

The Auditor-General
Audit Report No.27 2010–11
Performance Audit

Restoring the Balance in the Murray-Darling Basin

**Department of Sustainability, Environment,
Water, Population and Communities**

Commonwealth Environmental Water Holder

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of Australia 2011

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Canberra ACT
10 February 2011

Dear Mr President
Dear Mr Speaker

The Australian National Audit Office has undertaken an independent performance audit in the Department of Sustainability, Environment, Water, Population and Communities in accordance with the authority contained in the *Auditor-General Act 1997*. I present the report of this audit, and the accompanying brochure, to the Parliament. The report is titled *Restoring the Balance in the Murray-Darling Basin*.

Following its presentation and receipt, the report will be placed on the Australian National Audit Office's Homepage—<http://www.anao.gov.au>.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Ian McPhee', is positioned above the printed name.

Ian McPhee
Auditor-General

The Honourable the President of the Senate
The Honourable the Speaker of the House of Representatives
Parliament House
Canberra ACT

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Abbreviations

ABARE	Australian Bureau of Agriculture and Resource Economics
ANAO	Australian National Audit Office
CEWH	Commonwealth Environmental Water Holder
CMA	Catchment Management Authority
CPGs	Commonwealth Procurement Guidelines
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DEWR	Department of Environment and Water Resources
DIWA	Directory of Important Wetlands of Australia
DSE	Department of Sustainability and the Environment (Victoria)
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities
EWP	Environmental Watering Plan
EWSAC	Environmental Water Scientific Advisory Committee
FMA Act	<i>Financial Management and Accountability Act 1997</i>
GL	Gigalitres
Guide	<i>Guide to the proposed Basin Plan</i>
LTCE	Long-term Cap Equivalent
MCA	Multi-Criteria Analysis
MDBA	Murray-Darling Basin Authority
MDBC	Murray-Darling Basin Commission

MER	Monitoring, Evaluation and Reporting
Minister	The Minister responsible, under the Administrative Arrangements Order, for administering the Commonwealth <i>Water Act 2007</i>
ML	Megalitres
MOU	Memorandum of Understanding
NSW	New South Wales
NWI	National Water Initiative
RtB	Restoring the Balance program
SDL	Sustainable Diversion Limit
Twynam	Twynam Agricultural Group
Water Act	The <i>Water Act 2007</i> , legislation of the Commonwealth of Australia

Glossary

allocation	The specific volume of water allocated to water access entitlements in a given season, given accounting period, defined according to rules established in the relevant water plan.
asset	An environmental asset, including: (a) water-dependent ecosystems; (b) ecosystem services; and (c) sites with ecological significance.
Basin	The area composed of the catchments that collect surface water flows which end up in the Darling or Murray Rivers.
Basin Plan	The Basin Plan adopted by the Minister under section 44 of the <i>Water Act 2007</i> (as amended from time to time).
Catchment Management Authority	CMAAs were established across the basin to manage natural resources at the catchment level. In South Australia and Queensland, CMAAs are known as Natural Resource Managers.
cap	An upper limit for the volume of water available for use from a waterway, catchment, basin or aquifer.
carryover	The option to hold in storage a portion of unused seasonal allocations for use at a later date.
consumptive water use	Use of water for private benefit consumptive purposes, including irrigation, industry, urban and stock and domestic use.
entitlement	A perpetual or ongoing entitlement, by or under law of a state, to exclusive access to a share of the water resources of a water resource plan area.
Environmental water holdings	The group of entitlements that is owned by the Commonwealth. The full meaning is given in section 108 of the <i>Water Act 2007</i> .

regulated	A water supply network that, at its simplest, may comprise a single structure, such as a dam, which provides storage and the ability to regulate or control river flows, but which may comprise many structures and multiple connected regulated rivers or streams. A regulated river network would typically provide a regulated river supply service to a variety of rural, commercial or urban supply customers.
reliability	The frequency with which water allocated under a water access entitlement is able to be supplied in full.
security	The level of priority for which an entitlement is allocated water. Common security levels are 'high' 'general' and 'medium'.
supplementary	An entitlement that may receive allocations during flooding events, or other unregulated flows in a regulated system.
the Framework	A document developed by the CEWH, with stakeholder input, which outlines the principles and processes for determining the environmental use of water held by the CEWH.
unregulated	River system where flows are not regulated by the operation of structures such as major dams or weirs.

Summary and Recommendations

Summary

The Murray-Darling Basin

1. The Murray-Darling Basin (the Basin) is an area of national environmental, economic and social significance. It contains Australia's three longest rivers—the Darling, the Murray and the Murrumbidgee—as well as nationally and internationally significant environmental assets, such as wetlands, billabongs and floodplains (Figure S 1). The Basin is Australia's most significant agricultural area, and produces around \$15 billion of produce annually.¹ It extends across four states and the Australian Capital Territory, and is home to over two million people.

Figure S 1

The Murray-Darling Basin, showing all major rivers



Source: <<http://www.connectedwaters.unsw.edu.au/resources/articles/supermodellingmurray.html>>

¹ Murray-Darling Basin Authority, *Guide to the proposed Basin Plan: Volume 1*, Australian Government, Canberra, 2010, p. 13.

Water use and availability

2. Water in the Basin is used for two broad purposes—for consumption, including meeting critical human needs, and supplying irrigated agriculture and industry; and for the environment, such as allowing natural river flows, inundating floodplains and watering wetlands. There are often competing and sometimes conflicting demands on the available water.

3. Historically, water availability has been subject to large variations, throughout the year, between years, and over longer periods. Over the past century, a series of dams, weirs and barrages have been constructed across the Basin to store and regulate the flow of water. These storages and regulatory structures provide greater security of supply to users.

4. From 1997 to 2006, the average water runoff in the Basin was 30 per cent lower than the long-term average², with record low inflows in 2006–07. At 30 June 2010, storage levels across the Basin were at 32 per cent, with wide variation across the catchments. For example, storages in the Gwydir catchment were seven per cent full, while the lower Darling catchment was 88 per cent full (aided by flooding events in the northern Basin). Recent better rainfall, and flooding, across parts of the Basin has boosted overall storage levels.³

Environmental consequences

5. Prior to better rainfall in late 2010, the reduced inflows of water into the Basin had been attributed to several factors, in particular the prolonged drought that affected large parts of Australia for almost a decade. It is widely recognised that available water has been over-allocated for consumptive purposes, with insufficient water set aside for the environment. Climate change is also expected to result in lower average rainfall over the foreseeable future. The result has been that ecologically important and internationally recognised environmental sites, such as floodplains and wetlands, have been under stress. This stress has had adverse effects on the flora and fauna and overall biodiversity.⁴

² CSIRO, *Water availability in the Murray-Darling Basin*, CSIRO, Canberra, 2008, p. 22.

³ At 11 November 2010, total storage levels across the Basin were 74 per cent according to figures produced by the Murray-Darling Basin Authority.

⁴ Murray-Darling Basin Authority, *op. cit.*, Chapter 3.

Current water reforms in the Basin

6. In recent years, there have been a number of reforms in the Basin, aimed at improving the management of water resources and addressing the imbalance between consumptive and environmental water use. Major reforms, which are interrelated, include:

- the passing of the Commonwealth *Water Act 2007* on 3 March 2008—key legislation under which different entities are established and reforms implemented;
- the signing in July 2008 of an Intergovernmental Agreement on Murray-Darling Basin Reform, which commits Basin jurisdictions⁵ to new ways of managing water resources in the Basin;
- establishment in December 2008 of the Murray-Darling Basin Authority, which has responsibility for producing the first Basin-wide water sharing and management plan⁶; and
- establishment of a Commonwealth Environmental Water Holder (CEWH), in April 2008, to use water holdings to protect or restore environmental assets.

7. These reforms are designed to promote decision-making in the interests of the Basin as a whole. They build on a series of previous initiatives to manage water resources in the Basin, dating back to the 1915 River Murray Waters Agreement. The reforms are also being implemented in the context of the 2004 National Water Initiative (NWI), an intergovernmental agreement signed by all states and territories.

The Basin Plan

8. The Basin Plan is described as the centrepiece of the Australian Government's water reform agenda.⁷ It aims to provide for the integrated management of all of the Basin's water resources. Some of the functions of the Basin Plan are to:

⁵ Queensland, New South Wales, Victoria, South Australia and the Australian Capital Territory.

⁶ The Basin Plan was originally scheduled to be finalised by the MDBA in 2011. However, the latest indications are that the Plan may now be finalised in 2012.

⁷ Wong, P (Minister for Climate Change and Water), *Crucial reforms approved for Murray-Darling Basin*, media release, Parliament House, Canberra, 4 December 2008.

- set and enforce environmentally sustainable limits on the quantities of surface and groundwater that may be taken away from Basin water resources—these are known as Sustainable Diversion Limits (SDLs);
- set Basin-wide environmental objectives, and water quality and salinity objectives—to be set out in an Environmental Watering Plan;
- develop efficient water trading regimes across the Basin—consistent with one of the principles of the NWI;
- set requirements that must be met by state water resource plans; and
- improve water security for all users of the Basin’s water resources.

9. In October 2010, the Murray-Darling Basin Authority (MDBA) released a *Guide to the proposed Basin Plan*, which sets out proposals for key elements of the upcoming Plan. These include the volume of water to be provided for the environment, and the resulting SDLs for consumptive users. The Guide was released as an additional step in the formal consultation process with stakeholders.⁸ Under the Water Act, the first formal consultation document is the proposed Basin Plan, which the MDBA has announced is due to be released in 2011. This document is to be followed by the final Basin Plan, a legislative instrument, now due for completion in 2012.

10. Once the final Basin Plan is completed by the MDBA and adopted by the Minister⁹, it is to be tabled in both Houses of Parliament.¹⁰ However, as set out in the Water Act, the SDLs will not take full effect until 2014 for most states, and 2019 for Victoria, when existing state water sharing plans expire. Renewed water sharing plans will have to comply with the water management requirements of the Basin Plan.

⁸ Following the release of the Guide, two Parliamentary committees, one from each House of Parliament, have been asked to inquire into aspects of the management of the Murray-Darling Basin and the development of the Basin Plan.

⁹ The Minister responsible, under the Administrative Arrangements Order, for administering the *Water Act 2007*. Currently, the Minister for Sustainability, Environment, Water, Population and Communities.

¹⁰ Under the *Legislative Instruments Act 2003 (Cth)*, the Basin Plan can be disallowed by either House of Parliament.

Restoring the Balance program

11. The Restoring the Balance (RtB) program¹¹ is one of a number of initiatives being implemented under the Australian Government's overarching policy for water reform called *Water for the Future*. This policy commits more than \$12 billion over ten years to four priority areas: taking action on climate change; using water wisely; securing water supplies; and supporting healthy rivers and wetlands.

12. The Government has committed \$3.1 billion to the RtB program to purchase permanent water entitlements from willing sellers in the Murray-Darling Basin.¹² The program commenced in 2007–08, four years before the Basin Plan was originally due to be finalised, and is scheduled to run until 2016–17. The program is administered by the Department of Sustainability, Environment, Water, Population and Communities (the department).¹³

13. Since 14 September 2010, the Minister for Sustainability, Environment, Water, Population and Communities has had overall responsibility for the RtB program. Previously, the Minister for Climate Change and Water (and, from March to September 2010, the Minister for Climate Change, Energy Efficiency and Water) was responsible for the program.

Program objectives and purchasing mechanisms

14. The three announced objectives of the RtB program are to: reduce consumptive water use; provide water for the environment; and, through those measures, ease the transition to the upcoming Basin Plan.

15. To contribute towards rebalancing water use in the Basin, the program purchases permanent water entitlements from consumptive users, such as irrigators. These entitlements are then transferred to the Commonwealth to be used by the CEWH for the environment. However, the purchase of permanent water entitlements, while reducing consumptive use, does not guarantee the same amount of actual water for the environment. The amount of water

¹¹ A similar program was also proposed under the former Coalition Government's \$10 billion National Plan for Water Security, released in 2007.

¹² The Government has stated that it will not compulsorily acquire water entitlements, and that the purpose of the RtB program is to purchase *permanent* entitlements, not to purchase seasonal water allocations.

¹³ Formerly, the Department of the Environment, Water, Heritage and the Arts.

available for the environment depends, primarily, on the level of rainfall and subsequent inflows into river systems and water storages such as dams.

16. The principal mechanism that the department has used to purchase water entitlements is by conducting 'discriminatory price' tenders in different parts of the Basin. Seven tenders have been completed as of 30 June 2010. The department has also contributed to the purchase of Toorale station, a property in north-western New South Wales (NSW), by the NSW Government. This has been the only purchase outside a tender process. As of 30 June 2010, the department has purchased entitlements to 863 billion litres of water, at a cost of \$1.37 billion.

Government commitment to acquire environmental water

17. Following the 2010 Federal election, the Government has formalised its commitment to bridge any remaining gap between the level of water returned to the Basin under existing *Water for the Future* initiatives, including the RtB program, and the level required to be returned under the final Basin Plan. The Government has provided additional funding of \$310 million per annum from 2014–15 for water entitlement purchases, while noting that the total cost of this commitment cannot be quantified until the Basin Plan is finalised.

Role of the Commonwealth Environmental Water Holder

18. The establishment of the CEWH was one of the reforms under the Water Act. The role of the CEWH is to manage water entitlements purchased under the RtB program, and from other sources¹⁴, to benefit the environment. The position of CEWH is currently held by a division head within the department.

19. In deciding where to use available water, the CEWH's statutory obligation is to 'protect or restore environmental assets of the Murray-Darling Basin, and other areas outside the Basin where the Commonwealth holds water, so as to give effect to relevant international agreements'.¹⁵ These agreements include Australia's obligations to protect wetlands of international importance, biological diversity and habitats for migratory birds. As of 30 June 2010, the CEWH had allocated some 182 672 megalitres (ML) of

¹⁴ Water entitlements are also acquired through the department's Sustainable Rural Water Use and Infrastructure program. Entitlements may also be gifted to the Commonwealth, and have been.

¹⁵ *Water Act 2007 (Cth)* sub-section 105(3).

Commonwealth environmental water to 34 sites within the Basin. This equates to just over one-third of the volume of Sydney Harbour.

20. In carrying out statutory functions, the CEWH receives administrative support from within the department's Water Group, input from state government agencies and other parties, and scientific advice from an expert committee. For certain functions, including deciding where to use available water, the CEWH can be directed by the Secretary of the department and the Minister. The CEWH will also be required to act in accordance with the Environmental Watering Plan (EWP), which is being produced as part of the Basin Plan. The EWP is designed to safeguard existing environmental water, plan the recovery of additional water, and coordinate the use of environmental water across the Basin.

Audit objective and scope

21. The objective of the audit was to assess whether the department's processes for purchasing water entitlements were well-administered, and whether sound arrangements were in place to support timely and effective decisions by the CEWH on the use of available water.

22. The audit examined key aspects of the first four tenders for the RtB program. These tenders provided coverage across the Basin and resulted in expenditure in excess of \$1 billion. The 2008–09 tenders included the largest single purchase under the program—\$303 million to Twynam Agricultural Group. The audit also examined the Commonwealth's contribution to the purchase of Toorale station, the only purchase outside a tender process.

23. For the CEWH's functions, the audit focused on the decision-making process for providing available water to environmental sites in the first two years, 2008–09 and 2009–10. This period was characterised by a relatively modest volume of available water. In recognition of this, the ANAO also assessed the CEWH's preparedness for managing a steep increase in environmental water holdings.

Overall conclusion

24. The \$3.1 billion RtB program is the largest ever water entitlement purchasing initiative in Australia. It is part of a broader set of water reforms aimed at providing the sustainable use of water resources in the Murray-Darling Basin. The program is being implemented before the additional watering needs of the environment are identified under the final

Basin Plan. The decision to implement the RtB program before the Basin Plan is finalised was to provide more immediate benefits for the environment and to help ‘ease the transition’ towards the Plan. In seeking to provide these benefits, the department has also had to manage the uncertainty about how much water is needed for the environment, and where that water is most needed.

25. In the first few years of the RtB program to 30 June 2010, the department purchased 863 gegalitres (GL) of permanent water entitlements, at a cost of \$1.37 billion (or nearly half the total program budget). These purchases have enabled the CEWH to allocate some 182 GL of water to some 34 sites within the Basin. The purchase and use of water entitlements has advanced the program’s objectives of reducing consumptive water use, providing water for the environment and easing the transition to the upcoming Basin Plan. Recent better rainfall, and flooding, over large parts of the Basin means that more water will be available for the environment in the foreseeable future than was the case in the first few years of the RtB program, when water allocations were generally lower than long-term averages.

Purchasing water entitlements

26. Overall, the department has established adequate arrangements to administer the RtB program, ahead of the Basin Plan. Decisions on where to buy entitlements have been informed by the best information available at the time. In late 2009, the department sought to align its purchasing approach with the MDBA—albeit no formal arrangements were in place throughout the program. Similarly, although the CEWH makes decisions on where to use available water, the department has not established formal protocols to seek the CEWH’s input on environmental priorities; and no formal input was provided in the first four tenders examined by the ANAO. Advice on environmental priorities was provided to the RtB program from within the department’s Water Group. At the outset of the program, the knowledge base on environmental watering needs was limited to well-known sites. As a result, the advice provided did not encompass an extensive assessment of watering needs across the whole Basin. In developing the *Guide to the proposed Basin Plan*, the MDBA has identified some 2442 key environment assets. The department advised that it will draw on this information to better target future purchasing activity.

27. The department developed and documented a clear approach to identifying and assessing value for money, and meeting other procurement principles. The decision to use discriminatory price tenders as the principal

purchasing mechanism took appropriate account of the department's obligation to provide open and fair treatment of potential sellers, while also providing a good basis to assess and select the best value offers. For each tender, the department identified clear criteria to assess the value for money of offers, which addressed both the expected benefits and known costs of purchasing entitlements. In practice, price benchmarks play the central role in discriminating between offers, and the department's processes for identifying current market information have improved since the start of the program.

28. The department has established, and generally followed, standard processes to assess applications and transfer legal ownership to the Commonwealth. The tenders were conducted in accordance with the applicable purchasing strategy, guidelines and evaluation criteria endorsed by an internal project board and approved by the then Minister. Documentation has progressively improved across the tenders, and, overall, the tenders have been conducted in accordance with procurement principles. Although avoidable delays occurred during the 2008–09 tenders in finalising acceptable offers, the department has since taken a number of steps to better manage internal processing times. However, external factors can still affect the overall time it takes to transfer entitlements to the Commonwealth.

29. The \$303 million purchase of Twynam's entitlements provided a significant opportunity for the department to reduce the over-allocation of entitlements, and benefit from future water allocations. In the event that large offers are received in the future, more explicit consideration should be given to quantifying administrative savings and demonstrating claimed 'immediate' environmental benefits to justify paying a price premium above established price benchmarks.

30. The total volume of permanent water entitlements secured has been achieved by purchasing entitlements at a much faster pace than was contemplated in the original funding profile for the ten-year program. Accelerated purchasing has enabled the department to significantly advance the program's objective of reducing consumptive water use. The water recovery targets in the *Guide to the proposed Basin Plan*, while subject to ongoing consultation, indicate that significantly more water is required for the environment than has been recovered under the RtB program and other water recovery initiatives. Therefore, even with accelerated spending, the key risk of purchasing more water than required has so far been avoided.

31. The Guide also indicates that, overall, the department has concentrated purchasing in catchments where the largest volumes of water need to be recovered for the environment. Moreover, the Guide provides a more reliable basis on which to manage these risks in the lead-up to the Basin Plan. Although purchasing strategies were developed for each tender, it is now timely for the department to develop a formal purchasing strategy for the program that includes an assessment of the current and future risks facing the program and an evaluation of past purchasing practices. A formal strategy would need to be regularly revised to take account of the Basin planning process, and the Government's commitment to purchase all environmental water required under the final Basin Plan.

Decisions on the use of environmental water

32. As the manager of the Commonwealth's water entitlements, the CEWH plays a vital role in delivering tangible environmental outcomes from the significant expenditure incurred under the RtB program and *Water for the Future*. In the initial period examined by the ANAO (2007–08 to 2008–09), adequate arrangements were established within the department to support timely and effective decisions by the CEWH. The main exception was variability in the quality of information used to inform water decisions, although the department has recognised the need to improve this aspect of the decision-making process.

33. The faster pace of purchasing entitlements under the program has enabled a larger volume of water entitlements to be transferred to the Commonwealth, for use by the CEWH. However, lower water allocations during the initial years of the RtB program, due mainly to the drought, limited the immediate benefits for the environment. As the RtB program and other water recovery initiatives progress, the CEWH will be responsible for managing much larger volumes of water. In response, the department has initiated a range of measures to check that processes remain 'fit for purpose', and to manage the risks associated with larger volumes of water. These measures include trialling new tools and methods for prioritising watering options, and long-term arrangements for water delivery and monitoring the effectiveness of watering environmental sites. The publication of the Environmental Watering Plan under the Basin Plan is also expected to provide a more structured framework to guide the operations of the CEWH, and to better inform other stakeholders such as state environmental water managers.

34. Overall, the CEWH's processes provided reasonable assurance that allocated water was delivered as specified. As well, sufficient monitoring information was obtained, albeit of variable quality, to indicate whether intended ecological responses were being achieved (at least in the short term). The monitoring information provided the basis for the CEWH's outcomes report for 2008–09. Along with other measures, this report has aided the transparency of Commonwealth watering actions in the Basin.

35. The CEWH is ultimately responsible for achieving environmental outcomes from the RtB program and other initiatives—and may eventually hold at least 27 per cent of all entitlements in the Basin.¹⁶ Therefore, it is particularly important that current and future initiatives are implemented in a timely and effective manner, and are well-coordinated with the RtB program and related water recovery initiatives.

36. The ANAO has made two recommendations. The first one relates to the administration of the RtB program, and is directed at aligning ongoing purchasing strategies with the better information available under the Basin planning process. The second recommendation relates to the CEWH's functions, and is aimed at providing greater transparency and certainty for delivery partners on future cost-sharing arrangements.

Key findings by chapter

Developing a water purchasing framework (Chapter 2)

37. At \$3.1 billion over ten years, the RtB program involves substantial funding and is part of a broader set of reforms that includes the Basin Plan and the establishment of the CEWH. Key considerations for the department in developing and maintaining a purchasing framework for the program are to:

- manage uncertainty about how much additional water is required for the environment, and to reduce consumptive use, ahead of the Basin Plan being finalised;

¹⁶ In the *Guide to the proposed Basin Plan* (page 132), a 27 per cent reduction of surface water is proposed across the Basin under Scenario 1. In line with the Government's commitment to acquire all the entitlements needed to meet this reduction, the CEWH *may* be required to manage the 27 per cent of water that corresponds to this reduction.

- ensure that purchased entitlements can provide maximum benefit for the environment, recognising that the CEWH makes decisions on where to use the available water purchased under the program; and
- demonstrate that ‘value for money’ has been achieved with program funds, as well as adhering to other procurement principles, including providing fair access for potential sellers of water entitlements.

Managing purchasing risks ahead of the Basin Plan

38. Keys risks for the department in implementing the RtB program are the prospect of buying more water for the environment than is ultimately required when the Basin Plan is finalised, and concentrating purchasing in areas that are considered to be lower priority for water recovery efforts under the Basin Plan. These risks were identified in the individual purchasing strategies for the four tenders examined by the ANAO. These strategies were considered and approved by an internal project board within the department’s Water Group. The then Minister was also briefed on the purchasing approach undertaken for each of the tenders.

39. At the outset of the RtB program, the department did not have access to the same quality of scientific knowledge and socio-economic analysis that is underpinning the Basin Plan, and which is being progressively collected and analysed by the MDBA. However, the department’s decisions on where to purchase water, and how much water to purchase, have been informed by drawing on the available scientific data—in particular, the *Sustainable Rivers Audit* produced by the former Murray-Darling Basin Commission, and the CSIRO’s *Water Availability in the Murray-Darling Basin*. Both reports came out in 2008, after the first Basin-wide tender. These reports are also being used by the MDBA in producing the Basin Plan. In late 2009, the department also sought to align its purchasing approach with the MDBA—albeit no formal arrangements were in place previously or since.

40. The water recovery targets foreshadowed in the *Guide to the proposed Basin Plan* in October 2010, while subject to ongoing consultation, indicate that the key purchasing risks facing the department are unlikely to eventuate. In fact, in most catchments, significantly more water needs to be acquired than has currently been purchased under the RtB program, or through other water recovery measures. Moreover, the targets in the Guide indicate that the department has concentrated its purchasing in the three catchments where the environmental need is the greatest.

Coordinating the water purchase and water use functions

41. All permanent water entitlements purchased under the RtB program are transferred to the Commonwealth, for use on the environment. The CEWH therefore plays a vital role in delivering tangible environmental outcomes from the significant expenditure incurred under the RtB program.

42. There is no protocol or other formal arrangements between the department and the CEWH to provide a documented and agreed basis for gaining maximum benefits for the environment. For the four tenders examined, there was also no evidence of formal input from the CEWH on environmental priorities to guide the development of purchasing strategies. In particular, the CEWH did not provide advice on the type of entitlements that would be needed to meet the watering needs of priority sites.

43. Advice on environmental priorities was provided from elsewhere within the department's Water Group; but the advice was limited to well-known sites and did not provide a more comprehensive coverage across the Basin. Better information is now becoming available under the Basin planning process.

Basis for determining 'value for money' of purchased entitlements

44. The approved strategies for all four tenders examined by the ANAO explicitly recognised the need to provide a basis for achieving value for money. For each tender, the department identified clear criteria to assess the value for money, which addressed both the expected benefits and known costs of purchasing entitlements. Although the evaluation criteria evolved after the first tender, they essentially involved considering the:

- ability [of entitlements] 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
- costs involved in purchasing the entitlement (predominantly based on the market price).

45. The department sought external advice on the most appropriate mechanisms to purchase permanent water entitlements. The decision to use discriminatory price tenders broadly follows the approach taken in a previous water recovery initiative called The Living Murray. The department also

considered that tenders would be the best approach to achieve value for money, while also adhering to other procurement principles.

Purchasing water entitlements (Chapter 3)

46. With the exception of Toorale station, all permanent water entitlements have been purchased through a tender process. For the four tenders examined by the ANAO, the department established, and generally followed, consistent processes to assess applications and transfer legal ownership to the Commonwealth. The time taken to process applications—and hence provide entitlements for the CEWH to use on the environment—is affected by a range of internal and external factors, including state trade restrictions.¹⁷ During the 2008–09 tenders, avoidable delays (arising from budget-related issues) were experienced in finalising some acceptable offers. The department has since taken a number of steps to better manage its internal processing times, including establishing a panel of conveyancing providers to assess legal matters, and running shorter tenders with announced budgets and closing dates.

47. The tenders examined were conducted in accordance with the applicable purchasing strategy, and the guidelines and evaluation criteria were endorsed by the project board and approved by the then Minister. To promote adherence to procurement principles, an evaluation plan was developed for each tender and external probity advice was obtained. Adequate documentation was maintained to evidence the decision-making processes for each tender. In September 2010, the department initiated an upgrade to its tender-management system, replacing the less functional product that was used for the first seven tenders.

48. For the largest purchase under the program, \$303 million to Twynam, additional measures were undertaken to assess some risks associated with this purchase, and to provide assurance on the potential benefits of the purchase. The premium paid for the entitlements (10 per cent above normal benchmarks) was in line with project board guidelines, which were approved by the then Minister. However, contrary to the department's rationale for paying this premium price, the lower reliability entitlements purchased did not provide 'immediate' benefits for the environment, due to lower water allocations in the

¹⁷ Victoria has in place a rule that restricts the amount of entitlement trades that can take place across the state in a year.

following period. Nevertheless, the department is well-placed to reap significant benefits when more water is available for the environment, which is presently the case due to recent better rainfall.

49. The purchase of Toorale station presented opportunities for the department to benefit from a large parcel of water entitlements at a strategic location in the Basin. The purchase also presented significant risks and administrative overheads for the department, compared to standard tender purchases. In particular, the Toorale entitlements are not currently managed under a water sharing plan, which reduces the security of available water. Also, the water entitlements are legally owned by the NSW Government, not the Commonwealth, and 'water shepherding' arrangements are required to direct the available water to specific environmental sites beyond Menindee Lakes. Nevertheless, an agreement is in place to transfer ownership of entitlements to the Commonwealth, when a water sharing plan is in place. And reasonable measures have been taken to promote the best use of available water from Toorale's entitlements.

Decisions on the use of environmental water (Chapter 4)

50. The period of the CEWH's functions examined by the ANAO was characterised by relatively small volumes of water. Through both choice and necessity, the CEWH operates under a 'cooperative' watering approach with water managers and other stakeholders across the Basin. The CEWH has a Special Account¹⁸ to fund the management of Commonwealth water holdings.

51. The CEWH has established criteria to assess the merits of watering actions. These were developed in consultation with key stakeholders. Ahead of the final Basin Plan, the CEWH has also developed a broader framework for determining water use, which was also subject to consultation. To further the principle of using the best available science, the CEWH established an expert committee to provide advice on the use of environmental water, and watering proposals. These proposals were almost exclusively provided by state agencies.

52. Based on the sample of watering decisions examined, all proposals were examined by departmental staff using the approved criteria and, in all

¹⁸ The Special Account was established under the Water Act for the purposes of the FMA Act 1997. The FMA Act states that a Special Account is an appropriation mechanism that sets aside amounts within the Consolidated Revenue Fund for expenditure for special purposes.

cases, advice was provided by the expert committee. Nevertheless, there was variability on the quality of the (scientific) data provided to support states' watering proposals. The collection and assessment of information was not aided by templates or guidelines from the department, although more consistent approaches are now being developed and trialled.

53. In preparation for the steep increase in the Commonwealth's water holdings, the department has initiated a range of measures to better manage the risks associated with larger volumes of water. This includes: trialling or using new methods and tools for identifying and prioritising watering options; working with the MDBA on an environmental asset database; and making improvements to the register of environmental water holdings. At the time of the audit, these initiatives had not yet been fully implemented.

Water delivery, monitoring and reporting (Chapter 5)

54. In the period examined, all water that was allocated by the CEWH was delivered to sites by external parties (mainly catchment management authorities). Likewise, the outcomes of those watering events were also monitored and reported on by external parties.

55. Overall, the CEWH's processes provided reasonable assurance that allocated water was delivered as specified. As well, sufficient monitoring information was obtained, albeit of variable quality, to indicate whether intended ecological responses were being achieved (at least in the short term). The monitoring information provided the basis for the CEWH's outcomes report for 2008–09. Along with other measures, this report has aided the transparency of Commonwealth watering actions in the Basin.

56. The CEWH has recognised the need to establish longer term arrangements with external partners and stakeholders to accommodate much larger volumes of water in coming years. Key initiatives include the development of a Monitoring, Evaluation and Reporting (MER) framework, which will be guided by the Basin Plan; and the execution of bilateral agreements with state governments on joint water delivery and monitoring activities. However, the department has yet to formalise with delivery partners and stakeholders the basis on which costs will be shared in the long-term.

Summary of the department's response

57. The department's overall response to the audit is provided below, while the full response is provided at Appendix 1.

Department of Sustainability, Environment, Water, Population and Communities

58. The Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) notes that the ANAO has concluded that overall the Department has established adequate arrangements for the administration and implementation of the Restoring the Balance in the Murray-Darling Basin (RtB) program. SEWPaC acknowledges the ANAO's suggestion that there could be potential benefits from a closer and more formalised relationship with the Commonwealth Environmental Water Holder (CEWH). The Department will develop such a relationship with the CEWH to assist with the administration of the RtB program.

59. The Department notes ANAO's assessment of the adequacy of the CEWH's arrangements for use of Commonwealth environmental water. SEWPaC agrees with the ANAO's recommendation that better articulation of roles, responsibilities and the principles for sharing delivery, monitoring and reporting costs in the long-term, would provide more certainty to external delivery partners. As the ANAO notes, at least with respect to the monitoring and reporting costs, this could be done as part of the Monitoring, Evaluation and Reporting Framework being developed.

Recommendations

Recommendation No. 1

Para 2.76

In light of the better information available under the Basin planning process, the ANAO recommends that the Department of Sustainability, Environment, Water, Population and Communities develop and regularly review an overall purchasing strategy for the Restoring the Balance program. The strategy should be developed in consultation with the Commonwealth Environmental Water Holder and other key stakeholders, and include:

- (a) an assessment of current and future risks to meeting the objectives of the program and providing 'value for money';
- (b) consideration of appropriate purchasing mechanisms in the short, medium and long-term; and
- (c) formal communication protocols within the department and with key external stakeholders.

Department's response: Agreed.

Recommendation No. 2

Para 5.34

To provide more certainty to external partners in resourcing and budgeting, the ANAO recommends that the Department of Sustainability, Environment, Water, Population and Communities, in consultation with the Commonwealth Environmental Water Holder and other stakeholders, articulate the principles that will be used to determine the basis for sharing costs on the delivery, monitoring and reporting of Commonwealth watering actions.

Department's response: Agreed.

Audit Findings

1. Background and Context

This chapter outlines the broader context for the \$3.1 billion Restoring the Balance water entitlement purchasing program, and the functions of the Commonwealth Environmental Water Holder. The ANAO's audit objective and approach are also explained.

The Murray-Darling Basin

1.1 The Murray-Darling Basin is an area of national environmental, economic and social significance. The Basin contains Australia's three longest rivers—the Darling, the Murray and the Murrumbidgee—as well as nationally and internationally significant environmental assets, such as wetlands, billabongs and floodplains (Figure 1.1).

Figure 1.1

Map of the Murray-Darling Basin, showing all major rivers



Source: <<http://www.connectedwaters.unsw.edu.au/resources/articles/supermodellingmurray.html>>

1.2 The Basin is Australia's most significant agricultural area, producing around \$15 billion of produce annually;¹⁹ it contributes significantly to the economy and export revenue. Covering an area of over one million square kilometres, the Basin extends across four states—Queensland, New South Wales, Victoria, South Australia—and the Australian Capital Territory. It is home to over two million people.

Water use and availability

1.3 Water in the Basin is used for two broad purposes—for consumption, including meeting critical human needs and supplying irrigated agriculture and industry; and for the environment, such as allowing natural river flows, inundating floodplains and watering wetlands. There are often competing and sometimes conflicting demands on available water.

1.4 Historically, water availability has been subject to large variations, throughout the year, between years, and over longer periods. Over the past century, a series of dams, weirs and barrages have been constructed across the Basin to store and regulate the flow of water. These storages and regulatory structures provide greater security of supply to users.

1.5 Certain catchments in the southern part of the Basin (Figure 1.2) are connected through regulatory structures, which allow water to be moved more flexibly within and between these catchments. In these catchments—known as the 'southern-connected basin'—state authorities allocate available water from storages to users that hold water rights. For the remaining southern catchments, the water stays within those areas as they lack the infrastructure or flow patterns that allow trading between catchments.²⁰

1.6 The northern part of the Basin does not have the same degree of infrastructure to aid the flexible and regulated movement of water. Here, water use is largely 'unregulated' and is more typically available from the river systems, rather than held in and made available from public storages. State authorities set rules on how much water can be extracted from the river systems based on 'flow regimes', rather than by allocating water from storages.

¹⁹ Murray-Darling Basin Authority, *Guide to the proposed Basin Plan: Volume 1*, Australian Government, Canberra, 2010, p. 13.

²⁰ Namely, Wimmera-Mallee, Avoca, Ovens, Kiewa, Lachlan and part of Broken.

Figure 1.2

Map of the Murray-Darling Basin, demarcating the northern and southern parts of the Basin



Source: ANAO based on map found at <<http://www.environment.gov.au>>

1.7 From 1997 to 2006, the average water runoff over the Basin was 30 per cent lower than the long-term average,²¹ with record low inflows in 2006–07. At 30 June 2010, storage levels across the Basin were at 32 per cent, with wide variation across the catchments. For example, storages in the Gwydir catchment were seven per cent full, while the lower Darling catchment was 88 per cent full (aided by flooding events in the northern Basin). Recent

²¹ Some southern catchments were also averaging 50 per cent lower runoffs than the long-term average. CSIRO, *Water availability in the Murray-Darling Basin*, CSIRO, Canberra, 2008, p. 22.

better rainfall, and flooding, across parts of the Basin has boosted overall storage levels.²²

1.8 Prior to better rainfall in late 2010, the reduced inflows of water into the Basin had been attributed to several factors, in particular the prolonged drought that affected large parts of Australia for almost a decade. It is widely recognised that available water has been over-allocated for consumptive purposes, with insufficient water set aside for the environment. Climate change is also expected to result in lower average rainfall over the foreseeable future. The result has been that ecologically important and internationally recognised environmental sites, such as floodplains and wetlands, have been under stress. This stress has had adverse effects on the flora and fauna and overall biodiversity.²³

Current water reforms in the Basin

1.9 In recent years there have been a number of reforms in the Basin, aimed at improving the management of water resources and addressing the imbalance between consumptive and environmental water use. Major reforms, which are interrelated and depicted in Figure 1.3, include:

- the passing of the Commonwealth *Water Act 2007* on 3 March 2008—the legislation under which different entities are established and reforms implemented;
- the signing in July 2008 of an Intergovernmental Agreement on Murray-Darling Basin Reform, which commits Basin jurisdictions to new ways of managing water resources in the Basin;
- establishment in December 2008 of the Murray-Darling Basin Authority (MDBA), which has responsibility for producing the first Basin-wide water sharing and management plan;²⁴ and
- establishment of a Commonwealth Environmental Water Holder (CEWH), in April 2008, to manage water holdings for the benefit of the environment.

²² At 11 November 2010, total storage levels across the Basin were 74 per cent, according to figures provided by the Murray-Darling Basin Authority.

²³ Murray-Darling Basin Authority, op. cit., 2010, Chapter 3.

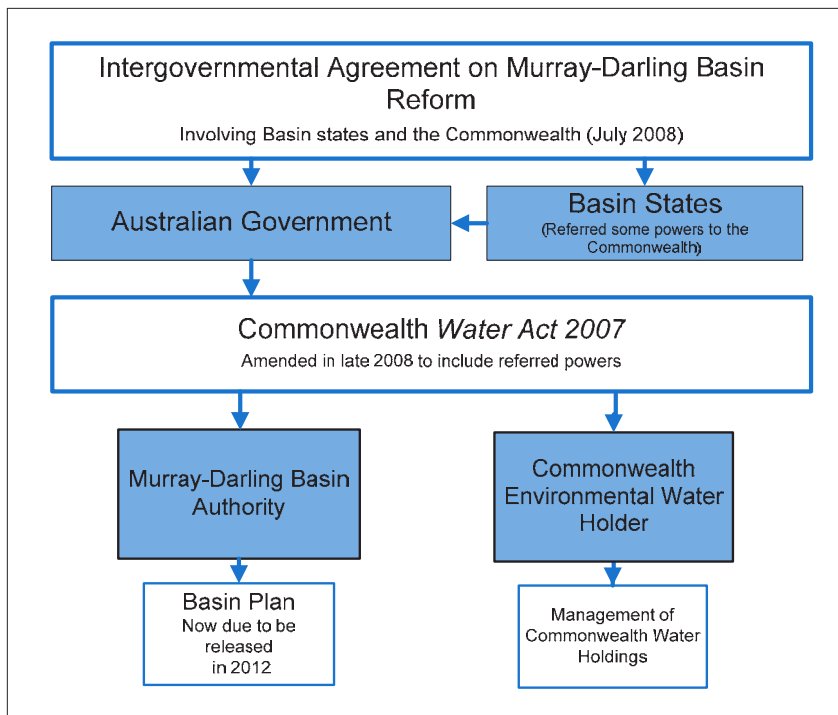
²⁴ The Basin Plan was originally scheduled to be finalised by the MDBA in 2011. However, the latest indications are that the Plan may now be finalised in 2012.

1.10 These reforms are designed to promote decision-making in the interests of the Basin as a whole. They build on a series of previous initiatives to manage water resources, dating back to the 1915 River Murray Waters Agreement. More recently, in 1995, the Murray-Darling Basin Ministerial Council set a cap on water diversions within the Basin. The cap aims to limit the diversions of water from the river systems to prevent further river health decline, and to increase the security and reliability of water supply during dry periods.

1.11 The Basin reforms are also being implemented in the context of the 2004 National Water Initiative (NWI), an intergovernmental agreement signed by all states and territories. The NWI commits signatories to actions that achieve a more cohesive national approach to the way Australia manages, measures, plans for, prices and trades water.

Figure 1.3

Overview of recent water reforms in the Murray-Darling Basin



Source: ANAO, based on the department's records

The Basin Plan

1.12 The Basin Plan is described as the centrepiece of the Australian Government's water reform agenda.²⁵ It aims to provide for the integrated management of all of the Basin's water resources. Some of the specific functions of the Basin Plan are to:

- set and enforce environmentally sustainable limits on the quantities of surface and groundwater that may be taken away from Basin water resources—these are known as Sustainable Diversion Limits (SDLs);
- set Basin-wide environmental objectives, and water quality and salinity objectives—to be set out in an Environmental Watering Plan (EWP) and a water quality and salinity management plan;
- develop efficient water trading regimes across the Basin—consistent with one of the principles of the NWI;
- set requirements that must be met by state water resource plans; and
- improve water security for all users of Basin water resources.²⁶

1.13 In October 2010, the Murray-Darling Basin Authority (MDBA) released a *Guide to the proposed Basin Plan*, which sets out proposals for key elements of the upcoming Plan. These include the volume of water to be provided for the environment, and the resulting SDLs for consumptive users. The Guide was released as an additional step in the formal consultation process with stakeholders.²⁷ Under the Water Act, the first formal consultation document is the proposed Basin Plan, which the MDBA has announced is due to be released in 2011. This document is to be followed by the final Basin Plan, a legislative instrument, now due for completion in 2012 (rather than 2011 as previously announced).

1.14 Once the final Basin Plan is completed by the MDBA and adopted by the Minister²⁸, it is to be tabled in both Houses of Parliament.²⁹ However, as set

²⁵ Wong, P (Minister for Climate Change and Water), *Crucial reforms approved for Murray-Darling Basin*, media release, Parliament House, Canberra 4 December 2008.

²⁶ *Water Act 2007* (Cth) s 20.

²⁷ Following the release of the Guide, two Parliamentary committees, one from each House of Parliament, have been asked to inquire into aspects of the management of the Murray-Darling Basin and the development of the Basin Plan.

²⁸ The Minister responsible, under the Administrative Arrangements Order, for administering the *Water Act 2007*. Currently, the Minister for Sustainability, Environment, Water, Population and Communities.

out in the Water Act, the SDLs will not take full effect until 2014 for most states, and 2019 for Victoria, when existing state water resource plans expire. Renewed water resource plans will have to comply with water management requirements under the Basin Plan.

Restoring the Balance program

1.15 The Restoring the Balance (RtB) program³⁰ is one of a number of initiatives being implemented under the Australian Government's overarching policy for water reform called *Water for the Future*. This policy commits more than \$12 billion over ten years to four priority areas: taking action on climate change; using water wisely; securing water supplies; and supporting healthy rivers and wetlands.³¹

1.16 The Government has committed \$3.1 billion to the RtB program to purchase permanent water entitlements from willing sellers in the Murray-Darling Basin.³² The program commenced in 2007–08, four years before the Basin Plan was originally due to be finalised, and is scheduled to run until 2016–17. The program is administered by the Department of Sustainability, Environment, Water, Population and Communities (the department).³³ As of 30 June 2010, the department had acquired entitlements to 863 billion litres of water at a total cost of \$1.37 billion.

1.17 Since 14 September 2010, the Minister for Sustainability, Environment, Water, Population and Communities has had overall responsibility for the RtB program. Previously, the Minister for Climate Change and Water (and, from March to September 2010, the Minister for Climate Change, Energy Efficiency and Water) was responsible for the program.

²⁹ Under the *Legislative Instruments Act 2003 (Cth)*, the Basin Plan can be disallowed by either House of Parliament.

³⁰ A similar program was also proposed under the former Coalition Government's \$10 billion National Plan for Water Security, released in 2007.

³¹ Another major program under *Water for the Future* is the \$5.8 billion Sustainable Rural Water Use and Infrastructure program. This program also seeks to provide more water for the environment.

³² The Government has stated that it will not compulsorily acquire water entitlements; and that the purpose of the program is to purchase *permanent* entitlements, not seasonal water allocations.

³³ Formerly, the Department of the Environment, Water, Heritage and the Arts.

Program objectives

1.18 The three announced objectives of the RtB program are to: reduce consumptive water use; provide water for the environment; and, through those measures, ease the transition to the upcoming Basin Plan.³⁴

1.19 To contribute towards rebalancing water use in the Basin, the program purchases permanent water entitlements from consumptive users, such as irrigators. These entitlements are then transferred to the CEWH for use on the environment. However, as explained further in Figure 1.4, the purchase of permanent water entitlements, while reducing consumptive use, does not guarantee the same amount of actual water for the environment.

Figure 1.4

Factors that influence the allocation of water against entitlements

- The amount of water available for the environment depends, principally, on the level of rainfall and subsequent inflows into river systems and water storages such as dams.
- Water entitlements give the holder a right to a maximum volume or share of water, typically under a water sharing plan.
- In catchments where water is held in storages, the relevant authorities determine the amount of water that is allocated on a seasonal/annual basis to entitlements; these water allocations can vary between zero when water is scarce, to the full volume of the entitlement when water is plentiful.
- The *type* of water entitlement held also determines the reliability of water allocations—for example, in dry years especially, high security entitlements provide a more reliable source of water than general security entitlements.
- In catchments where water use is less regulated and not necessarily held in storages, the relevant authorities set rules on how much water can be extracted against particular entitlements, depending for example, on the height of, and flow regimes in, rivers.
- Across the Basin, there are different rules on how much water provided against entitlements can be ‘carried over’ into the next water year (ending 30 June). These rules provide some flexibility, but also constraints, on the use of available water.

Source: ANAO’s summary of the department’s records

Purchasing mechanisms

1.20 The principal mechanism used by the department to purchase water entitlements is through ‘discriminatory price tenders’ being conducted in different parts of the Basin. The key parameters for the seven tenders completed as at 30 June 2010 are outlined in Table 1.1. The department has also

³⁴ See various documents on the department’s website, including the fact sheet on the Restoring the Balance program.

contributed to the purchase of Toorale station (an irrigated farming property in north-western New South Wales), in conjunction with the NSW Government. This has been the only purchase outside a tender process.

Table 1.1

Parameters for tenders under the RtB program, 2007–08 to 2009–10

Tender period	Duration	Tender location	Open to	Announced tender budget
2007–08	3 months	Basin-wide tender	Sellers in all catchments within the Basin	\$50 million
2008–09	9 months	Northern basin	Sellers in the specified northern catchments only	No budget
2008–09	8 months	Southern basin	Sellers in the specified southern catchments only	No budget
2009–10	3 weeks	Southern basin	Sellers in the specified southern catchments only	\$90 million
2009–10	3 weeks	Southern basin	Sellers in the specified southern catchments only	\$120 million
2009–10	3 weeks	Southern basin	Sellers in the specified southern catchments only	\$120 million
2009–10	8 weeks	Lower Balonne	Sellers in the Lower Balonne catchment only	\$100 million

Source: ANAO based on the department's records

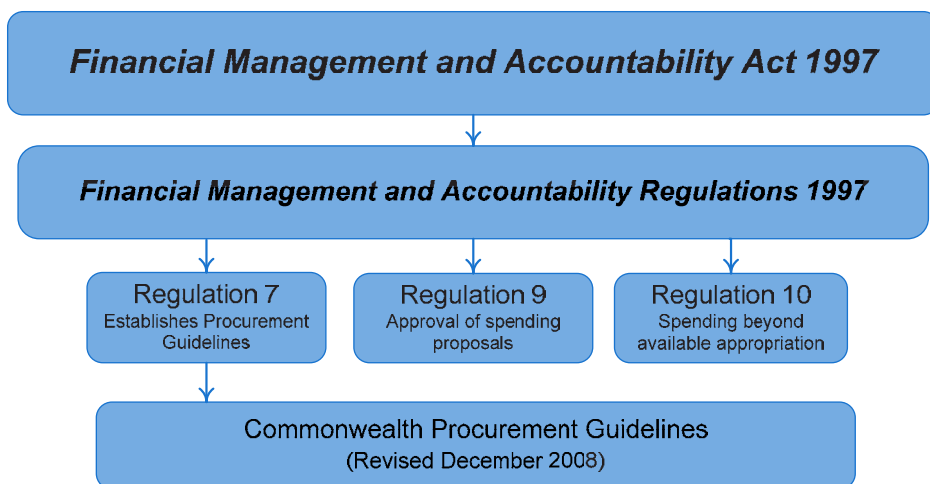
1.21 In November 2010, following the release of the *Guide to the proposed Basin Plan*, the current Minister announced further tenders under the RtB program. One tender will focus on catchments within the southern-connected system, with another tender focusing on the Lower Balonne in Queensland. These tenders have a total budget of \$300 million.

Legislative framework

1.22 The purchase of water entitlements is governed by a legislative framework, principally the *Financial Management and Accountability Act 1997* (FMA Act) and subsidiary rules, including the Commonwealth Procurement Guidelines (Figure 1.5).

Figure 1.5

Legislative framework governing the procurement of water entitlements under the RtB program



Source: ANAO, based on the *Financial Management and Accountability Act 1997*

Commonwealth Procurement Guidelines

1.23 The Commonwealth Procurement Guidelines (CPGs) establish the procurement policy framework within which agencies determine their own practices. Achieving ‘value for money’ is the core principle underpinning procurement activities. The CPGs also promote the principles and practices of:

- encouraging competition and equitable treatment of potential suppliers (or, for the RtB program, sellers);
- selecting a procurement process that is consistent with government policy and allows efficient, effective and ethical use of resources; and
- transparent and accountable decision-making, so that decisions are documented, defensible and in accordance with legislation and policy.³⁵

Administrative arrangements

1.24 Within the department, the roles and responsibilities for overseeing and administering the RtB program are as follows:

³⁵ Department of Finance and Deregulation, *Commonwealth Procurement Guidelines*, Commonwealth of Australia, Canberra, December, 2008, Division 1.

- an internal project board of senior departmental officers from the Water Group³⁶ considers and endorses a purchasing strategy for each tender, based on submissions provided by relevant staff;
- the water recovery branch (within the Water Group) conducts each tender and provides advice to the Minister on non-tender purchases and other program matters; and
- a delegate within the Water Group (usually the head of the water recovery branch) makes spending decisions under the FMA Act on which entitlements to purchase.

1.25 Advice is also provided to the department by external parties, including (biannually) through a stakeholder reference panel.³⁷

Government commitment to acquire environmental water

1.26 Following the 2010 Federal election, the Government has formalised its commitment to bridge any remaining gap between the level of water returned to the Basin under existing *Water for the Future* initiatives, including the RtB program, and the level required to be returned under the final Basin Plan. The Government has provided additional funding of \$310 million per annum from 2014–15 for water entitlement purchases, while noting that the total cost of this commitment cannot be quantified until the Basin Plan is finalised.³⁸

Role of the Commonwealth Environmental Water Holder

1.27 As illustrated in Figure 1.3, the establishment of the CEWH was a key reform under the Water Act. The role of the CEWH is to manage the water entitlements purchased under the RtB program and from other sources³⁹, to benefit the environment (see Figure 1.6). The position of CEWH is currently held by a division head within the department.

³⁶ The Water Group includes three divisions—Water Efficiency, Water Reform and Water Governance.

³⁷ The panel was established in June 2009, after the first two tenders had been completed. It comprises a cross-section of stakeholders including irrigators, environmentalists, water experts and community members. The panel provides a forum for discussing the socio-economic impacts and environmental benefits of water purchasing. It also provides advice to the department on how best to disseminate information on the program.

³⁸ *Mid-year Economic and Fiscal Outlook 2010–11*, Commonwealth of Australia, Canberra, 2010, p. 217.

³⁹ Water entitlements are also acquired through the department's Sustainable Rural Water Use and Infrastructure program. Entitlements may also be gifted to the Commonwealth, and have been.

Figure 1.6

Hattah Lakes in Victoria, before and after being watered in April 2009



Source: M. Mohell, DSEWPac website

1.28 In deciding where to use available water, the CEWH's statutory obligation is to 'protect or restore environmental assets of the Murray-Darling Basin, and other areas outside the Basin where the Commonwealth holds water, so as to give effect to relevant international agreements'.⁴⁰ These agreements, as listed in section 4 of the Water Act, include:

- *Ramsar agreement*—an intergovernmental treaty that commits member countries to maintain the ecological character of their Wetlands of International Importance, and to plan for the 'wise use', or sustainable use, of all of the wetlands in their territories;
- *Bonn Convention*—an intergovernmental treaty, concluded under the United Nations (UN) Environment Programme, which is concerned with the conservation of wildlife and habitats on a global scale;
- *Convention on Biological Diversity*—which has three main objectives: the conservation of biological diversity; the sustainable use of the components of biological diversity; and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources; and
- *Migratory bird agreements*—with Japan, China and the Republic of Korea.

1.29 In carrying out statutory functions, the CEWH receives administrative support from within the Water Group, input from state government agencies and other parties, and scientific advice from an expert committee. For certain

⁴⁰ *Water Act 2007 (Cth)* sub-section 105(3).

functions, including deciding where to use available water, the CEWH can be directed by the Secretary of the department and the Minister. The Minister may also set operating rules relating to the CEWH dealing with water access rights and entering into contracts. Under the Water Act, the CEWH will be required to use environmental water in accordance with the EWP when the Basin Plan is finalised. The EWP is designed to safeguard existing environmental water, plan the recovery of additional water, and coordinate the use of environmental water across the Basin.⁴¹

Other environmental watering initiatives

1.30 Environmental watering activities are also undertaken by other parties within the Basin. All four Basin states—Queensland, South Australia, Victoria and New South Wales—have environmental watering strategies as part of their catchment operations. As well, from July 2011 Victoria will establish a state-level environmental water holder, to operate similarly to the CEWH.

1.31 Within the Basin jurisdictions, there are a number of past and current water recovery initiatives—the most significant of which is The Living Murray. The Living Murray is a joint water recovery initiative between the Commonwealth, New South Wales, Victorian and South Australian governments. The ‘first step’ of The Living Murray, which started in 2004 and has now ended, has recovered water entitlements that are expected to provide, in the long-term, an average of 472 GL of water per year for six ‘Icon’ sites along the River Murray (as of 30 October 2010).⁴²

External reviews

1.32 In March 2010, the Productivity Commission released a comprehensive report entitled *Market Mechanisms for Recovering Water in the Murray-Darling Basin*.⁴³ The report focused on the department’s RtB and Infrastructure programs, and the Basin Plan. Overall, the Commission concluded that the

⁴¹ The *Water Act 2007* defines ‘environmental water’. This includes both ‘planned’ and ‘held’ environmental water. Broadly, planned environmental water includes water that is committed or preserved by water-related plans or other legislative instruments for achieving environmental outcomes. Held environmental water is a ‘right’ (water access, water delivery, irrigation) for the purposes of achieving environmental outcomes.

⁴² These sites are: Barmah–Millewa Forest; Gunbower–Koondrook–Perricoota Forest; Hattah Lakes; Chowilla Floodplain and Lindsay–Wallpolla Islands; Lower Lakes, Coorong and Murray Mouth; and the River Murray Channel.

⁴³ The report can be found at <<http://www.pc.gov.au/projects/study/water-recovery>>.

design, scale, implementation and sequencing of policy initiatives to recover and manage water for the environment have not been ideal. The Commission made a range of findings and recommendations on the RtB program and related initiatives. The Government has yet to respond to this report.

The ANAO's audit approach

Objective and criteria

1.33 The objective of the audit was to assess whether the department's processes for purchasing water entitlements were well-administered, and whether sound arrangements were in place to support timely and effective decisions by the CEWH on the use of available water.

1.34 To meet this objective, the ANAO gave particular emphasis to examining whether:

- the department's methods for purchasing water entitlements were soundly-based, demonstrated value for money, and were conducted in a fair and transparent manner;
- the water purchasing and water use functions were well-coordinated and administered, to maximise environmental outcomes; and
- adequate arrangements were in place to monitor the health of watered sites as well as environmental conditions across the Basin, to inform future purchasing and use decisions.

1.35 More broadly, the audit considered whether risks to the success of the RtB program and the CEWH's functions were identified and mitigated in a timely and effective manner.

Scope

1.36 The audit examined key aspects of the first four tenders for the RtB program (as listed in Table 1.1). These tenders provided coverage across the Basin and resulted in expenditure in excess of \$1 billion. The 2008–09 tenders included the largest single purchase under the program—\$303 million to Twynam Agricultural Group. The audit also examined the Commonwealth's contribution to the purchase of Toorale station, the only purchase outside a tender process.

1.37 For the CEWH's functions, the audit focused on the decision-making process for providing available water to environmental sites in the first two

years of the CEWH's functions, 2008–09 and 2009–10. This period was characterised by a relatively modest volume of available water. In recognition of this, the ANAO also assessed the CEWH's preparedness for managing a steep increase in environmental water holdings.

Methodology

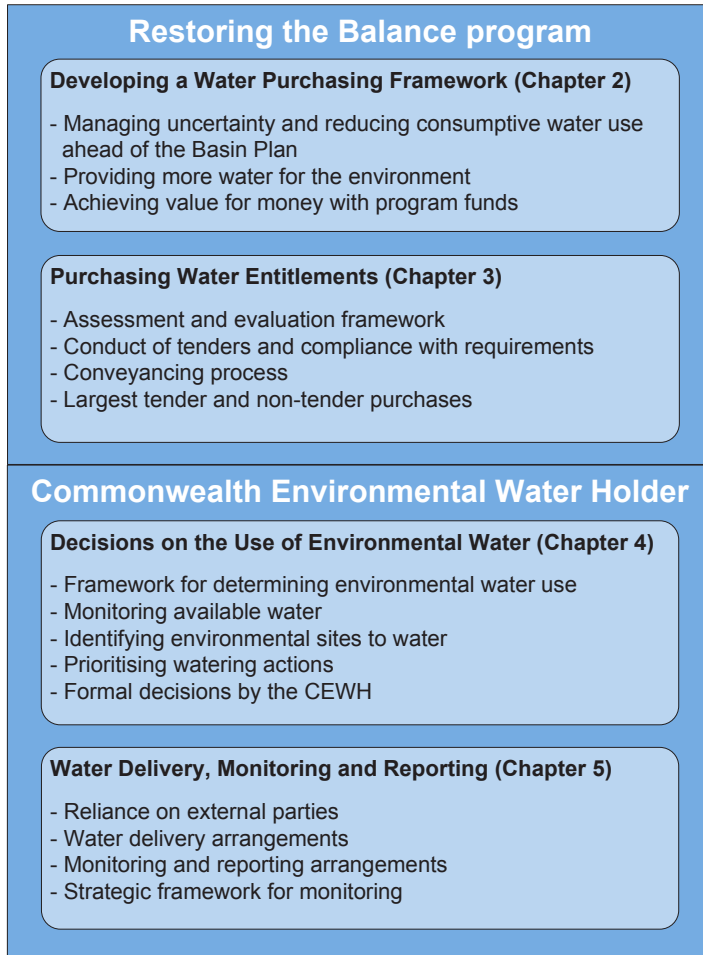
1.38 The audit was conducted in accordance with ANAO auditing standards at a cost of \$490 000. The audit methodology included:

- interviews with departmental staff and the CEWH;
- review and examination of departmental files;
- examination, on a sample basis, of successful and unsuccessful applications to sell water entitlements (the methodology used to select these applications is outlined at Appendix 2);
- examination, on a sample basis, of the CEWH's decisions in 2008–09 and 2009–10 to provide environmental water to sites within the Basin (listed at Appendix 3);
- discussions with stakeholders involved in the purchasing process or the delivery and monitoring of environmental water; and
- first-hand observation of a range of environmental sites that were receiving environmental water, or had previously been watered (listed at Appendix 4).

1.39 The structure of the report is illustrated in Figure 1.7.

Figure 1.7

Report structure



2. Developing a Water Purchasing Framework

This chapter examines the department's arrangements for developing a purchasing framework to promote the objectives of the Restoring the Balance program and to meet procurement requirements and other legislative obligations.

Introduction

2.1 At the time the RtB program commenced, large parts of Australia, including the Basin, were in the middle of a serious drought. In 2006–07, inflows to the Basin were the lowest on record. In a speech announcing the Government's *Water for the Future* initiative in April 2008, the then Minister for Climate Change and Water said:

We cannot afford to wait for a new Basin Plan to come into effect before more water can be returned to the environment. Under 'Water for the Future', over-allocation and declining river health are urgent priorities, and I intend to progress them now.⁴⁴

2.2 In this context, key considerations for the department in developing a purchasing framework for the RtB program were to:

- manage uncertainty about how much additional water is required for the environment, and to reduce consumptive water use, ahead of the Basin Plan being finalised;
- ensure that purchased entitlements can provide maximum benefit for the environment, recognising that the CEWH makes decisions on where to use available water; and
- demonstrate that 'value for money' has been achieved with program funds, as well as adhering to other procurement principles, including providing fair access for potential sellers of water entitlements.

2.3 Focusing on these three areas, the ANAO examined the department's arrangements for promoting the objectives of the RtB program and meeting procurement requirements and other legislative obligations.

⁴⁴ Excerpt from Speech to the 4th Annual Australian Water Summit, page 14, 29 April 2008.

Managing uncertainty and reducing consumptive water use ahead of the Basin Plan

2.4 One of the major challenges facing the department is that the RtB program, which commenced in 2007–08, is being implemented before the Basin Plan is due to be finalised. This means the program is seeking to achieve its objectives of reducing consumptive water use and providing more water for the environment before the additional watering needs of the environment are identified and Sustainable Diversion Limits (SDLs) are set.⁴⁵ As a consequence, a major risk for the RtB program is the prospect of purchasing more water in particular catchments than ultimately needed when the SDLs are set. Another risk is purchasing water in catchments where environmental watering needs are less urgent than elsewhere. Both risks would impact on the best use of program funds and the resulting environmental outcomes.

2.5 The uncertainty associated with the amount of water to be purchased can be expected to decrease as better information becomes available under the Basin planning process, and can be categorised into three main phases:

- Phase 1—from the outset of the RtB program in February 2008 until October 2010, when the *Guide to the proposed Basin Plan* was released;
- Phase 2—from the release of the Guide to the finalisation of the Basin Plan, when better information is available, including through the proposed Basin Plan, due in 2011; and
- Phase 3—following the adoption of the final Basin Plan by the Minister, now due in 2012, when SDLs are set and are legally binding.

Availability of scientific knowledge of watering needs

2.6 At the outset of the RtB program, the department did not have the same level of scientific information that is required to underpin the final Basin Plan, and which is being progressively assembled by the MDBA. As a result, the department did not have sufficiently rigorous information on which to develop reliable targets for how much water to purchase in each catchment, and, consequently, to develop a program-level purchasing strategy.

⁴⁵ In developing the Basin Plan, the MDBA is required to act on the basis of the best available scientific knowledge and socio-economic analysis. See paragraph 21(4)(b) of the *Water Act 2007*.

2.7 In initial briefings to the then Minister, the department indicated an overall water recovery target of 1000 GL⁴⁶, which was two-thirds of the 1500 GL target identified in Labor's 2007 election statement.⁴⁷ However, as of 30 June 2010, the department had acquired 863 GL of water entitlements (or 650 GL on a long-term cap equivalent basis), from expenditure of \$1.37 billion. Therefore the target of 1000 GL may be conservative for what can be achieved with total program funding of \$3.1 billion.

2.8 In the absence of more complete scientific knowledge, the department recognised that it would be expected to use the best available information to inform decisions on where to concentrate its purchasing and how much water to acquire in particular locations. To this end, the purchasing strategies for the first four tenders included information to explain and justify the basis for the preferred locations of water purchases. These strategies were endorsed by the internal project board and approved by the then Minister. The department adopted what it called a conservative 'no-regrets' approach to purchasing ahead of the Basin Plan being finalised.⁴⁸ The department also advised the ANAO that its decision to purchase water on a tender-by-tender basis reflected its intention to recover water on a more cautious basis ahead of the Basin Plan being finalised.

Purchasing strategies for the first four tenders

2.9 In the first phase of the RtB program, prior to the release of the *Guide to the proposed Basin Plan*, the department spent some \$1.37 billion on purchasing water entitlements. These purchases were principally made through seven tenders, the first four of which were examined by the ANAO.⁴⁹ As illustrated in Figure 2.1, the pace of expenditure ahead of the Basin Plan, was significantly faster than was anticipated in the original funding profile for the program.

⁴⁶ Based on a long-term cap equivalent basis, which takes into account reductions in water availability resulting from the effects of climate change.

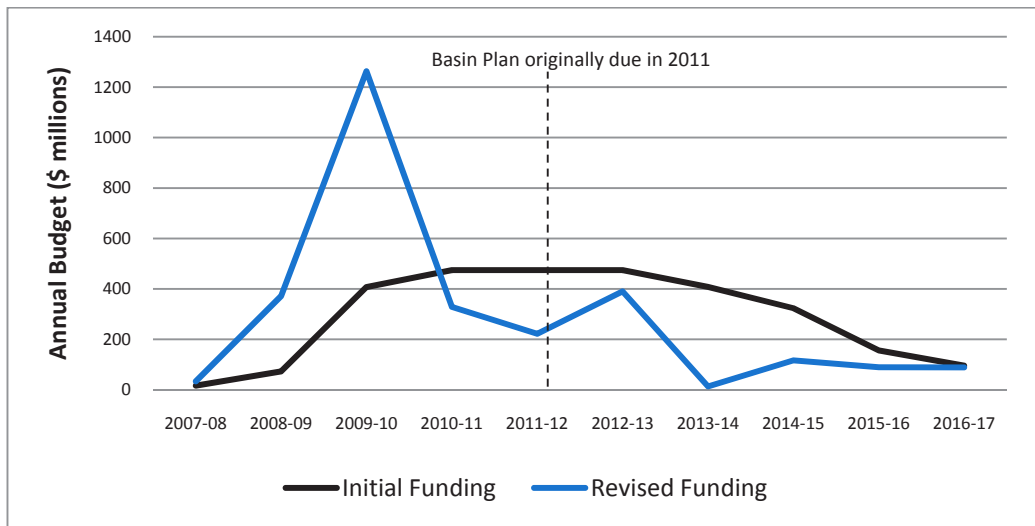
⁴⁷ See page 14 of *Labor's national plan to tackle the water crisis*, Election 2007 Policy Document.

⁴⁸ This approach is described as 'being done by directing purchase to catchments with the highest environmental need whilst also ensuring that water is not acquired in excess of the estimated reduction in diversions required by the new lower sustainable diversion limits expected in the Basin Plan. Environmental needs are determined using the best available science from a range of information sources.'

⁴⁹ As noted in Table 1.1, these included the 2007–08 Basin-wide tender, the 2008–09 northern and southern basin tenders, and the first 2009–10 southern tender.

Figure 2.1

Original and revised funding profile for the RtB program, 2007–08 to 2016–17



Source: ANAO, based on the department's data as of 30 June 2010

2007–08 Basin-wide tender

2.10 The approved strategy for the 2007–08 Basin-wide tender, which had a budget of \$50 million, stated that purchasing priorities would be guided by existing watering programs that had sound governance and water management arrangements. This strategy included the six 'Icon' sites under The Living Murray initiative in the southern Basin, and the Macquarie and Gwydir wetlands in the northern Basin. All of these sites were regarded to be of international or national significance. For each site, the purchasing strategy summarised the ecological objectives and the required watering regimes to meet these objectives. The strategy also confirmed that the water recovery targets for the sites in the southern and northern Basin fell well within the volumes required to meet environmental watering needs. It further stated that the targets set for priority sites took account of water being purchased through other programs, such as The Living Murray and the NSW Riverbank program.⁵⁰

⁵⁰ NSW RiverBank is a \$105 million environmental fund set up by the NSW Government to buy water for the state's most stressed and valued inland rivers and wetlands for five years until 2011.

2.11 The department developed and published the following four evaluation criteria to guide its purchasing decisions in the 2007–08 tender:

- ability of the entitlement to service priority environmental assets;
- watering needs of the environmental assets the entitlement can serve;
- capacity of the CEWH to use the water entitlement to deliver water that will benefit the environment; and
- financial cost of acquiring and managing the entitlement.

2.12 The decision to conduct the first tender across the whole Basin, rather than targeting particular catchments where priority assets were located, reflects a less structured approach than has been taken in all other tenders. For each subsequent tender, the department defined the particular catchments to recover water from and limited offers only to those catchments.

New scientific information to guide subsequent tenders

2.13 The department's purchasing strategies for the following three tenders (and all subsequent tenders) drew on the data and findings from two scientific reports, which were released after the 2007–08 tender, had been completed. These were:

- the Murray-Darling Basin Commission's⁵¹ (MDBC) *Sustainable Rivers Audit*, which was completed in June 2008; and
- the Commonwealth Scientific and Industrial Research Organisation's (CSIRO's) *Water Availability in the Murray-Darling Basin*, which was completed through the Sustainable Yields Project in October 2008.

2.14 In brief, the MDBC's report provided an assessment of the ecosystem health for 23 major river valleys, and rated each valley (or catchment) on a five-point scale—good, moderate, poor, very poor and extremely poor. In turn, CSIRO's report provided a detailed basin-scale assessment of the anticipated impacts of climate change, catchment development and groundwater extractions on the availability and use of water resources. Both reports provided the department with more reliable information to guide its purchasing activities in the Basin. The MDBA is also drawing on these reports and other information in preparing the Basin Plan. Using the information from the *Sustainable Rivers Audit*, the department prioritised the catchments within

⁵¹ In December 2008, the Commission was disbanded and replaced by the Murray-Darling Basin Authority.

the Basin into three categories—high, moderate and lower priority—for each subsequent tender (Table 2.1).

Table 2.1

Prioritisation of catchments in the Murray-Darling Basin for the first four tenders under the RtB program

Priorities	2007–08 Basin-wide	2008–09 Northern Basin	2008–09 Southern Basin	January 2009–10 Southern Basin
High	<ul style="list-style-type: none"> • Southern-connected Murray system • Macquarie • Gwydir 	<ul style="list-style-type: none"> • Lower Condamine-Balonne • Gwydir • Macquarie 	<ul style="list-style-type: none"> • Southern-connected Murray system 	<ul style="list-style-type: none"> • NSW Murray • Murrumbidgee • Lower Darling • SA Murray • VIC Murray • Kiewa • Goulburn • Campaspe • Loddon
Moderate		<ul style="list-style-type: none"> • Border Rivers, Barwon-Upper Darling, Upper Condamine 	<ul style="list-style-type: none"> • Lachlan 	
Lower		<ul style="list-style-type: none"> • Moonie, Paroo, Warrego and Castlereagh 		<ul style="list-style-type: none"> • Wimmera-Mallee • Broken • Avoca • Ovens

Source: ANAO, based on the department's Program Information and Guidelines for the RtB program

2.15 The catchments categorised as high priority were believed to require additional water to maintain environmental values and health. They were also assessed as requiring additional water under the CSIRO's climate change scenarios. All catchments were rated by the CSIRO as having 'superior' environmental assets. However, unlike the 2007–08 tender, the purchasing strategy for the subsequent three tenders did not list the priority environmental assets that were intended to be the beneficiaries of water provided against the purchased entitlements.

Internal water purchase targets

2.16 The department has used the information from the CSIRO project to set upper limits on the amount of water needed to be recovered in particular catchments. These limits reflect the estimated reduction in surface water availability resulting from climate change.⁵² This information was used during the 2008–09 northern tender, when the department recommended a halt to further water entitlement purchases in the Gwydir catchment to avoid recovering more water than was needed. This recommendation was endorsed by the department's project board and subsequently agreed to by the then Minister.⁵³

Evaluation criteria for the subsequent tenders

2.17 The three criteria that were developed to guide purchasing decisions for the three tenders reflect the focus on catchments, rather than individual sites. That is, the:

- ability [of the entitlement] to provide more water in a *catchment* where scientific evidence indicates that more water needs to be recovered for the environment;
- capacity to deliver the water for an environmental benefit; and
- relevant costs (including the offer relative to market prices, transactions costs and management costs).

Liaising with the Murray-Darling Basin Authority

2.18 Since the MDBA is required to draw on the best available scientific and socio-economic knowledge in preparing the Basin Plan, it makes sense for the department to liaise closely with the Authority, to inform the development of its purchasing strategies.

2.19 The department advised the ANAO that it has maintained close informal contact with the MDBA during the RtB program, and that representatives from both the department and the MDBA attend committees to discuss water-related matters. The department has not sought to formalise its

⁵² The CSIRO project identified different climate change scenarios and the effects on water availability. The department's internal targets were based on the 'mid-point' climate change scenario.

⁵³ As discussed later in this chapter, the cuts proposed by the MDBA in the *Guide to the proposed Basin Plan*, while subject to ongoing consultation, indicate that the department has so far avoided the risk of over-purchasing in the Gwydir catchment, as with all other catchments.

relationship with the MDBA through, for example, regular structured meetings, noting that the MDBA is an independent body.

2.20 In December 2009, following the first three tenders, the department wrote to the MDBA explaining its purchasing approach and seeking confirmation that it was in line with the Basin planning process. Overall the purchasing approach described by the department was consistent with the process evident in the four tenders examined by the ANAO. The main exception is that the department told the MDBA that ‘purchasing is restricted to those entitlement types whose reliability profiles match identified environmental needs’. As discussed later in this chapter, the ANAO found no evidence that the department explicitly considered the reliability of entitlements that would be needed to meet the short or longer term needs of particular assets. The department was focusing its purchasing on catchments, rather than buying entitlements to meet the needs of particular environmental assets.

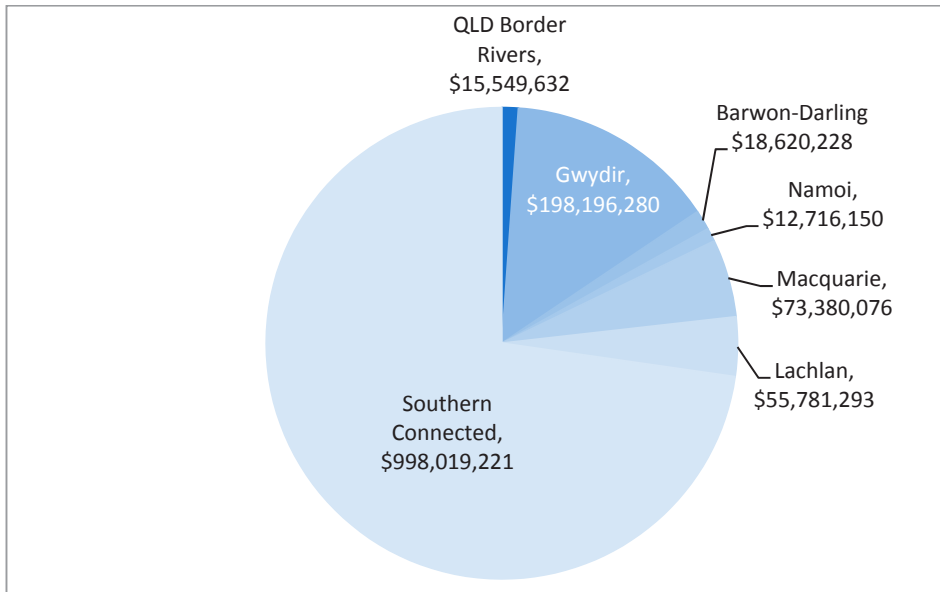
2.21 The MDBA responded to the department’s letter in January 2010, noting that, in general terms, the purchasing principles set out by the department are broadly consistent with the approach being taken by the MDBA in developing the proposed Basin Plan. There was also a suggestion that the agencies continue to work together throughout the development of the Basin Plan. The department informed the ANAO that it intends liaising closely with the MDBA in the lead up to the final Basin Plan.

Purchasing outcomes

2.22 Across the seven tenders undertaken at 30 June 2010, and the purchase of Toorale station, the department had purchased water in 16 (of 22) catchments in the Basin. As illustrated in Figure 2.2 the department has concentrated its purchasing in the southern-connected system, followed by the Gwydir and Macquarie catchments. These areas account for approximately 93 per cent of total program funds committed as of 30 June 2010, and were consistently identified as priority catchments (where they were included) across the four tenders examined by the ANAO. In addition, in 2009–10, the department conducted a tender to purchase entitlements in the Lower Balonne, which was also identified as a priority water recovery catchment.

Figure 2.2

Cost of water entitlements, by catchment, purchased under the RtB program, 2007–08 to 2009–10¹



Note 1: Figure 2.2 excludes certain catchments and entitlement types due to commercial sensitivity.

Source: ANAO, based on the department's data at 30 June 2010

2.23 During the first seven tenders, the department also purchased entitlements in catchments that were rated as moderate or lower priorities in its purchasing strategies. These catchments included the Warrego, Border Rivers and Lachlan. However, with the exception of the Lachlan catchment, where the department has committed over \$55 million, the expenditure has been immaterial in the context of the overall budget for the RtB program.

Guide to the proposed Basin Plan

2.24 The release of the *Guide to the proposed Basin Plan* in October 2010 marked an important event for the RtB program, as for the Basin planning process. The Guide was not expected when the RtB program commenced, but was released by the MDBA as an extra step to the formal consultation processes required under the Water Act.⁵⁴ The Guide identified the range of additional water required for the environment, and listed the cuts to water

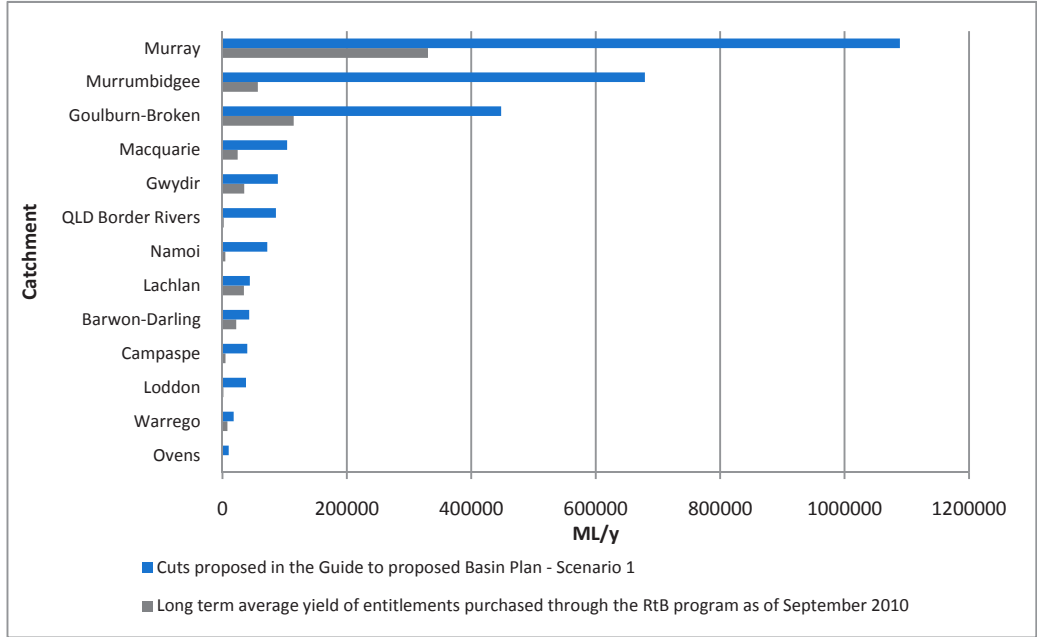
⁵⁴ Under the Water Act, the MDBA is required to produce a proposed Basin Plan for consultation, followed by a final Basin Plan for consideration, and ultimately, adoption by the Minister.

entitlements in different catchments across the Basin. These cuts, though subject to ongoing consultation, indicate that the department has avoided the major risk of over-purchasing in catchments (see Figure 2.3). In most catchments, there is significantly more water to be acquired than has been purchased under the RtB program, and through other water recovery initiatives. This risk was avoided even though significantly more program funding was spent in the first few years than originally intended.

2.25 The Guide also indicates that the department has concentrated its purchasing in the three catchments where the cuts to current consumptive water use are foreshadowed to be the deepest—namely, the Murray, the Goulburn-Broken and the Murrumbidgee.

Figure 2.3

Progress of purchases under the RtB program against cuts proposed under the *Guide to the proposed Basin Plan*¹



Note 1: This figure displays only those catchments where purchases have been made under the RtB program at 30 June 2010.

Source: ANAO, based on the department's records and the *Guide to the proposed Basin Plan*

2.26 In managing the risk of over-purchasing entitlements in particular catchments, the department also has to be mindful of the environmental water being acquired through other initiatives, such as the Sustainable Rural Water Use and Infrastructure (SRWUI) program and state-based water recovery

programs. The Guide indicates that, in catchments where additional water is required, considerably more water is needed than has been recovered under the RtB program and all other initiatives. A possible exception is in the Lachlan catchment, where combined water recoveries have exceeded the cuts for the most conservative water reduction scenario by about one GL. In this catchment, the department's purchases under the RtB program are under the proposed cuts; but this example highlights the need to coordinate water recovery initiatives within the department and with other Basin jurisdictions.

Future purchasing arrangements

2.27 The proposed cuts set out in the Guide, while still subject to ongoing consultation in the lead-up to the final Basin Plan, provide more certainty about where future purchasing efforts under the RtB program are likely to be focussed. The department has drawn on the information in the Guide in developing its purchasing strategies for two further rounds of tenders, announced in November 2010. The tenders have a total budget of \$300 million, with one focussing on the southern basin (\$200 million); the other on the Lower Balonne in Queensland (\$100 million). These regions were chosen by the department because, although SDLs are not yet set, they currently have the largest gaps between current diversion limits and the SDLs. The department describes this as a cautious approach designed to reduce the risk of over-purchasing should SDLs in the final Basin Plan be significantly different to the cuts proposed in the Guide.

2.28 The publication of the proposed Basin Plan, scheduled for 2011, is expected to provide more up-to-date information. The document will provide the department with another opportunity to review, and, where necessary, refine its purchasing priorities ahead of the Basin Plan being finalised.

Providing more water for the environment

2.29 The ultimate objective of the RtB program is to provide more water for the environment, for use by the CEWH. As previously noted, the poor health of the environment in the Basin was a strong justification for establishing the RtB program, and the need to take action ahead of the Basin Plan being finalised.

The difference between entitlements and actual water

2.30 Although the purchase of permanent water entitlements automatically contributes to the RtB program's objective of reducing consumptive water use,

the entitlements do not guarantee the same volume of actual water for the environment. The amount of water provided against entitlements in any year is variable and can range from nothing to the full share of the entitlement (see Figure 1.4 in Chapter 1).

2.31 The difference between entitlements and actual water, and the uncertainty of seasonal water availability presents a different set of challenges to the department in meeting the RtB program's objective of providing water for the environment. Among other things, this implies a need to:

- identify the watering needs of priority environmental sites and the timeframes for when water needs to be provided; and then consider:
 - what types and overall mix of entitlements would best meet the more immediate and ongoing needs of identified environmental sites, recognising that permanent entitlements can provide water year-on-year; and
 - whether a higher price for certain types of entitlements could be justified to secure a more reliable source of water for priority assets that need water urgently.

2.32 Since the CEWH is responsible for deciding where to use available water acquired under the RtB program, it also makes sense for the department to seek and consider the CEWH's input in developing its purchasing approach.

Purchasing strategies to address environmental needs

2.33 The department did not develop an overall strategy for meeting the RtB program's objective of providing water for the environment. Instead, it developed a purchasing strategy for each tender, and used criteria to guide its purchasing decisions during tenders.

2.34 An overall purchasing strategy was not developed because, at the outset of the program, the department had not identified, and no information was available elsewhere on, the watering needs of sites across the entire Basin. Even for the CEWH, there was limited information to draw on to inform the purchasing approach in the early years of the RtB program. The lack of scientific information is, however, a broader problem. In releasing the *Guide to the proposed Basin Plan*, the MDBA noted that:

The task of assessing Basin-wide and catchment-specific environmental water requirements has never before been undertaken in the Murray-Darling Basin. The key environmental assets of the Basin have never been comprehensively

identified or prioritised on a consistent basis at the Basin scale, and in many cases an assessment of their water needs has never been undertaken.⁵⁵

2.35 The limited, but emerging, knowledge base on environmental water needs at the start of the RtB program meant that the department did not have sufficient information on which to make decisions about the overall portfolio of entitlements to acquire, or the timeframe for meeting different environmental needs.

2.36 The department advised the ANAO that it has adopted a medium to long-term view when acquiring water entitlements for the environment. It also stated that the task of the RtB program is to acquire a 'good' portfolio of water for the environment, for use by the CEWH. However, this medium to long-term timeframe is not clearly articulated in any of the tender purchasing strategies, or in briefs to the then Minister. More particularly, the medium to long-term timeframe sits uneasily with the original justification for the RtB program, which was to provide more water to address urgent environmental needs. The department has also not defined the characteristics of a 'good' portfolio of water—although the ANAO understands that this involves consideration of various factors including:

- the appropriate mix of different types of entitlements, such as high security or general security entitlements;
- the cost of acquiring particular types of entitlements; and
- the location and flexibility of those entitlements.

2.37 Some of the key constraints on the acquisition of a 'good' portfolio include: the composition of different types of entitlements within Basin jurisdictions; the willingness of entitlements holders to sell desired entitlements types; and trading limits imposed by some jurisdictions.⁵⁶

⁵⁵ See page 58 of the MDBA's *Guide to the proposed Basin Plan*.

⁵⁶ For example, in 2009, the NSW Government imposed a 60 GL limit on the Commonwealth's purchase of water entitlements in that state.

Approach taken during the first four tenders to address environmental needs

2.38 For the 2007–08 Basin-wide tender, the department identified the watering needs of ten sites. These sites were well-known and six of them were already identified as ‘Icon’ sites under The Living Murray water recovery initiative. For the subsequent three tenders examined by the ANAO, the department focused its purchasing on a catchment basis. It did not separately identify the specific sites to be watered, or the relative importance and priority of those sites. The decision to focus purchasing on a catchment basis followed the release of better information through the CSIRO’s Sustainable Yields Project and the MDBC’s *Sustainable Rivers Audit*. This approach also recognised that within some parts of the Basin, particularly the southern-connected system, water that is provided against entitlements can be used to service a number of different environmental sites.

Capacity to deliver entitlements for an environmental benefit

2.39 From the 2008–09 tenders, the department considered the immediate and long-term factors that could affect the capacity of the CEWH to use water entitlements being offered for sale. These factors included:

- the management arrangements and infrastructure required to deliver and use water entitlements for environmental benefit;
- whether entitlements are able to provide water when it is needed;
- possible water losses through seepage, evaporation and extraction by other licensed water users; and
- the relevant state legislation and water sharing plans that govern the use of water entitlements and provide security over the property right.

2.40 The department categorised entitlements into three risk categories—high, moderate and low (see Table 2.2)

Table 2.2**Prioritisation of entitlements for tenders under the RtB program, 2008–09 to 2009–10**

Entitlement types	Risk rating
<ul style="list-style-type: none"> Overland flow licence remote from large volume channel Small volume channels, particularly when separated from a high value environmental asset by a dam (unregulated rivers in NSW and regulated and unregulated rivers in Queensland) 	High
<ul style="list-style-type: none"> Unregulated entitlements in Macquarie and Gwydir Queensland overland flow licence adjacent to large volume channels Large volume channels (unregulated rivers in NSW and regulated and unregulated rivers in Queensland) 	Moderate
<ul style="list-style-type: none"> Entitlements located upstream of high priority environmental assets where water is likely to flow for environmental benefit even in the absence of water management arrangements NSW, Victorian and South Australian regulated entitlements 	Low

Source: The department's Program Information and Guidelines for the RtB program

2.41 Key factors that determined the risk categorisation were whether the entitlements were regulated under a water sharing plan, and whether the entitlements were located upstream of priority environmental assets, so that the water could be delivered. The purchasing strategies examined by the ANAO also stated that:

The use of water acquired for the Commonwealth is intended to be flexible across a range of environmental assets and generally, where the acquisition would benefit more than one priority environmental value in catchments, these catchments have higher priorities.

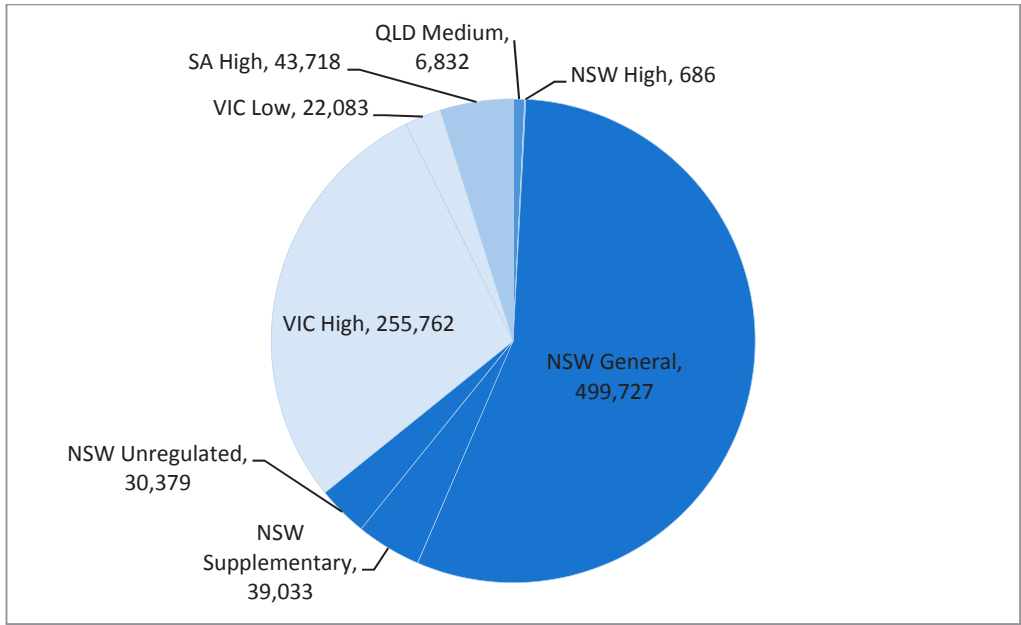
Reliability of entitlements

2.42 Although the department gave consideration to the environmental use of entitlements to be purchased, there was no explicit consideration in any of the first four tenders of the reliability of entitlements needed to meet more immediate needs in the catchments where purchases were being targeted. Matching the reliability profile of entitlements to the watering needs of priority sites was particularly important in the early period of the program, when less water was available for the environment. As illustrated in Figure 2.4, the department ended up with a reasonable mix of entitlements through the first four tenders. The purchased entitlements broadly reflect the composition of entitlements available in the catchments that have been targeted—notably the large number of general security entitlements from NSW. However, in the first

three years of the RtB program, when water availability was low, general security entitlements provided a less reliable source of water than high security entitlements.

Figure 2.4

Breakdown of the type of entitlements purchased under the RtB program by volume (megalitres) within each Basin state, 2007–08 to 2009–10



Source: ANAO, analysis of the department's data as at 31 July 2010

2.43 The combination of additional purchasing, and higher recent water allocations against entitlements held by the CEWH, means that there is now significantly more water for the environment than in the first few years of the program.

Formal input from the CEWH

2.44 As previously noted, the position of CEWH is currently held by a division head within the department's Water Group. In this role, the division head was a member of the internal project board that considered and approved the purchasing strategies for each tender. The staff that support the CEWH are physically co-located with the staff that administer the RtB program, so there is opportunity for regular contact. Notwithstanding these points, there was no protocol in place during the establishing of the RtB program, or currently, between the department and the CEWH to coordinate the water purchasing and water use functions. For the first four tenders examined by the ANAO,

there was also no evidence of direct and formal advice being provided by the CEWH, to inform the purchasing approach for these tenders. Limited advice was, however, provided from within the department's Water Group.

2.45 In the *Guide to the proposed Basin Plan*, the MDBA identified four key ecosystem functions relevant to all parts of the Basin, and 2442 key environmental assets spread across the Basin. As previously noted, the task of identifying these sites had never been undertaken before in the Basin. Along with the other information in the Guide, the grouping of key environmental assets provides a better basis to inform the development of future purchasing strategies under the RtB program, and the watering priorities of the CEWH.

Achieving value for money with program funds

2.46 The department's overriding obligation in spending program funds is to achieve 'value for money', and ensure that expenditure represents an efficient, effective and ethical use of public funds, that is not inconsistent with the policies of the Commonwealth.⁵⁷ Expenditure also has to be within annual and total funding limits set by the Parliament.

2.47 The CPGs state that the value for money principle requires a comparative analysis of all relevant costs and benefits throughout the procurement cycle. This approach is analogous to 'whole-of-life' costing, where all significant ongoing costs are considered, not just the immediate or upfront capital costs. The CPGs also underline the need to select a procurement process that allows efficient, effective and ethical use of resources.

Decision to use tenders as the principal purchasing mechanism

2.48 As noted in Chapter 1, the principal mechanism the department has used to purchase permanent water entitlements has been to conduct 'discriminatory price' tenders in the Basin. Although the tender format has been modified over the seven tenders conducted, the key features of the tenders are listed in Figure 2.5.

⁵⁷ See section 44 of *Financial Management and Accountability Act 1997*.

Figure 2.5

Key features of the department's tender format for the RtB program

- The department solicits non-binding bids or expressions of interest from sellers. Bids are subject to assessment against published criteria. If the criteria are met, a due diligence process is followed to verify the legal particulars of each bid.
- The department sets benchmark prices, which determine how much it is willing to pay for different entitlement types in different catchments. The benchmark prices are not disclosed to potential sellers. Bids at or under the benchmark prices are accepted in order of best value for money, subject to funding being available and other criteria being met.
- The department allows sellers to bid more than once during each tender or in subsequent tenders (if, for example, a previous offer was above the benchmark price).
- Sellers are able to withdraw their bids at any stage during the tender process, up until the point where sales contracts are exchanged with successful bidders.
- The decision on whether to purchase water entitlements is made by an authorised delegate, normally the head of the department's Water Recovery Branch.

Source: ANAO, based on the department's records

Rationale for choice of tender format

2.49 The department's decision to purchase water entitlements through tenders was informed by, and broadly follows, the approach taken by the MDBC in implementing The Living Murray initiative. The Living Murray was the first initiative of its kind in Australia and involved recovering 500 GL of permanent entitlements through a number of means, including market purchases by tender.

2.50 The decision to purchase entitlements for RtB through a tender process, and the method of securing ownership of entitlements, was also informed by advice from the Australian Bureau of Agricultural and Resource Economics (ABARE)⁵⁸, and a specialist conveyancing firm in October 2007. In both cases, the advice was sought by the then Department of Environment and Water Resources (DEWR), under the former Coalition Government.⁵⁹

2.51 In summary, ABARE advised the then DEWR that, in the presence of a water market, open market purchases are likely to be the most cost-effective mechanism for purchasing water. This advice was subsequently endorsed by the Productivity Commission in its 2010 study on *Market Mechanisms for Recovering Water in the Murray-Darling Basin*.⁶⁰ ABARE also advised that, in the

⁵⁸ Now called the Australian Bureau of Agricultural and Resource Economics and Sciences.

⁵⁹ In January 2007, the then Prime Minister announced a \$10 billion National Plan for Water Security. The Plan included a commitment to spend \$3 billion to address over-allocations in the Murray-Darling Basin.

⁶⁰ The report can be found at <<http://www.pc.gov.au/projects/study/water-recovery>>.

absence of a water market, and when competition from potential bidders is weak, a discriminatory price auction is likely to be more efficient. The setting of a reserve price was suggested as a way of reducing bidder collusion in a repeated auction format. In response, the department selected the expression of interest process as the most appropriate mechanism because it was regarded to be administratively straightforward, non-binding and would deliver water entitlements at the best value for money. This method became known as a 'rolling tender' because the process involved regular assessments of applications as they were received.

2.52 The conveyancing firm was asked to advise the department on the most cost-effective way of transferring ownership of purchased water entitlements to the Commonwealth. A draft report was provided to the then DEWR on 27 November 2007, followed up by a meeting between the parties. A final report was not available, nor was there any written departmental response to the draft report. The ANAO notes that the conveyancing process that the department has used to take ownership of water entitlements offered for sale during tenders (as outlined in Chapter 3) follows the key steps outlined in the firm's draft report.

External review of the 2007–08 Basin-wide tender

2.53 At the request of the then Minister, the department arranged for an external review of the first round of purchases under the RtB program. The final report, provided to the then Minister in September 2008, examined the purchasing strategy for the program, the economic impacts and the communication and stakeholder consultation carried out during the first financial year. Overall, the review concluded that the program was appropriate, efficient and effective. It made 18 recommendations to improve the strategy. In response, the department changed various aspects of its tender processes and purchasing arrangements from the 2008–09 tenders onwards.⁶¹

Review ongoing suitability and effectiveness of tender processes

2.54 With the exception of the direct purchase of Toorale station, the department has used tenders as its only purchasing mechanism for the RtB program. The ANAO recognises that, when the RtB program commenced, purchasing permanent water entitlements was a relatively new policy response

⁶¹ The 18 recommendations, and the department's response, can be found at <<http://www.environment.gov.au/water/publications/mdb/pubs/2007-08-review-response.pdf>>.

in Australia, with few local (or overseas) precedents for guidance. In this context, the department's decision to adopt a more traditional tendering approach, rather than engage in 'open market' purchases as recommended by ABARE (and subsequently by the Productivity Commission), reflected a judgement on its obligations to ensure efficient and effective use of public money, and demonstrate due process.

2.55 The department has continued to use tenders as its principal purchasing mechanism following the release of the *Guide to the proposed Basin Plan*. The department recognises, however, that, as the RtB program progresses, tenders may provide a less viable mechanism—especially in circumstances where the remaining water recovery 'gap' in particular catchments becomes smaller and/or if there are too few sellers offering targeted entitlements for sale. In such circumstances, there would be benefit in the department revisiting the advice of ABARE and the Productivity Commission, and explore more direct procurement methods, to supplement the tender processes that have been used to date.

2.56 The setting of SDLs in the final Basin Plan may provide the appropriate catalyst and timeframe for considering new purchasing approaches. The SDLs will provide greater certainty on the watering needs of the environment. They will also indicate the extent to which the RtB program has helped to close the gap in each catchment between the SDLs and past extraction levels. Providing any new approaches are conducted on a manageable scale and with due regard to procurements principles, they would allow the department to test claims by external reviewers about the relative cost savings of more direct 'open market' approaches. In turn, this would better inform its decision to rely predominantly on tenders to purchase permanent water entitlements.

Basis for determining value for money

2.57 All four tender strategies examined by the ANAO explicitly recognised the need to achieve value for money, and explained how this would be achieved. As outlined previously, there were variations in the criteria used for the 2007–08 tender, which focussed more on specific environmental sites, than the following three tenders, which focused more on priority catchments (Table 2.3).

Table 2.3**Criteria used to evaluate the value for money of offers during the first four tenders under the RtB program**

2007–08 Basin-wide tender	2008–09 southern and northern tenders and 2009–10 southern tender
<ul style="list-style-type: none"> • The sell offer relative to the prevailing market prices • The priority of the target environmental assets • The transaction costs associated with the purchase • The costs incurred in delivering water to the target assets 	<ul style="list-style-type: none"> • The ability [of the entitlement] to provide more water in a catchment where scientific evidence indicates that more water needs to be recovered for the environment • Capacity to deliver the water for an environmental benefit • Relevant costs

Source: The department's Program Information and Guidelines for the RtB program

2.58 For the subsequent three tenders, the first two evaluation criteria were described as 'threshold criteria'. Only if these two criteria were met, would the relative cost of entitlements being offered for sale be considered.

Setting price benchmarks

2.59 For all four tenders, the central mechanism that the department used to determine the price it would pay for entitlements was to set price benchmarks based predominantly on the prices that had previously been paid for different types of entitlements in different catchments.

2.60 For the 2007–08 tender, the department engaged an external consultant to conduct an assessment of market prices in the Basin. The market information obtained by the consultant included recent prices and brokers' asking prices. This information was then compared against the historical average allocation provided by the entitlements—otherwise known as the 'long-term cap equivalent' (LTCE)—to produce a cost-per-megalitre value. The use of LTCE allows comparison between entitlements that have allocation characteristics that vary across catchments and security types. LTCE can be a useful approach for assessing and comparing value over the longer term when environmental needs can be met from a number of different upstream tributaries. But because LTCE is not designed to forecast short-term water allocations, it is less useful when considering the shorter term needs of the environment.

2.61 The LTCE valuation allowed market price benchmarks to be determined for different types of entitlements. The strategy employed meant that offers to sell preferred entitlement types in target catchments that were

under the price benchmark would be automatically accepted, as they would represent good value for money. The strategy also allowed offers up to 10 per cent above the price benchmark⁶² to be accepted if the expenditure target was not met, and if the entitlements were from target catchments.

Price benchmarks for subsequent tenders

2.62 The department followed a similar, but improved, approach to setting price benchmarks for the three subsequent tenders. For all three tenders, the department engaged external parties to provide historical information on market prices, to inform decisions on the benchmark prices across different catchments and types of entitlements. In addition, for the January 2010 tender, the prices included information sourced from state water registers, brokers, water trading platforms and imputed valuations of the capitalised value of future expected water allocations. The department also engaged the consultant to undertake surveys of water brokers and exchanges on the entitlement prices within the Basin. The benchmark prices were set by the department after all this information had been taken into consideration.

2.63 The department has published the average prices paid for entitlements for the 2008–09 and January 2010 tenders, and subsequent tenders. This was done to aid transparency and to encourage competition. It was also in response to a recommendation from the external review of the 2007–08 tender. Appendix 5 lists the average prices for the first six tenders under the RtB program.

2.64 Across the four tenders examined, benchmark prices were revised once during the 2007–08 tender, and twice during the 2008–09 tenders. The changes were approved by the authorised delegate. The shorter duration tenders that the department has conducted since January 2010 reduce the risk of market prices changing during the tender, and hence the need for review of pre-determined benchmark prices. The shorter, more targeted tenders undertaken since January 2010 (that specified the catchments and type of entitlements being considered) also meant that price became the key criterion used to differentiate between offers from potential sellers.

⁶² In a subsequent brief to the then Minister, the department said that offers up to 20 per cent above benchmark prices might be considered if the market is 'sluggish' and if entitlements can deliver significant environmental benefits.

Other relevant costs

2.65 For all four tenders examined, the published criteria noted that there would be a range of costs considered beyond the benchmark price. These included transaction costs, management costs and costs associated with any trade restrictions applying to the entitlements being purchased (Table 2.4).

Table 2.4

List of relevant costs for the department's water entitlements

Category	Description
Transaction costs	The costs of obtaining approval for the trade and transferring ownership to the Commonwealth. As this is a fixed cost for each transaction, larger parcels of water will be preferred
Management costs	These include future storage and delivery costs, as well as the cost of delivering and maintaining partnership arrangements for the water
Trade restrictions	Any restrictions that would add to the financial and administrative cost of transferring the entitlement

Source: The department's Program Information and Guidelines for the RtB program

2.66 The purchasing strategy for the 2007–08 tender did not explicitly discuss how these other costs would be considered in evaluating the value for money of entitlements being offered for sale. The additional costs were not incorporated into the price benchmarks for this tender. In particular, the 2007–08 tender, as with the following three tenders, did not identify the costs of delivering the water and maintaining partnership arrangements. In practice, some management costs (including on-ground delivery costs, which are site-specific) were not known until the CEWH made decisions on where to use water allocated against purchased entitlements.

2.67 Transactions costs were more explicitly considered for the January 2010 tenders. Specifically, the estimated cost of conveyancing services was incorporated into the price criterion, under 'value for money' index. Applications were initially assessed against the price benchmark and then against the index. Applications were successful if they passed both stages for this criterion.

2.68 Overall, the department has made a concerted effort to base its purchasing decisions on a 'value for money' basis. The major costs and benefits involved in purchasing entitlements were identified, and incorporated into purchasing strategies before program funds were committed. Some of the management costs, however, are site-specific and could be excluded from the

department's criteria as they are not being used to evaluate the value for money of sellers' offers.

Conclusion

2.69 The decision to implement the RtB program before the Basin Plan was finalised provided additional challenges for the department in administering the program and in demonstrating value for money with program funds. The major challenge, particularly in the initial years of the program, was uncertainty about how much water was needed in advance of SDLs being set. Related to this was the lack of more comprehensive scientific data on the watering needs of environment sites across the Basin.

2.70 The department took a tender-by-tender approach to purchasing water entitlements. For each of the four tenders examined, the department developed and documented a clear approach to identifying and assessing value for money, and meeting other procurement principles. The decision to use discriminatory price tenders as the principal purchasing mechanism took appropriate account of the department's obligation to provide open and fair treatment of potential sellers, while also providing a good basis to assess and select the best value offers. For each tender, the department identified clear criteria to assess the value for money of offers, which addressed both the expected benefits and known costs of purchasing entitlements. In practice, price benchmarks play the central role in discriminating between offers, and the department's processes for identifying current market information have improved since the start of the program.

2.71 The release of *Guide to the proposed Basin Plan*, while subject to ongoing consultation, indicates that the department has avoided the major risks of over-purchasing in particular catchments or concentrating purchasing in lower priority catchments. The Guide also provides more reliable information on which to base future purchasing strategies. The department has drawn on the information in determining the location and relative importance of the latest round of tenders announced in November 2010.

2.72 In light of the better information available under the Basin planning process, it is now timely that the department develop a more explicit program-level purchasing strategy to guide the expenditure of the remaining program funds (around \$1.5 billion). The strategy could provide clearer articulation of the department's purchasing priorities (location, type of

entitlements sought, timeframe for delivery), the anticipated pace of expenditure and linkages with relevant stakeholders, including the CEWH.

2.73 The first iteration of the strategy could focus on the period up until the adoption of the final Basin Plan, when some uncertainty and risk remain about the overall volume, and locations, of additional water needed for the environment. The strategy could then be reviewed and, where necessary, refined after the final Basin Plan is adopted, when water requirements are known and take legislative effect.

2.74 In developing, and refining, a purchasing strategy for the RtB program, the department should give particular emphasis to:

- identifying and managing risks to the achievement of the RtB's program's objectives in each purchasing phase;
- establishing more formal arrangements to seek the input of key stakeholders, including the CEWH and the MDBA; and
- reviewing the suitability of purchasing mechanisms, especially when a more targeted approach is required in particular catchments.

2.75 Since the RtB program is also being used to meet the Government's commitment to acquire all environmental water under the final Basin Plan, the department will also need to ensure that any purchasing strategy takes appropriate account of how much water is expected to be recovered under other initiatives, including the SRWUI program.

Recommendation No.1

2.76 In light of the better information available under the Basin planning process, the ANAO recommends that the Department of Sustainability, Environment, Water, Population and Communities develop and regularly review an overall purchasing strategy for the Restoring the Balance program. The strategy should be developed in consultation with the Commonwealth Environmental Water Holder and other key stakeholders, and include:

- (a) an assessment of current and future risks to meeting the objectives of the program and providing 'value for money';
- (b) consideration of appropriate purchasing mechanisms in the short, medium and long-term; and
- (c) formal communication protocols within the department and with key external stakeholders.

Department's response

2.77 Agreed. Since the outset, the approach to implementing the Restoring the Balance in the Murray-Darling Basin program has been to identify environmental water purchasing priorities using the best available information. The information which has been collated to support the Basin planning process and publicly released provides the opportunity for the Department to clarify its purchase strategy. As the information collected to underpin the development of the final Basin Plan is still being improved, including as a result of ongoing extensive stakeholder consultation, it will be important that the strategy is regularly reviewed and updated as the quality and extent of available information improves.

3. Purchasing Water Entitlements

This chapter examines the department's processes for purchasing water entitlements through tenders, including the timeliness of providing entitlements to the Commonwealth Environmental Water Holder. The largest tender and non-tender purchases are also separately examined.

Introduction

3.1 As of 30 June 2010, the department had completed seven tenders in the Basin, and contributed to the purchase of Toorale station. In total, these purchases secured 863 GL of water entitlements, at a cost of \$1.37 billion.

3.2 The ANAO examined whether key aspects of the first four tenders conformed to published tender guidelines and Commonwealth procurement principles. As previously noted, these were the 2007–08 Basin-wide tender, the northern and southern tenders in 2008–09, and the January 2010 southern tender. The audit also assessed whether the tender processes were timely in finalising the purchase of water entitlements, for use on the environment by the CEWH. The rationale and assessment processes for the largest tender and non-tender purchases were also examined separately.

Assessment and evaluation framework

3.3 As discussed in Chapter 2, the broad parameters for each tender—including the location, budget, timing and applicable evaluation criteria—were endorsed by the internal project and approved by the then Minister. The key responsibilities of the department's Water Recovery Branch, which administers each tender, was to adhere to the parameters set for each tender, and to adopt good principles and practices in the conduct of tenders. This includes adopting a consistent and fair approach to assessing applications, so that all applicants are treated equitably; and having clear documentation to support and justify all key decisions made.

Tender guidelines

3.4 The department developed an information pack for the four tenders examined by the ANAO. This pack included program guidelines that outlined the eligibility requirements, evaluation criteria and indicative timeframes for processing applications and transferring ownership of water entitlements. Supporting documents included an application form, relevant fact sheets and

frequently asked questions, to assist with the application process. The information pack was posted on the department’s website prior to each tender.

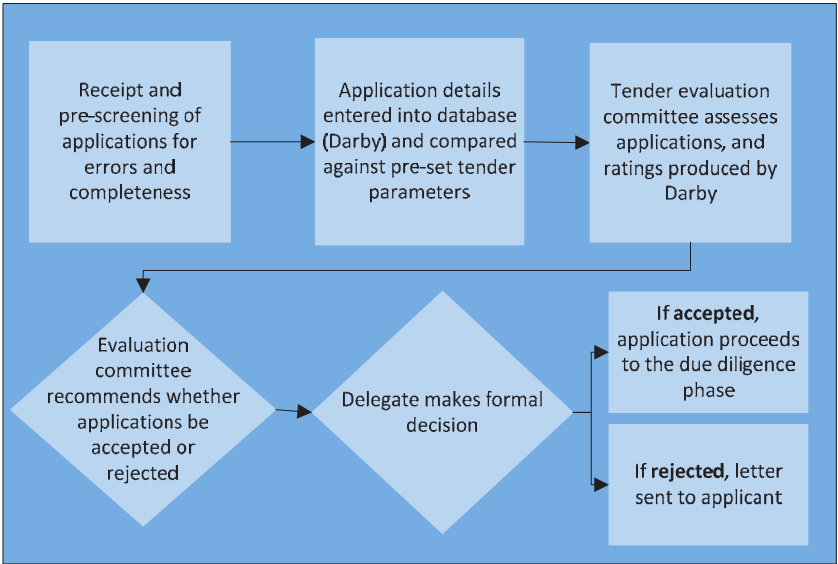
3.5 The four tender guidelines examined by the ANAO had been modified in line with the applicable purchasing strategy, as endorsed by the project board and approved by the then Minister. That is, the guidelines listed the geographical location of the tender, evaluation criteria, the assessment timeframe and, where relevant, the tender budget. The guidelines also described any trading constraints affecting the RtB program.

Key steps in the assessment process

3.6 While there were some differences in the purchasing parameters for the first four tenders, the framework that the department used to process applications remained largely the same across the tenders. The first phase of the tender process, as illustrated in Figure 3.1, involved the assessment and evaluation of applications by departmental staff. This phase was followed by a conveyancing process to transfer the legal ownership of eligible entitlements to the Commonwealth.

Figure 3.1

Key steps in the assessment and evaluation processes for applications received under the RtB program, 2007–08 to 2009–10



Source: ANAO, based on the department’s records

Receiving applications and entering details into Darby

3.7 For the first seven tenders, the department used an internal access database (called Darby) to hold the details of applications and to perform basic processing functions. Staff manually loaded information into Darby after checking applications for errors and completeness.

3.8 The basic processing functions undertaken within Darby involved matching the details of applications against the following parameters for each tender, as approved by the project board and the then Minister:

- the catchments in which the entitlements were held;
- the types of entitlements offered for sale; and
- the applicable price benchmarks set for specific locations and types of entitlements.

3.9 For the first three tenders, Darby assigned pre-set ratings of 'low', 'medium' or 'high' priority to each application, based on an assessment of the type and location of entitlements. The sale price was assessed as 'pass' or 'fail', according to whether it was below or above the price benchmark for that catchment and entitlement type. From the January 2010 tender, all criteria were assessed as either 'pass' or 'fail'.⁶³

Replacing Darby with a customised module in SAP

3.10 An important change to the department's arrangements for processing tender applications is the replacement of Darby with a customised module in the department's financial management system (SAP) called the Water Entitlement Purchasing System. This system, which was trialled in September 2010, was initiated in response to an internal audit in 2009 that identified various shortcomings with Darby, including:

- the lack of capacity to generate a full suite of management reports;
- no configuration to enable registration of applications (instead a separate excel spreadsheet was used);
- no capacity to record certain information, such as the contract exchange date; and

⁶³ The rating classifications changed to 'pass' or 'fail' as a result of the department targeting only 'high priority' catchments in subsequent tenders.

- the inability to automate processes, including issuing letters to applicants.

3.11 The ANAO also noted the absence of a history log to show the benchmark prices for all completed tenders (although the history of benchmark prices was recorded on tender files). As the parameters changed for each tender, the previous information was overwritten with the latest tender data.

Evaluation plan and committee

3.12 The assessment phase of the tender process was supported by an evaluation plan, which was produced for all four tenders. Each plan detailed the roles, responsibilities, procedures and steps to be followed by relevant staff when assessing applications. The plans were an internal probity guide for staff and reflected tender guidelines and key Commonwealth procurement requirements. Each plan was approved by an external probity advisor engaged by the department.⁶⁴

3.13 As provided for in each evaluation plan, the department established an evaluation committee for all four tenders. The committee's role was to evaluate all applications for each tender and produce an evaluation report that contained recommendations to the authorised delegate on which applications should proceed to the conveyancing phase. The committee's role was to evaluate the assigned ratings from Darby and to seek advice on any unusual applications outside the intended tender parameters (for example, new types of licences or catchments that had not been submitted through previous tenders).

3.14 For the first three tenders, the committee comprised eight staff from the department's Water Group, and was chaired by a staff member from the branch that administers the RtB program. For these tenders, the committee included four members from the Environmental Water Branch that provides administrative support to the CEWH. However, from the January 2010 tender onwards, there was no direct representation from this branch on the committee. Instead, the evaluation plan noted that the committee may call

⁶⁴ The department's probity advisor for the first two years was the Australian Government Solicitor. From the January 2010 tender onwards, a different provider was engaged as the probity advisor for the program.

upon any staff member in the department or advisory organisations for specialist support, which included the Environmental Water Branch.

Probity issues

3.15 In line with good practice, members of the evaluation committee were required to advise any potential or existing conflicts of interest at the outset of the evaluation process and to submit relevant forms. No such conflicts were advised or emerged during the first four tenders. Committee members were also required to complete and execute a deed of confidentiality. This was done in all cases and for each relevant tender.⁶⁵

3.16 The department took additional steps to ensure the confidentiality of price benchmarks for each tender, which were considered commercially sensitive. The benchmarks for each tender were restricted to certain staff and were held in secure storage. They could only be accessed subject to the written approval of the chair of the evaluation committee.

Applications received and pursued

3.17 Across the four tenders examined by the ANAO, the department received and assessed a total of 6756 applications. Some 2346 (or 35 per cent) of these applications were pursued to the conveyancing phase, and 4410 (or 65 per cent) were rejected during the assessment phase. The number of applications received and pursued for each tender, along with budgeted expenditure, are listed in Table 3.1.

Tender parameters influenced processing arrangements

3.18 The key parameters for each tender influenced the department's arrangements for processing applications. In particular, the duration of tenders affected both the frequency of assessments and the number of applications received. For the first three tenders, which had no announced closing dates, assessments were carried out on a fortnightly basis. This approach was taken to ease the workload on staff and to promote the timely finalisation of applications through the conveyancing phase. In contrast, for the January 2010 tender, which had a closing date, only one assessment was undertaken for the entire tender.

⁶⁵ The declaration stated that the staff member did not have any personal, financial or professional relationship with potential applicants, employees or advisers of any potential applicant, and that there was no personal benefit arising from any potential conflict.

Table 3.1**Applications received and assessed for the first four tenders under the RtB program**

Tender	Duration	Budget (\$m)	Received	Pursued	Not pursued
2007–08 Basin-wide	3 months	50	979	103 (10%)	876 (90%)
2008–09 Northern tender	9 months	157 ¹	476	92 (19%)	384 (81%)
2008–09 Southern tender	8 months	-	4010	2073 (52%)	1937 (48%)
January 2010 Southern tender	3 weeks	90	1291	78 (6%)	1213 (94%)
Total		297²	6756	2346 (35%)	4410 (65%)

Note 1: This was the annual budget for 2008–09; however, the amount was not publicly announced.

Note 2: As of 30 June 2010, total program expenditure was \$1.37 billion.

Source: ANAO, based on the department's data

3.19 The number of applications received for each tender can be attributed to a number of factors, including the willingness of sellers to offer entitlements for sale to the department. As well, the longer duration of the 2008–09 tender provided the opportunity for sellers to re-submit applications, which may account for the substantially higher number of applications received.

3.20 More generally, the decision of the project board and the then Minister to conduct more targeted tenders following the initial Basin-wide tender simplified aspects of the assessment process. By specifying the catchments and types of entitlements required, fewer applications had to be rejected on the first two environmental criteria. Instead, more targeted tenders meant that price became the determining factor on whether applications were accepted.

3.21 The decision by the project board and the then Minister not to announce a budget for both 2008–09 tenders did not directly affect the assessment outcome. However, as discussed later in this chapter, this was one factor that contributed to delays in the settlement of applications through the conveyancing process.

Conduct of tenders and compliance with requirements

3.22 The ANAO examined a sample of 133 applications across the four tenders, comprising both successful and unsuccessful applications. Details on how the sample was selected and the breakdown between tenders are provided at Appendix 2.

3.23 Overall, there was sufficient documentation to evidence that a consistent process had been followed for the sampled applications. In particular:

- all 133 applications were signed, on file and, where relevant, received on time⁶⁶;
- each application also included a copy of the water licence being offered for sale, as required under the tender guidelines;
- the department's staff correctly entered all information provided in the 133 applications into Darby;
- all applications had been assessed against the relevant criteria by the evaluation committee; and, in all cases, the correct ratings were assigned to applications, as per the relevant criteria for each tender; and
- for all 133 applications, the authorised delegate endorsed all recommendations from the evaluation committee, agreeing to pursue 72 offers and to reject 61 applications.

3.24 The consistent processes that were evident in the sampled applications support the principles of fairness, transparency and value for money, in line with Commonwealth procurement requirements.

Process improvements

3.25 The department has made improvements to aspects of its assessment and evaluation processes to ensure that procurement requirements were met, while also accommodating tender-specific constraints and risks. For example, in 2009, the NSW Government imposed a 60 GL limit on the Commonwealth's purchase of water entitlements. Potential applicants were notified of this limit in the department's published guidelines for the January 2010 tender and beyond. This limit was also taken into account when the department assessed

⁶⁶ The January 2010 tender had a closing date of 29 January at 5pm.

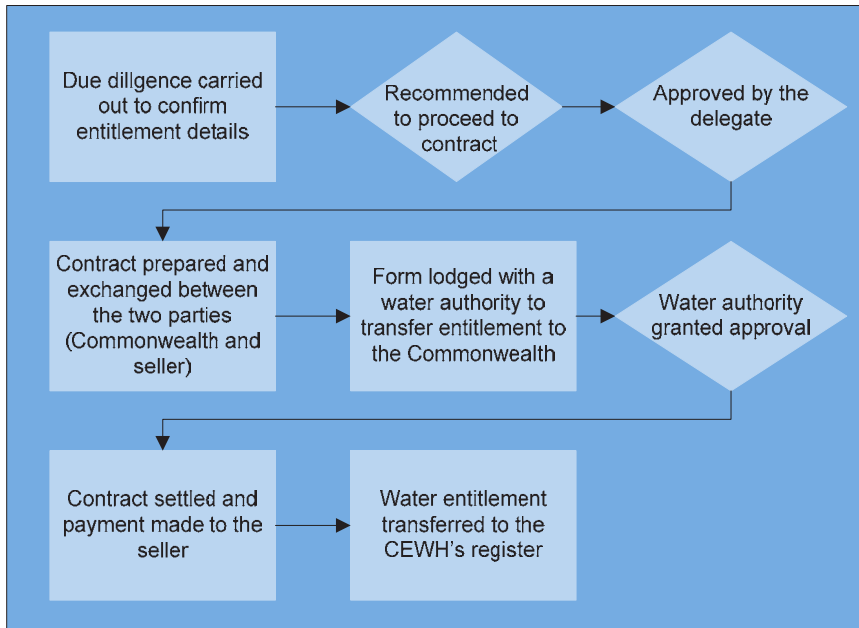
applications for these tenders. The department accepted all eligible applications up to this limit and rejected all subsequent applications once this limit was reached. Although this meant that otherwise eligible applications were not accepted, applicants were able to re-submit applications in future tenders. The ANAO considers that this approach gave effect to the fairness and equity principles under the CPGs.

3.26 For the January 2010 tender, the department also added another step to further discriminate on the offers against the relevant price benchmarks. In previous tenders, applications were assessed as 'pass' or 'fail' against the price benchmarks. However, for the January tender, the department introduced the value for money index. This was calculated as a percentage of the total offer price, including provision for conveyancing costs, relative to the corresponding benchmark value. Any index value greater than a pre-determined ratio meant that the offer was not recommended for approval.

3.27 Overall, the assessment and evaluation phase of the tender process has been well-managed by the department. The decision by the project board and the then Minister to set more targeted tender parameters, with closing dates and budgets, promotes greater consistency and fairness in the assessment of applications. In turn, this approach underpins value for money outcomes.

Conveyancing process

3.28 As previously noted, the purpose of the conveyancing process is to transfer the legal ownership of eligible entitlements to the Commonwealth. The first step in the conveyancing process, as outlined in Figure 3.2, is due diligence. The purpose of due diligence is to verify information provided by applicants, and to identify any errors or omissions in the documents provided. The next steps in the conveyancing process involve the preparation, exchange and settlement of contracts between the Commonwealth and sellers. These steps culminate in the transfer of ownership to the Commonwealth, on the condition that relevant state authorities approve the transfer.

Figure 3.2**Key steps in the conveyancing process for the RtB program**

Source: ANAO, based on the department's records

External conveyancing firms

3.29 Since the start of the RtB program, the department has engaged external firms to carry out all steps in the conveyancing process. For the first three tenders, the department used one provider, a specialist conveyancing firm. From the January 2010 tender, the department established a panel of six providers, which includes the original firm.

3.30 The department had two main reasons for using an external party to provide conveyancing services. First, an external firm would provide specialist legal expertise, which was not available internally. Second, an external firm would indemnify the Commonwealth from liability, loss or expense arising from any fault or error on the firm's part relating to the conveyancing process.

3.31 The original conveyancing firm was initially chosen through a tender conducted in January 2008, primarily due to their involvement with The Living Murray pilot purchase in July 2007. At the time, no other providers were deemed by the department to possess the necessary water expertise. This resulted in this firm being the sole provider for the first two years. The department's decision to appoint a panel of providers from the January 2010

tender was to manage the increased number of applications. It was also to create competition between providers, with the aim of reducing costs and timeframes for the conveyancing process. All six contracted external firms are legal service providers.

Contract with providers

3.32 The department signed a contract with the original firm, and subsequently with all other providers on the panel. The contract with the original firm, which covered the first three tenders examined by the ANAO, included standard legal clauses and set out the services to be provided. These included:

- performing each step in the conveyancing process (as outlined in Figure 3.2);
- providing a project plan outlining how it will deliver the agreed services; and
- providing a draft standard sale contract, to be approved by the department.

3.33 In addition, the contract provided for actions and associated timeframes to be communicated between the parties, as agreed by the department, for each matter assigned to the original firm. But no specific timeframes were set in the contract.

3.34 From January 2010, the department executed a new contract with the original firm and all other providers. The contract included essentially the same provisions as the contract signed by the original firm.

Compliance and documentation

3.35 The ANAO assessed whether the original firm had provided conveyancing services as specified in the contract, and whether all steps in the process were adequately documented by the department. This assessment was drawn from the same sample used to assess the evaluation process. However, as previously mentioned, only 72 (of 133) applications proceeded to due diligence (as part of the overall conveyancing process).⁶⁷

⁶⁷ The sampled applications were from the first three tenders only, as the January 2010 tender did not have any applications that reached the conveyancing stage at the time of the ANAO's audit.

3.36 Overall, there was sufficient documentation to evidence that the key steps in the conveyancing process were followed for the sampled applications. For each application, there were records to show that:

- due diligence was performed by the firm, and in accordance with contractual requirements;
- contracts were prepared and exchanged using the agreed sale contract;
- the relevant water authorities approved the transfer of entitlements to the Commonwealth, based on forms lodged by the firm; and
- all applications were settled and correct payments were made to the sellers.

3.37 The main omission in the sample examined is that the department did not retain some key documentation for the 11 applications for the 2007–08 Basin-wide tender. Missing documentation included:

- no records as to when the firm was instructed by the department to proceed with due diligence, or when due diligence checks commenced; and
- no records of the delegate's approval of the firm's recommendation to proceed to contract preparation; nor documentation of the department's instructions to prepare contracts of sale.

3.38 This lack of documentation is inconsistent with the transparency requirements under the CPGs and good financial management practices under the FMA Act. It also made it difficult for the department to demonstrate whether the firm's contractual obligations had been met. Following an internal audit in 2008, the department has improved its record-keeping for the conveyancing process. The process now includes using a checklist to confirm that key documentation is on file for each application.

Issues identified by the original firm

3.39 Two issues were identified by the original firm on the 72 applications examined by the ANAO. In one case, the applicant provided the wrong licence number and the incorrect allocation amount. The other case involved an application that was signed by one party, but the water licence was owned by two parties. The other owner had placed a caveat on the licence, making it ineligible for sale. In both cases, the issues were resolved by the firm before the contracts were exchanged and before Commonwealth funding was committed.

3.40 The department advised that there have been nine applications in total that failed due diligence for the RtB program, amounting to \$5.85 million. These applications were not pursued by the department.

Timeliness of the conveyancing phase and overall tender process

3.41 The time it takes to process tender applications affects how quickly the department can transfer eligible offers to the Commonwealth, to be used by the CEWH for the environment. The guidelines published by the department for the first four tenders indicated to potential applicants that the conveyancing process could take several months. It also noted that longer delays may be experienced as a result of ongoing trading restrictions in Victoria and NSW, as well as obtaining approvals from relevant state water authorities for the transfer of ownership.

3.42 The department recorded key dates in Darby that allowed it to produce reports on the overall time taken to process applications, and the breakdown in time between the assessment and evaluation phase and the conveyancing phase. As illustrated in Figure 3.3, the overall time taken to process applications increased during both 2008–09 tenders, from the initial Basin-wide tender; but then decreased over the January 2010 tender.⁶⁸ Conversely, the overall time taken to finalise the evaluation and assessment phase took longer for the January 2010 tender than for all but the 2008–09 northern tender. This was because all assessments were done after the closing date, rather than on a rolling basis as was the case for the first three tenders.

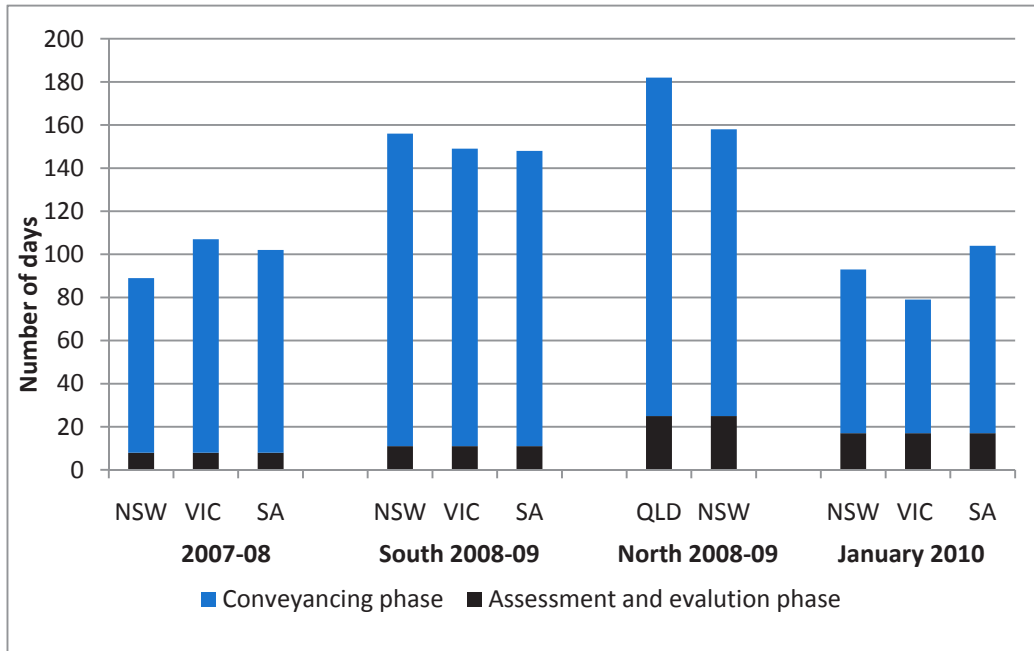
Longer timeframes for the 2008–09 tenders

3.43 For the 2008–09 tenders, it took an average of 159 days, or just over five months, for legal ownership of pursued entitlements to be transferred to the Commonwealth. This timeframe was two months longer than the initial Basin-wide tender, which took an average of 99 days.

⁶⁸ The assessment and evaluation phase varied from eight days for the 2007–08 tender, to 25 days for the 2008–09 tenders, reducing to 17 days for the January 2010 tenders. Conversely, the conveyancing process started with 91 days for the first tender, increased to 142 days for 2008–09 and ultimately reduced down to 68 days for the January 2010 tender.

Figure 3.3

Average number of days to finalise the RtB tender process, from receipt of application to contract settlement, from 2007–08 to January 2010



Source: ANAO, based on the department's data

3.44 The longer processing timeframes for the 2008–09 tenders resulted from a combination of internal and external factors. Externally, the processing times included delays arising from:

- obtaining state approvals where trading restrictions were imposed (which was the case in Victoria and NSW);
- awaiting approvals from relevant water authorities to grant the transfer of entitlements to the Commonwealth; and
- an unusually high number of applications for the 2008–09 southern tender (4010), which put pressure on the department's internal resources and the processing capacity of the sole conveyancing provider.

3.45 The longer processing timeframes for the 2008–09 tenders also resulted from the department's decision to deliberately 'extend' the settlement date for some applications into the next financial year. This decision was taken to avoid the risk of exceeding the budget for 2008–09. This risk arose from the department's earlier decision not to announce a budget for the

2008–09 tenders and to accept more applications than were able to be funded under the annual budget. Ultimately, the department was able to secure sufficient funds to avoid exceeding the budget. Nevertheless, the budget and timeliness issues could have been avoided by announcing a budget and closing date, as the department has done for all subsequent tenders.⁶⁹

3.46 As shown in Figure 3.3, processing timeframes were significantly reduced during the January 2010 tender. The department advised that timeframes are being progressively shortened during the more recent tenders, which were not examined by the ANAO. The reduction in processing times can be attributed in part to the department’s decision to establish a panel of conveyancing providers, and to more actively manage internal factors within its control.

Largest tender and non-tender purchases

3.47 As outlined in Chapter 2, the amount of money paid for entitlements depends on two variables—the price benchmark, which varies according to the location and type of entitlements; and the volume of water being offered for sale. As of 30 June 2010, total expenditure for the first four tenders was \$1.37 billion. The amounts paid ranged from \$20 000 to \$303.3 million.

3.48 The largest single purchase under the program was \$303.3 million to Twynam Agricultural Group, during the 2008–09 tenders. This payment is some six times higher than the next largest purchase of \$51.8 million to Murray Irrigation Limited, which was also acquired during the 2008–09 tenders.⁷⁰ The purchase of Twynam’s entitlements accounts for around 10 per cent of total program funding of \$3.1 billion and, at the time the purchase was made, represented around 50 per cent of committed program funds. Given the significant funding expended, the ANAO has separately examined the department’s processes for securing ownership of Twynam’s entitlements.

⁶⁹ The recommendations to have set budgets and closing dates were made in an internal audit of the RtB program carried out in 2009.

⁷⁰ The three largest purchases for the program: Twynam, Murray Irrigation Limited and Toorale, were all made in 2008–09.

Entitlements offered for sale by Twynam Agricultural Group

3.49 The final payment of \$303.3 million to Twynam resulted from 34 separate applications from both the 2008–09 northern and southern tenders. These applications were subsequently combined and assessed as a single application. Overall, the department paid a premium of nine per cent above the normal benchmark prices for the entitlements secured. This equated to additional expenditure of around \$25 million.

3.50 The original applications for the northern and southern tenders were received on 19 December 2008. The applications comprised 239 770 ML of water entitlements with the offer price of \$1265 per ML. This price included the value of \$8.55 million attributed to 51 830 ML of water allocations, which were outside the scope of the RtB program and were not being sought during the tender. The combination of permanent entitlements and water allocations resulted in the final asking price of \$311.86 million.

Processes followed to secure Twynam's entitlements

3.51 Twynam's offer presented an opportunity for the department to purchase a substantial volume of water entitlements, and so advance the RtB program's objectives of reducing consumptive water use and providing water for the environment.

3.52 Overall, there was sufficient documentation to evidence that key steps in the assessment and conveyancing processes were followed by the department. That is:

- the application was received on time, with correct signatures and the copies of licences enclosed for each separate application;
- the application was pre-screened for completeness and errors, in line with the evaluation plan;
- the application was assessed against three evaluation criteria, and an additional risk assessment was conducted for the supplementary licences being offered for sale;
- the price premium paid did not exceed the 10 per cent limit for large purchases, in line with the project board's parameters;
- due diligence was completed for all licences and, where errors were found, these were correctly identified and rectified by the conveyancing firm; and

- the contract of sale, which included all entitlements, was signed between the seller and the Commonwealth, which was an appropriate procedure for the bulk entitlement purchase.

3.53 Some aspects of the purchase process could have been better documented, to aid conformance with procurement principles and to provide a more defined and realistic timeframe for realising environmental benefits from the purchased entitlements.

Direct negotiations with applicant

3.54 Although Twynam's application originated through a tender process, the department ended up entering into direct negotiations with the applicant. In January 2009, after Twynam's original application was received, the department sought and received approval from the then Minister to enter into direct negotiations with vendors offering large parcels of water entitlements, if these offers were not initially accepted through tender processes. The department advised the then Minister that direct negotiations could be used for volumes in excess of 20 GL and where the offer price was within 20 per cent of the upper price limit—both criteria applied to Twynam. Direct negotiations are considered to be a more effective way of expediting purchasing, rather than repeatedly asking the seller to re-submit an application until an acceptable price is offered.

3.55 For Twynam, direct negotiations occurred during a meeting on 16 February 2009 between senior departmental officers and Twynam's representatives. The meeting was initiated by Twynam, and provided the department with an opportunity to explain that, as per its guidelines for the 2008–09 tenders, it was not seeking to buy the water allocations that were being offered. Records indicate that the department advised Twynam's representatives that if the value attributed to the water allocations was removed from any subsequent offer, then the price sought for the permanent water entitlements would be acceptable, as it was within the department's pre-determined pricing strategy. On 20 February 2009, Twynam submitted a revised offer, which was accepted by the department. The revised offer was the same as the original offer, with the value attributed to the water allocations (some \$8.55 million) removed.

3.56 The department's decision to negotiate with Twynam, and other similar vendors, was pre-approved by the then Minister and was aimed at advancing the RtB program's objectives without incurring significant administration costs. The approach taken was also permitted in the publicly available

guidelines for the 2008–09 tenders (and other tenders), where the department assumed the right to ‘negotiate with one or more applicants or discontinue negotiations’.⁷¹ The department advised the ANAO that direct negotiations were also used with another applicant during the 2008–09 tenders, Murray Irrigation Limited, who also met the two criteria of offering a very large parcel of water entitlements and being within 20 per cent of the department’s price benchmark.

Improve practices for any future larger purchases

3.57 Notwithstanding the above, 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. 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.

Assessing the ‘value for money’ of purchased entitlements

3.58 As outlined in Chapter 2, the department’s approach to determining value for money involved a consideration of the environmental benefits of the entitlements being offered, as well as market prices and other relevant costs.

⁷¹ As stated in the Terms and Conditions section of the Information Package for the 2008–09 tenders, under the heading ‘Department’s Rights’.

3.59 The department assessed the environmental benefits of the entitlements being offered by Twynam and found that they could serve a range of priority assets in the relevant catchments.⁷² In addition, the department assessed the risks associated with the purchase of supplementary licences, which provide a less reliable source of water than other types of entitlements. It also considered the broader risks associated with supplementary licences when the Basin Plan is finalised.⁷³ Given these risks, the evaluation committee recommended that the department pay a lower price for Twynam's supplementary entitlements.

3.60 The department's decision to pay a premium for Twynam's entitlements was in accordance with the purchasing strategy that was approved, and subsequently modified, by the project board and the then Minister. The original purchasing strategy stated that, where no acceptable sell offers are received in high priority, low risk catchments, offers up to 10 per cent above the market price benchmarks can be accepted. The project board subsequently agreed to modify the pricing strategy to provide a premium of:

- up to five per cent above the relevant price benchmarks for parcels of water larger than 20 GL; and
- up to 10 per cent above the relevant price benchmarks for parcels of water larger than 40 GL.

3.61 These premiums were decided on the basis that large parcels of water would provide administrative savings and immediate and substantial environmental benefits. It was noted that the large volumes of water potentially allocated to these entitlements could substantially address some of the environmental watering needs in the Basin.

3.62 The decision to pay a premium was also aimed at securing entitlements in the Murrumbidgee catchment, for which no previous offers under other tenders had been accepted. In this catchment, the department ended up paying

⁷² The department assessed the environmental watering needs for each catchment where Twynam entitlements were held and identified specific assets and volumes of water required according to prevalent surface water use.

⁷³ In the evaluation report, the department undertook a risk assessment of supplementary licences for the relevant catchments, including the impact of the Basin Plan and any relevant water sharing plans, such as zero allocations and possible cancellation of these types of entitlements.

a premium of 20 per cent for general security entitlements.⁷⁴ The entitlements that were acquired have since provided some water for the environment, the bulk of which initially came from the supplementary licences (following flooding events in the northern Basin in February and March 2009).⁷⁵

3.63 Notwithstanding the above, the ANAO 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)⁷⁶, 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.

3.64 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.

⁷⁴ As a result of no accepted offers for Murrumbidgee water, another 10 per cent price premium was applied to these general security water entitlements, which was in line with the project board's purchasing strategy.

⁷⁵ The department advised the ANAO that allocations have since accrued against all of the entitlements that were purchased.

⁷⁶ 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.

Toorale station — purchase of land and water

3.65 In September 2008, the NSW Government purchased Toorale station in north-western NSW for \$23.75 million. Toorale is a large irrigated farming property situated between Bourke and Louth on the junction of the Warrego and Darling rivers.

3.66 The Commonwealth contributed some \$19.83 million (or 83 per cent of total funding) towards the purchase of Toorale. This funding was provided to secure Toorale's water entitlements and to contribute to the purchase of the land. It came from two programs—\$3.5 million from Caring for Our Country⁷⁷, and \$16.12 million from the RtB program. The contribution from the RtB program is the only funding to date that has been committed outside a tender process. The location, type and volume of entitlements acquired are set out in Table 3.2.

Table 3.2

Toorale water entitlement catchments, types and volumes

Catchment	Type of licence	Volume (ML)
Barwon-Darling	Class A unregulated	67
Barwon-Darling	Class B unregulated	1437
Barwon-Darling	Class C unregulated	6168
Warrego	Unregulated	8122

Source: ANAO, based on the department's records

3.67 The decision to contribute funding to the purchase of Toorale was made by the then Minister in September 2008. This decision followed an announcement in August 2008 by the then Prime Minister to accelerate water purchasing by working with state governments to co-fund the purchase of irrigation properties and water entitlements in the northern Basin.

3.68 The ANAO examined the department's role in informing the Minister's funding decision and the processes used to secure Toorale's water entitlements for the benefit of the environment.

⁷⁷ This contribution was provided under the National Reserve System (NRS) budget. Advice provided to the then Minister for Climate Change and Water by the department was that Toorale would make a significant contribution to the NRS.

Environmental benefits

3.69 Since the RtB program's contribution to the purchase of Toorale did not occur under a tender process, the department was not required to apply the evaluation criteria used for other purchases. Nevertheless, the department had obligations under the FMA Act and CPGs to ensure that expenditure was efficient, effective and represented value for money. In practice, the department applied the same principles that underpinned its decision-making process for tender purchases. That is, it considered:

- which environmental assets the water entitlements could be used for;
- any potential constraints in delivering the water; and
- relevant costs of acquiring the entitlements, including reference to available market information.

3.70 A number of issues were identified by the department in assessing the potential environmental benefits of Toorale's entitlements. First, there was not (and still is not) a water sharing plan in place to determine and regulate the use of the entitlements in the northern catchments, where Toorale's licences are held. This means that there is less security over the provision of water against the licences.⁷⁸ In the meantime, the department is dependent on making arrangements with the NSW authorities to confirm and use the allocations against the Toorale water entitlements. Second, the water entitlements could not be owned separately from the land, which was being purchased by the NSW Government. This meant that NSW would legally own the entitlements, even though a major component of the funding was provided by the Commonwealth.

3.71 In considering where the water allocated against Toorale's entitlements could be used, the department noted that, initially, the water could improve the system health in the Darling river above Menindee lakes, and/or extend a bird breeding events in the Lakes themselves. The department also considered the possibility of sending available water to the Lower Lakes in South Australia. It recognised that there were some significant risks associated with this latter option—including the likelihood of large 'losses' of water through evaporation and seepage, as it moves down the system; and the different

⁷⁸ Although 'Cap shares' have been allocated to entitlement holders in the area, which gave greater confidence in the likely reduction of irrigation extractions from this purchase. A water sharing plan is expected to be place by 2014.

regulatory arrangements for water that flows into Menindee lakes, which could result in the Commonwealth losing its entitlement to the water.

Funding agreement with NSW

3.72 In December 2008, the department signed a funding agreement with the NSW Government over the purchase of Toorale. The agreement included two conditions designed to mitigate the risks associated with the Commonwealth's access and use of water, namely:

- NSW shall ensure that all water entitlements will be transferred to the Commonwealth as soon as practicable, or within 90 days after a water sharing plan takes effect, which is expected in 2014; and
- NSW agrees to implement the necessary action to protect environmental flows in the Darling River in NSW, downstream of Toorale.

3.73 As of 30 June 2010, the entitlements purchased with Toorale have provided around 49 GL of water allocations for use by the CEWH. Much of this water became available following flooding events in the northern Basin in early 2009. As elsewhere in the Basin, future environmental conditions will determine how much water is allocated and hence the extent of environmental benefits that can be achieved.

3.74 In July 2010, the Commonwealth signed a Memorandum of Understanding (MOU) with the NSW Government in relation to the shepherding of water for the environment. Among other things, the MOU is designed to protect environmental flows in the Darling River in NSW, downstream of Toorale.

Valuation of water licences

3.75 As part of its enquiries to determine value for money, the department engaged external parties to provide independent valuations of Toorale's water licences.

3.76 Two firms assessed the value of Toorale's water licences to be \$10.46 million and \$12.45 million respectively. These valuations were accepted as reasonable by the department, although the higher valuation was considered to provide an overly generous valuation of floodplain harvesting rights. The \$16.33 million funding contribution provided under the RtB program approved by the then Minister included a notional \$11.48 million for the water entitlements. This figure was assessed to be a reasonable mid-point of the two valuations. The balance of funding under the RtB program,

\$4.85 million, notionally went towards the land and fixed asset value for Toorale.

3.77 Further evaluations were conducted by the then NSW Department of Environment and Climate Change and the NSW Department of Lands to include both land and water entitlements. These agencies valued the land and water at \$24 million. The RtB program funded two-thirds of the total costs of these items. The \$3.5 million contribution from the department's Caring for Our Country was solely for the land component of Toorale. All up, NSW contributed \$4.13 million to the purchase of Toorale. Table 3.3 provides a breakdown of the funding contributions from each government. These figures show that Toorale was purchased principally with Commonwealth funding, with a smaller contribution from NSW.

Table 3.3

Breakdown of notional funding contributions from the Commonwealth and the NSW Government for the purchase of Toorale Station

Government	Water entitlements (\$m)	Land and assets (\$m)	Total (\$m)
Commonwealth	11.36	4.76 ¹ 3.5 ²	19.62
NSW	-	4.13	4.13
Total	11.36	12.39	23.75

Note 1: Contribution from Restoring the Balance program.

Note 2: Contribution from the National Reserve System component of Caring for our Country program.

Source: ANAO, based on the department's records

Value for money of purchased entitlements

3.78 The purchase of Toorale station generated significant media and public interest. At the time, there was criticism that the purchase did not represent good value for money, as actual water availability was modest and therefore 'taxpayers were buying air'. The ANAO notes, however, that highly variable water availability is common across large parts of the Basin, reflecting rainfall and inflows to storages. Flooding events in the northern Basin have delivered valuable water, but similar volumes cannot be expected year-on-year.

3.79 The Commonwealth's total funding for Toorale (\$19.62 million) is not material in the context of the RtB program, and remains the only non-tender purchase to date. The purchased entitlements have delivered some tangible benefits to the environment, with the potential for ongoing benefits depending on environmental conditions. Compared to standard tender processes, the Toorale purchase presented additional risks and administrative overheads for

the department. Nevertheless, key risks were identified, and mitigated, during the purchase process and reasonable measures have been taken to promote the best use of available water from Toorale's entitlements.

Conclusion

3.80 With the exception of Toorale station, all permanent water entitlements acquired under the RtB program have been purchased through tender processes. For the four tenders examined by the ANAO, the department established, and generally followed, standard processes to assess applications and transfer legal ownership to the Commonwealth. The time taken to process applications—and hence provide entitlements to the CEWH—is affected by a range of internal and external factors, including state trade restrictions. Although avoidable delays were experienced during the 2008–09 tenders, which arose from budget-related issues, the department has since taken a number of steps to better manage internal processing times. This includes establishing a panel of conveyancing providers and running shorter tenders with announced budgets and closing dates.

3.81 The tenders were conducted in accordance with the purchasing strategy, guidelines and evaluation criteria endorsed by the project board and approved by the then Minister. Documentation has progressively improved across the tenders, and, overall, the tenders have been conducted in accordance with procurement principles. The recent replacement of Darby is a necessary administrative improvement, aimed at providing a more reliable and multi-functional system to better support future tenders.

3.82 The largest purchase under the program, \$303 million to Twynam, presented a significant opportunity to the department to advance the RtB program's objectives. Additional measures were undertaken to assess some risks associated with this purchase, and provide assurance on the potential benefits of the purchase. The premium paid for the entitlements (10 per cent above normal benchmarks) was in line with project board guidelines, which were approved by the then Minister. However, contrary to the rationale for paying this price premium, the entitlements purchased did not provide 'immediate' benefits for the environment, due to lower water allocations in the following period. Nevertheless, the department is well-placed to reap significant benefits when actual water allocations are higher. Likewise, the purchase of Toorale station presented significant risks and ongoing administrative overheads for the department, compared to standard tender purchases. Reasonable measures have been taken by the department to mitigate these risks.

4. Decisions on the Use of Environmental Water

This chapter examines the processes used to inform the Commonwealth Environmental Water Holder's decisions on where to use available water provided under the Restoring the Balance program and other initiatives.

Introduction

4.1 The permanent water entitlements purchased under the RtB program are transferred to the Commonwealth for use on the environment by the CEWH. As of 30 June 2010, the CEWH had provided some 182 672 ML of Commonwealth environmental water to 34 sites within the Basin. These sites are located within six (of 16) catchments where water has been purchased under the RtB program.

4.2 The ANAO examined a sample of 11 watering actions from the period 2008–09 and 2009–10, to identify and assess the processes used to inform the CEWH's decisions on where to use environmental water made available through the RtB program. This period was characterised by a relatively modest volume of available water. In recognition of this, the ANAO also assessed the CEWH's preparedness for managing a steep increase in environmental water holdings.

Framework for determining environmental water use

Establishment of the CEWH

4.3 Although environmental watering activities are undertaken in all Basin jurisdictions, and through The Living Murray, the CEWH became the first statutory environmental water holder in Australia. As such, the department and the CEWH faced a significant, though not entirely unprecedented, task of establishing the necessary frameworks and processes to guide decisions on where to use available environmental water.

4.4 The Water Act requires the CEWH to undertake his functions for the purpose of 'protecting or restoring' environmental assets in the Basin, so as to give effect to relevant international agreements; but the Act does not prescribe how this should be done. The CEWH will be required to manage Commonwealth water holdings in accordance with the Environmental Watering Plan (EWP) when the Basin Plan is finalised. The release of the *Guide*

to the proposed *Basin Plan* in October 2010 has also provided a better information base to inform the CEWH's decisions, including a list of 2442 key environmental assets. However, in the initial two-year period examined by the ANAO, the CEWH had greater discretion on how and where to use environmental water in the Basin.

Longer term framework

4.5 One of the CEWH's priority tasks was to develop, and make public, a framework for determining Commonwealth environmental watering actions in the Basin. In undertaking this task, the CEWH recognised the need to provide transparency to stakeholders on the principles and processes that would be used to guide watering decisions. This includes transparency on the scientific basis for those decisions.

4.6 In October 2008, the CEWH established an expert committee called the Environmental Water Scientific Advisory Committee (EWSAC).⁷⁹ The stated role of EWSAC is to provide advice to the CEWH and the department on the use of environmental water, including:

- methods for determining the relative priority of environmental assets;
- areas which merit additional investigation, including research; and
- assessing the benefits of the use of water.

4.7 In developing the framework, the CEWH also recognised the need to consider arrangements for managing much larger volumes of water than were present in the early period.

Assessment criteria

4.8 Although the CEWH's longer term framework for determining environmental water use was not formalised until December 2009, the CEWH formulated assessment criteria to guide the prioritisation of watering actions. For 2008–09, nine criteria were used. These criteria were consolidated to five for 2009–10. Table 4.1 lists the assessment criteria for the first two years. Both sets of criteria were designed to address the CEWH's statutory obligation to use Commonwealth environmental water to protect or restore environmental

⁷⁹ EWSAC is comprised of eight members, selected for their expertise in fields such as hydrology, limnology, river operations management, river and floodplain ecology and the management of aquatic ecosystems.

assets in the Basin. The criteria were also designed to identify the key risks and benefits associated with the use of water, and the role and capacity of other parties involved in watering actions.

Table 4.1

Criteria for prioritising the use of Commonwealth environmental water

2008–09	2009–10
<ul style="list-style-type: none"> • Must meet the requirements of section 105 of the <i>Water Act 2007</i> and the approach articulated in section 3.2 of the Business Plan. • The ecological significance of the asset (includes matters such as Ramsar or DIWA listing, presence of nationally listed threatened, migratory or rare species). • The expected ecological outcomes from the proposed watering action. • The potential risks of the proposed watering action at the site and at connected locations. • The degree to which Commonwealth water is likely to make a substantial contribution to protecting or restoring ecological significance of the asset. • The contribution of the delivery partner to the watering event (e.g., water volume, financial, monitoring, management). • The cost effectiveness of undertaking the watering. • The long-term likelihood of sustaining the ecological values of the asset. • The adequacy of governance and management arrangements, including the monitoring and evaluation activities, in place to ensure effective outcomes from the watering action. 	<ul style="list-style-type: none"> • The ecological significance of the asset(s). • The expected ecological outcomes from the proposed watering action. • The potential risks of the proposed watering action at the site and at connected locations. • The long-term sustainability of the asset(s) including appropriate management arrangements. • The cost effectiveness and operational feasibility of undertaking the watering.

Source: ANAO, based on the department's records

Framework document finalised in December 2009

4.9 The CEWH's framework was finalised in December 2009 and is posted on the department's website. The document, called '*A Framework for Determining Commonwealth Watering Actions*' (the Framework), sets out:

- the overall objectives and scope of Commonwealth water use;
- the specific water use objectives under different water resource availability scenarios (extreme dry, dry, median and wet);

- the process for prioritising watering actions—which in brief, involves matching available water with priority sites and using criteria and available scientific information to assess sites; and
- arrangements for prioritising, delivering and monitoring the ecological outcomes of environmental watering through a ‘cooperative’ process, which relies on the input and involvement of other Basin stakeholders.

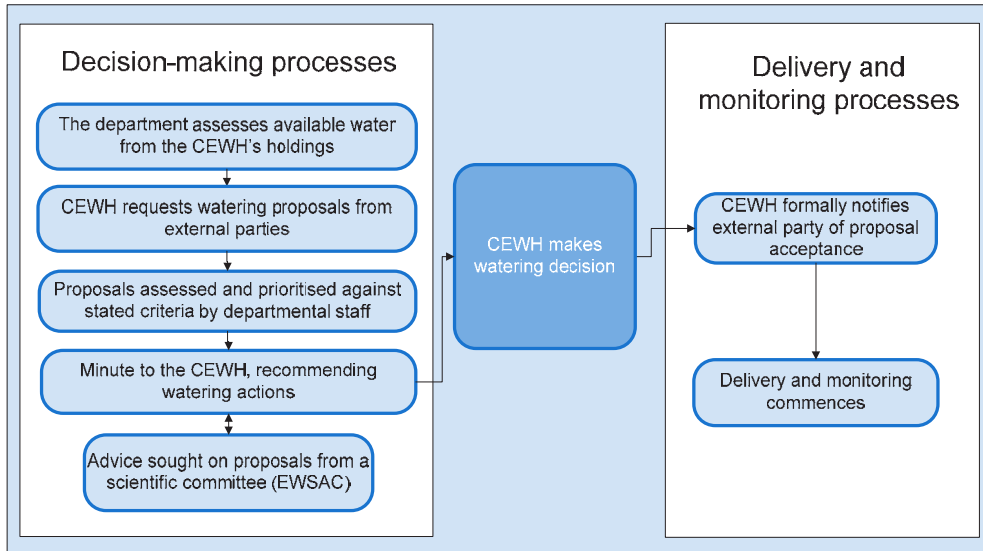
4.10 The Framework was developed in consultation with a broad range of stakeholders, and is to be further refined and implemented over the period 2009–11 before the Basin Plan is published. The Framework will be adapted (where necessary) in accordance with the EWP.

Interim arrangements

4.11 The Framework was not finalised until after all of the CEWH’s decisions to allocate environmental water had been made in 2008–09, and after some decisions had been made in 2009–10. Nevertheless, the central principles and approach outlined in the Framework were evident in the sample of watering actions examined by the ANAO. The key steps in the decision-making process, which are depicted in Figure 4.1, and discussed in more detail throughout this chapter, involved departmental staff:

- monitoring the growth of Commonwealth water holdings and allocations, to identify available water;
- seeking watering proposals from state agencies;
- assessing proposals against established evaluation criteria;
- seeking scientific advice and input from EWSAC; and
- recommending watering actions to the CEWH.

These steps culminate in a formal decision by the CEWH on where to use available environmental water. Delivery and monitoring arrangements are discussed in Chapter 5.

Figure 4.1**Outline of the processes used by the CEWH for determining environmental water use, 2008–09 to 2009–10**

Source: ANAO, based on the department's records for the sample of watering decisions examined

Monitoring available water

4.12 The ability of the CEWH to protect or restore environmental assets in the Basin depends, in the first instance, on the total volume of available water. Broadly, this is determined by two sets of factors:

- *permanent water entitlements*—the number of entitlements purchased under the RtB program or acquired through other sources⁸⁰; which have been registered to the Commonwealth⁸¹; and
- *water allocations*—the percentage of actual water allocated to, or allowed to be extracted against, purchased entitlements; and the timing of allocation announcements.

⁸⁰ The main other source of water is from the department's \$5.8 billion Sustainable Rural Water Use and Infrastructure program. Water entitlements can also be gifted to the Commonwealth.

⁸¹ The Commonwealth may have a legal claim to water allocations in circumstances where the department has exchanged contracts with the seller to purchase permanent water entitlements, but the transaction is still to be approved by state authorities.

4.13 Under the Water Act, the CEWH is able to trade or dispose of Commonwealth holdings under certain conditions⁸², but these powers were not exercised in the period examined by the ANAO.

4.14 As noted in Chapter 1, there are also rules on how much water can be ‘carried over’ from one water year to the next. These rules provide entitlement holders, including the CEWH, with greater flexibility on the timing and use of some available water. On the other hand, water that cannot be carried over must be used within the relevant water year, or risk being forfeited or lost. These rules underscore the need for timely and effective decision-making to make the best use of available water.

CEWH’s register of water holdings

4.15 One of the CEWH’s functions under the Water Act is to maintain an up-to-date record of Commonwealth water holdings.⁸³ The department’s Environmental Water Branch, which provides administrative support to the CEWH, has developed an electronic register to record:

- details of entitlements registered to the Commonwealth;
- allocation announcements against the entitlements across the Basin;
- details on the movement (trading) of allocations; and
- the balance of water available against entitlements.

4.16 The entitlements registered to the CEWH are also captured in the department’s financial management system (SAP), to enable reporting for financial statement purposes. The department records the entitlements as intangible assets. The ANAO examined the processes through which the intangible assets were created, and the basis on which the department values the CEWH’s water holdings. Overall, these processes were assessed to be satisfactory. As part of its audit of the department’s 2009–10 financial statements, the ANAO concluded that the department had followed a reasonable approach for valuing and impairing water entitlements.

⁸² As prescribed in Part 6 Division 1 section 106 of the *Water Act 2007*.

⁸³ The water holdings are the Commonwealth’s rights to water, which are acquired under the RtB program or other means. The legal definition of ‘Commonwealth environmental water holdings’ is provided in Part 6, Division 1, section 108 of the *Water Act 2007*.

Registered water entitlements and resulting water allocations

4.17 The first entitlements purchased under the RtB program were registered to the Commonwealth in August 2008, following the Basin-wide tender in February 2008. Since then, the cumulative volume of entitlements has grown substantially and, by 30 June 2010, totalled 737 797 ML. This was eleven-fold higher than the cumulative total at the end of 2008–09, some 63 594 ML (see Figure 4.2).

4.18 The cumulative volume of entitlements is expected to grow steeply as secured purchases from previous tenders are finalised and registered to the CEWH, and as more tenders are undertaken. More environmental water is also expected to become available to the CEWH from the SRWUI program. The Government's commitment to acquire all environmental water under the final Basin Plan means that, eventually, the CEWH may hold up to 27 per cent (or even more) of all water entitlements in the Basin.⁸⁴

Water allocations

4.19 The first water allocations announced against entitlements held by the CEWH became available in September 2008, some 3.8 ML. These allocations had grown to 2345 ML by 30 June 2009. An additional 11 400 ML was provided against entitlements for Toorale station. These entitlements are not technically part of the CEWH's holdings⁸⁵, but the use of water allocated against the entitlements is determined by the CEWH. By the end of 2009–10, the cumulative amount of water allocated against the Commonwealth's holdings had increased substantially, totalling 149 116 ML, plus a further 37 992 ML for Toorale (see Figure 4.2).

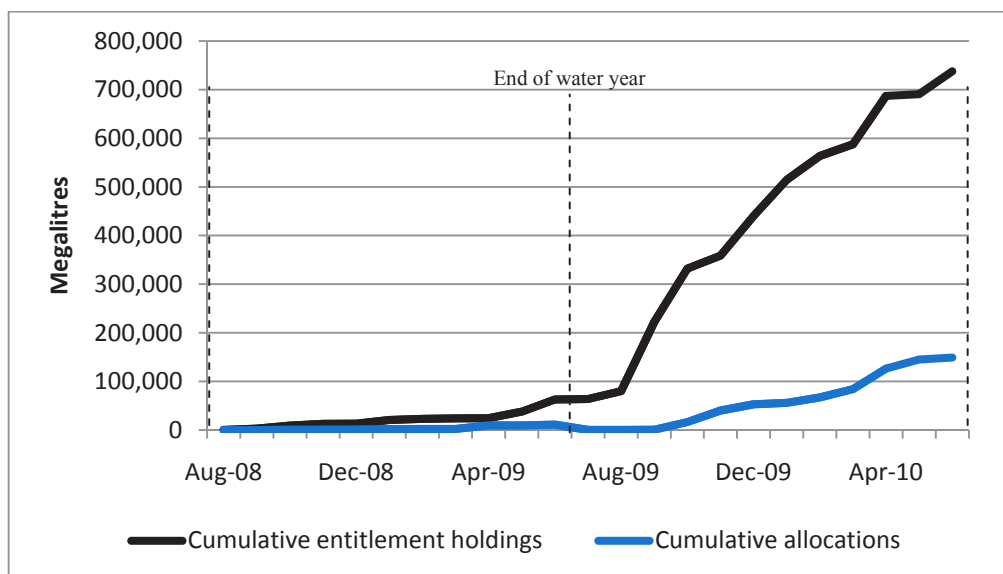
4.20 Cumulative water allocations will continue to grow as more entitlements are registered to the Commonwealth, and as water availability improves for entitlement holders, following higher rainfall and improved storage levels. Given the climatic variables involved, the department is unable at this stage to provide a reliable estimate of future allocations—although efforts are being taken to develop better forecasting tools.

⁸⁴ In the *Guide to the proposed Basin Plan* (page 132), a 27 per cent reduction of surface water across the Basin is proposed under Scenario 1. In line with the Government's commitment to acquire all the entitlements needed to meet this reduction, the CEWH *may* be required to manage the 27 per cent of water that corresponds to this reduction.

⁸⁵ The entitlements are owned and held by the NSW Government, as discussed previously in Chapter 3.

Figure 4.2

Growth of cumulative water entitlements registered to the CEWH and resulting cumulative water allocations, August 2008 to April 2010



Source: ANAO, based on the department's data at 15 May 2010

Difference between the growth of water entitlements and water allocations

4.21 Two main factors account for much of the difference between the cumulative volume of water entitlements and water allocations, which were significantly lower at the end of June 2010. That is:

- water allocations are almost always lower than entitlements, and vary according to the type of entitlements purchased, especially in dry years when less water is available; and
- allocations can be made against entitlements before they are registered to the Commonwealth, which means that for the relevant water year, the Commonwealth receives only part of the total allocation of water.

4.22 The modest volume of water available for use by the CEWH in 2008–09 and 2009–10 also reflected aspects of the purchasing strategies for the first three tenders, as discussed in Chapter 2. That is, the department purchased a mix of entitlements during these tenders, rather than focusing on high reliability entitlements, aimed at providing a larger volume of water to meet the more immediate needs of high priority environmental assets. Many of the general security entitlements purchased had modest or, in some cases, no allocations in the first two years after being transferred to the Commonwealth.

Recent better rainfall across large parts of the Basin means that water allocations are much higher in 2010–11 than in the first few years.

Accuracy of the CEWH's register

4.23 As at April 2010, there were around 1100 entitlements recorded on the CEWH's register. The department is taking steps to consolidate the entitlements where it holds multiples of the same type in the same catchment. It was beyond the scope of the ANAO's audit to systematically assess whether the information in the register was accurate, complete and up-to-date. However, the ANAO examined whether 30 entitlements that were purchased under the RtB program were correctly recorded on the CEWH's register, which they were. These entitlements were drawn from the larger sample of 133 applications referred to in Chapter 3.

Current and future initiatives

4.24 The information in the register of Commonwealth water holdings plays a central role in the CEWH's processes for determining environmental water use. In recognition of this, the department is undertaking a range of initiatives to improve its management of the holdings, and to better forecast allocations and manage carryover water. Three key initiatives include:

- engaging an external consultancy firm to review the suitability of the register to meet future needs;
- engaging the CSIRO to undertake specified services, with the aim of allowing the department to better determine the conditions of assets and to forecast allocations and yields on entitlements given climatic conditions; and
- using an external consultancy firm to conduct a review of the CEWH's approach to managing carryover water in 2009–10.

4.25 In response to this latter initiative, the department has formulated a more deliberate strategy to manage carryover water in coming years, which is expected to be much larger than the relatively small amounts carried over during the period examined by the ANAO.⁸⁶ The strategy is underpinned by four key principles designed to address the risks, cost, administrative

⁸⁶ In 2008–09, when allocations were modest, some 140.1 ML was carried over to 2009–10. The department carried over some 33 611 ML from 2009–10 into 2010–11.

efficiency and constraints associated with carryover water.⁸⁷ The department has now recognised that part of its strategy for managing carryover water should be to provide specific advice on carryover rules and limits to inform the purchase of permanent water entitlements. Such advice was not provided for the first four tenders for the RtB program examined by the ANAO.

4.26 The external review of the CEWH's register recommended some improvements, which are being implemented. For the future, it was recommended that the department use its financial management system (SAP) as the main register for water entitlements, and then develop a separate, linked database to record and monitor water allocations and their use. The ANAO endorses this approach. The replacement of the current register with a more robust application seems essential to meet the increasing demands arising from an increase in the size and value of the Commonwealth's environmental water holdings.

Identifying environmental sites to water

4.27 Across the Basin, it is estimated that there are many thousands of environmental sites that may be in need of additional water.⁸⁸ Nevertheless, three fundamental issues need to be considered in identifying feasible watering options among the full range of potential sites:

- whether adequate scientific data exists on the specific watering needs of, and risks associated with, particular sites;
- the CEWH's capacity to deliver water to those sites, from entitlements purchased under the RtB program and from other water holdings; and
- the operational feasibility of getting water to particular sites (such as access to land and water pumps), which may change from time to time.

4.28 In identifying sites, the CEWH also has to have regard to his statutory obligation of giving effect to international agreements. While these agreements provide a broad remit to address watering needs, they do not necessarily cover all sites in the Basin that require additional water. Some sites may have local or state significance, but not national or international importance.

⁸⁷ For example, carryover limits are set by the relevant state authorities, and are subject to change in response to prevailing environmental conditions and storage capacities.

⁸⁸ See page 59 of the *Guide to the proposed Basin Plan*.

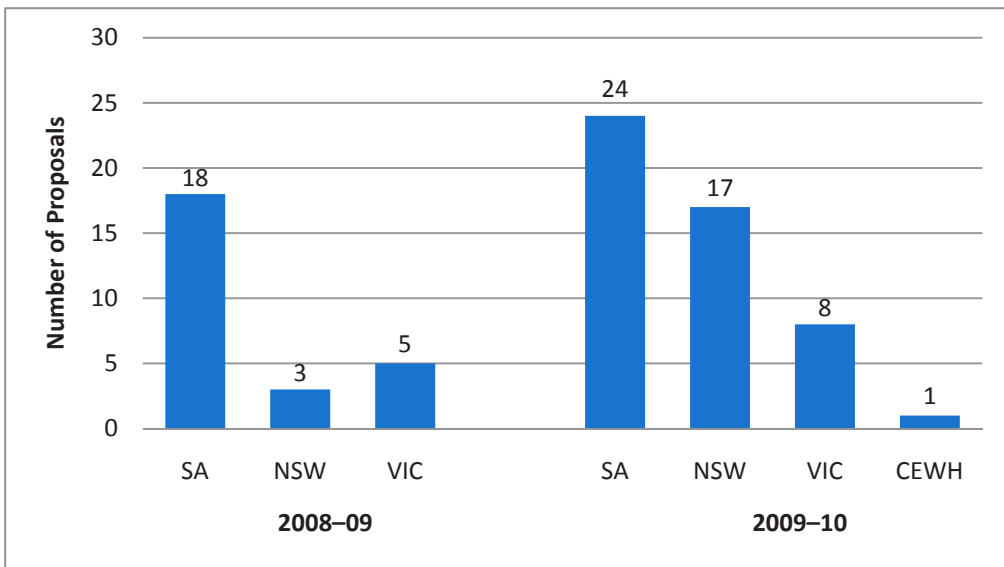
Input from state agencies

4.29 State agencies played a central role in identifying watering options in the period examined by the ANAO. With one exception, all of the CEWH's watering decisions in 2008–08 and 2009–10 were based on watering proposals sought from, and provided by, state agencies in South Australia, Victoria and New South Wales. The exception involved an in-stream flow of 50 ML that could not be carried over or traded out of the Ovens catchment in Victoria.

4.30 As illustrated in Figure 4.3, the majority of proposals in both years came from South Australia. In 2008–09, a total of 26 proposals were received; with 50 proposals in 2009–10. Many of the proposed watering locations are also designated as 'Icon' sites under The Living Murray initiative.

Figure 4.3

Number of watering proposals submitted by state agencies to the CEWH, 2008–09 to 2009–10



Source: ANAO, based on the department's data

4.31 The CEWH's involvement of state agencies reflects a cooperative approach to environmental watering, as set out in the CEWH's Framework for determining environmental watering use. States also hold and manage their own environmental water, and have greater knowledge of environmental assets and broader land management responsibilities. The involvement of state agencies reflects the fact that the CEWH did not have a broad information base of potential sites to generate alternative watering options. That is, upon

establishment, detailed information about environmental assets across the Basin and their water needs was limited.

Processes for seeking state proposals

4.32 The CEWH's process for identifying watering options was formalised by a letter to the relevant state agency, which often reflected earlier discussions between officers from the department and the agency.

4.33 In early 2010, the department developed a template that external parties (mainly state agencies) could use in submitting proposals. The template is designed to collect key information from all parties, and provide a more consistent approach to identifying watering options. However, although different approaches were trialled by the department in the first two years, no consistent template was used on the proposals examined by the ANAO. Nevertheless, states were consulted on, and then advised of the criteria that would be used by the department to assess their proposals.

Targeting particular seasons

4.34 In general, delivery of environmental water has been in autumn and spring. These seasons are regarded as important in achieving ecological outcomes—although exact timing will depend on the specific objectives of each watering event. Winter is sometimes an option for environmental watering, but the summer months are the least beneficial because higher temperatures and increased sunlight result in higher evaporation rates, reducing potential benefits.

4.35 In 2008–09, the first set of proposals was sought in January 2009, with the aim of informing watering decisions in autumn that year. The second set of proposals was sought in March 2009, with the aim of identifying uses of water allocated against unregulated entitlements from Toorale station. For the 2009–10 watering year, South Australia provided formal bids in January 2010, after providing a draft in July 2009. Victoria provided proposals in December 2009.

4.36 In seeking proposals, the department has to give consideration to carryover rules at the end of the water year, which have particular implications on spring watering decisions. Proposals received must be sought, received and assessed in time to determine watering actions in spring, and to make the necessary arrangements with carryover water.

Broader range of watering options in future years

4.37 The department anticipates that, as the volumes of water entitlements and allocations increase over the following years, there will be an increase in the number of sites that will be watered. Sites may also receive larger volumes of water than was previously available.

4.38 As previously noted, the MDBA identified 2442 key environmental assets in the *Guide to the proposed Basin Plan*, as well as identifying key ecosystem functions. The department is working with the MDBA to develop an environmental asset database to hold information on existing and new sites. The database is the major initiative that is expected to provide the CEWH with a better source of data on potential new sites. However, the collection of reliable scientific and operational data will take time, as this is a progressive and incremental process, dependent on available resources.

4.39 In the meantime, the department has established a panel of service providers to identify options for using the larger volumes of water that are now becoming available to the CEWH. Although this initiative provides an alternative source of information, the CEWH is likely to remain dependent on states for watering proposals in the foreseeable future. As such, the ANAO considers that, in light of the CEWH's independent role, the department should supplement state proposals with internally-generated watering options. This would allow the CEWH to take a broader, more independent approach to determining watering options across the Basin.

Prioritising watering actions

4.40 As previously noted, the prioritisation process essentially involves matching available water to particular sites. In the period examined by the ANAO, there was a relatively modest volume of available water, and a sufficient number of proposals to match against. That is, the CEWH was not presented with the situation of having more water than identified needs.

4.41 The prioritisation process involves staff assessing and ranking proposals against assessment criteria for each year. Scientific advice is also sought from EWSAC to inform subsequent recommendations to the CEWH on priority watering actions.

Assessment by staff

4.42 All of the watering proposals examined by the ANAO for the first two years were subject to an assessment against the relevant criteria. For each year,

the department used a standard format to record the information provided in proposals against the relevant criteria. This aided a consistent assessment approach. The format for recording information was revised in 2009–10 when the assessment criteria changed.

4.43 The assessments are principally conducted through a ‘desk-based’ review of information. While staff have visited a number of sites in the Basin, these visits do not generally occur in response to the submission of proposals.

4.44 All proposals were ranked by the department in order of priority, although there was no documented method for determining the rankings, or the extent to which criteria were met. The ranking was also not assisted by weightings being given to the criteria. The department followed up in a number of instances where the information did not satisfactorily address the criteria. However, the follow-up actions did not usually involve independent verification on aspects of the proposal; rather, the department obtained further information or confirmed existing claims made.

4.45 In assessing proposals, the department gave consideration to the future watering needs of sites. However, the principal purpose of the assessment process was to decide on, and prioritise, watering options for the immediate period or season, when allocations were known and available, rather than a commitment to provide water in the future. The department is now considering multi-year watering proposals that can be incorporated into its longer term planning.

New assessment tools and approaches

4.46 The CEWH has recognised the need for more sophisticated approaches to support the assessment and prioritisation of proposals. In January 2010, the department trialled the use of a multi-criteria analysis (MCA) decision-support tool for watering options being considered for the following autumn and spring. The MCA tool has been developed in consultation with the CSIRO and EWSAC. The tool provides a process for scoring the relative merits of each option against criteria, and aggregating a score to assist with rankings. The MCA tool is used to inform the CEWH’s decisions, not provide a definitive list of priorities.

4.47 Aside from providing water to individual sites based on a set of criteria, the CEWH is investigating the use of water at a ‘systems’ level. This approach assesses the watering needs of discrete ecosystems rather than just particular assets. The systems approach is being trialled through a study in the

Murrumbidgee catchment in 2010–11. The trial is of interest to many parties, including state governments.

Scientific advice provided

4.48 EWSAC advice was sought by the department on all proposals that were part of the ANAO's sample. In all cases, advice was provided from the Chair of EWSAC to the department, following comments by some or all committee members. EWSAC's advice was considered by the department in formulating recommendations to the CEWH.

4.49 In all cases EWSAC supported the planned use of water. Nevertheless, EWSAC expressed a number of strong, and recurring, concerns about aspects of the proposals. These included:

- a general lack of scientific evidence to justify particular watering regimes, and to support claims made about the success of previous watering actions on the suggested sites;
- a lack of detail on the arrangements to be used to monitor and report on the outcomes of watering; and
- the narrow objectives of some proposals, which focused on a single species rather than broader ecosystem functions.

4.50 EWSAC also raised concerns about the short timeframes in which it was asked to provide advice on a number of proposals. In one case, when advising on the use of Toorale water on the Markaranka floodplain, the Committee's advice was required within two days. The time given, and the general lack of evidence, was considered to be insufficient to allow members to properly consider the proposals and tender rigorous scientific advice to the CEWH, consistent with EWSAC's role.

Response to issues raised

4.51 The department has taken a number of measures to address the concerns raised by EWSAC, and it reports back to EWSAC on progress in addressing the Committee's concerns. Actions taken to date include obtaining more peer-reviewed scientific evidence to support recommended watering actions and claims made about the success of past watering actions; and developing an operational monitoring template, as a first step in developing a rigorous and systematic monitoring and evaluation framework. As well, the department has created a template to capture information on delivery arrangements when proposals are submitted. As discussed further in Chapter 5, the department is

also developing a more rigorous and systematic monitoring and evaluation framework, with significant input from EWSAC. While these are all useful measures, it is clear from more recent decisions that further and ongoing effort will be needed to properly and fully address EWSAC's concerns—especially the quality of evidence underpinning watering proposals.

EWSAC's ongoing role and functions

4.52 EWSAC plays an important role in the process for informing the CEWH's watering decisions. In particular, the Committee assists the department and the CEWH to formulate assessment criteria and to consider and review frameworks and arrangements for undertaking watering activities. This work provides practical application of the principle that environmental watering activities should be based on the best available science.

4.53 Although the department conducted an interim review of the Committee's roles and functions in 2009, the steep increase in water holdings and allocations over the coming years may require further consideration of EWSAC's ongoing role. Issues for the department to consider, which emerged from the ANAO's sample, are:

- whether EWSAC should be required to provide advice each and every time a proposed site is being considered, or only for the first time, when the ecological values of the site are being assessed;
- arrangements for getting EWSAC's input on the use of supplementary water, where decisions have to be made quickly; and
- whether EWSAC's role is to approve the sites being proposed *and* the appropriate volume of water to be delivered.⁸⁹

4.54 These matters are not currently addressed in EWSAC's terms of reference. They could be formally considered during any future reviews of EWSAC's role and functions, to inform its role in assisting the CEWH.

Formal decisions by the CEWH

4.55 The final step in the process for determining environmental water use is for the CEWH to make a decision on the recommended watering actions put

⁸⁹ In one decision, the volumes approved for delivery by the CEWH were larger than the estimated volumes considered by EWSAC. This was due to improved estimates of the volume of water required to meet the needs of the asset being provided by jurisdictions.

forward by the department. Under the Water Act, the CEWH can also be directed by either the Minister or the Secretary on where to use available water. No such directions were given on any of the events examined by the ANAO. The CEWH is required to report any such directions in his annual report.

4.56 The CEWH made his first decisions on where to use available water in February 2009, some 12 months after the first RtB tender commenced. The decision involved providing some 1486 ML to three sites—Chowilla Floodplain in South Australia, Katarapko Creek Wetlands in South Australia and Lindsay Island in Victoria. By 30 June 2010, the CEWH had made 17 separate decisions to provide a total of 182 672 ML to some 34 sites.⁹⁰ Figure 4.4 illustrates one of the first sites to receive environmental water in 2008–09. This site has not received any further water from the CEWH.

Figure 4.4

Chowilla Island Horseshoe on the Chowilla Floodplain in South Australia, 15 months after receiving water from the CEWH



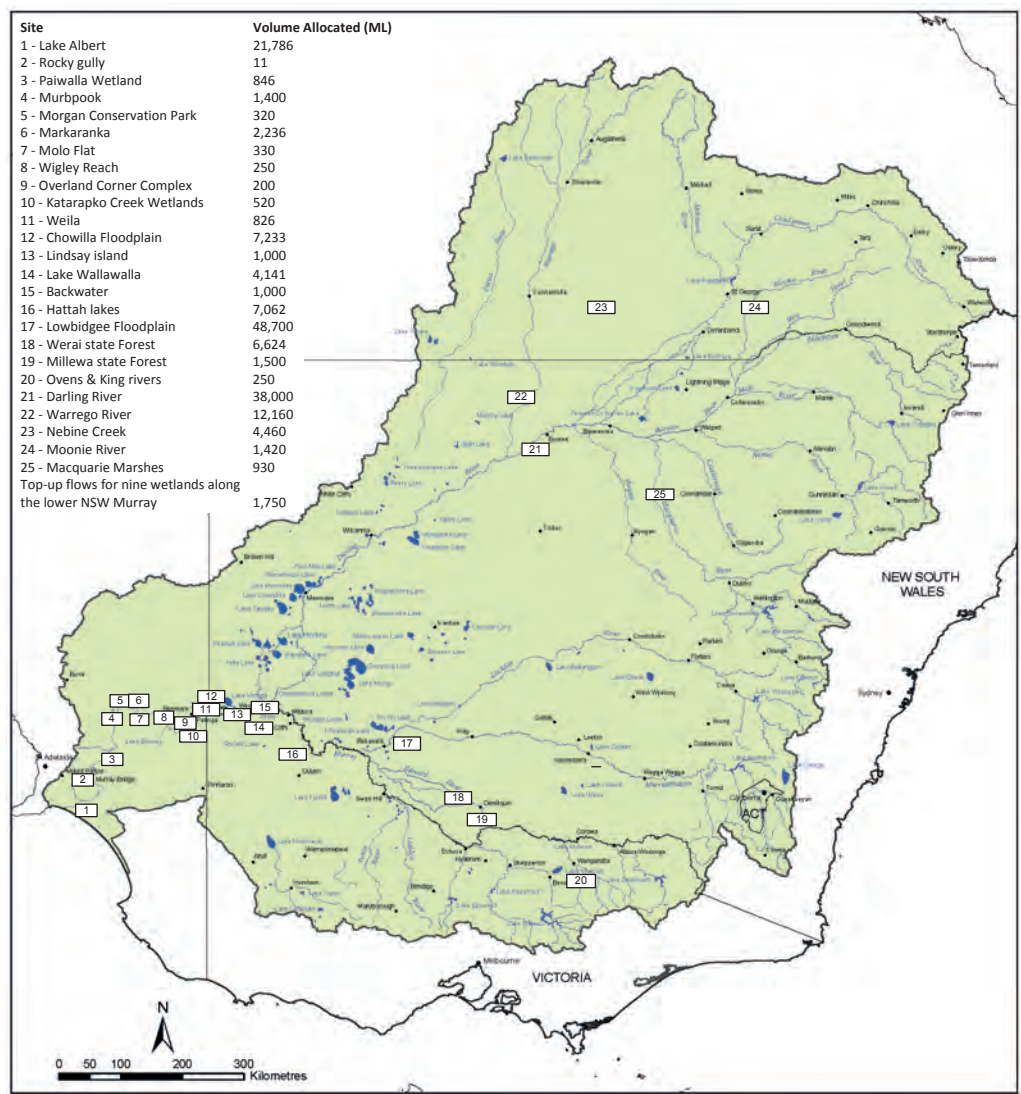
Source: ANAO, 22 June 2010

⁹⁰ As well, some 56 GL was delivered through in stream flows from unregulated entitlements.

4.57 As of 30 June 2010, water had been delivered in seven of the 16 catchments where water has been purchased under the RtB program—the Darling, Murray, Murrumbidgee, Macquarie, Moonie, Warrego and Ovens catchments. The vast majority of watering sites are located within the Murray catchment in the southern-connected system, as shown in Figure 4.5.

Figure 4.5

Sites in the Murray-Darling Basin provided water by the CEWH, 2008–09 and 2009–10



Source: ANAO, based on the department's records

4.58 In all cases examined by the ANAO, the proposed watering actions were approved by the CEWH, and a signed minute evidenced the decisions. The department advised that, in the first two years up to 30 June 2010, the CEWH had qualified two recommendations put forward by the department. In both cases, the CEWH gave 'in-principle' agreement to the recommended watering actions, subject to future water availability and the condition of assets.

Conclusion

4.59 The CEWH was established in 2008 to contribute to a broader set of reforms, aimed at providing sustainable water use throughout the Basin. As the manager of the Commonwealth's water entitlements, the CEWH plays a vital role in delivering tangible environmental outcomes from the significant expenditure incurred under the RtB program and *Water for the Future*.

4.60 The period of the CEWH's functions examined by the ANAO was characterised by relatively small volumes of water, predominately from the RtB program, and the progressive establishment of the CEWH's decision-making framework. Several aspects of the CEWH's early processes were not functioning smoothly, but have since been improved, including the depth and rigour of scientific information used to support watering actions.

4.61 The department and the CEWH have initiated a range of measures to manage the substantial increase in Commonwealth environmental water holdings. The recent deluge across parts of the Basin means that larger volumes of water are available sooner than expected. The immediate and ongoing challenge for the department and the CEWH is, therefore, to match the pace of implementation of these new approaches with the increased risks associated with larger water holdings. Of particular importance is the need to develop a better knowledge base on potential watering sites, to enable the CEWH to take a more independent and Basin-wide approach to environmental watering activities. In the latter case, the finalisation of the EWP under the Basin Plan is expected to provide clearer direction to all stakeholders on environmental watering priorities across the Basin.

5. Water Delivery, Monitoring and Reporting

This chapter examines the Commonwealth Environmental Water Holder's arrangements for delivering, monitoring, and reporting on the water provided to different sites within the Murray-Darling Basin.

Introduction

5.1 The final steps in the CEWH's process of providing water involves the physical delivery of water to sites, followed by monitoring actions to evaluate the ecological effects of the water. These final steps provide visibility of the tangible environmental benefits gained from the purchase of permanent water entitlements under the RtB program. They also provide information to support the CEWH's reporting obligations to Parliament on the outcomes achieved with Commonwealth water holdings.

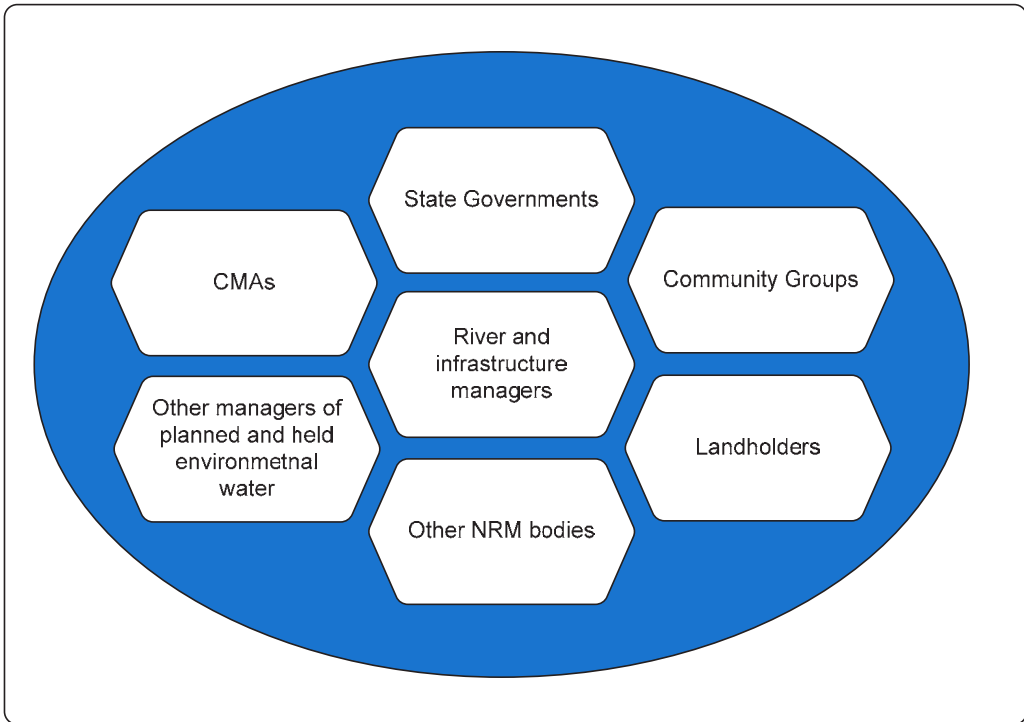
5.2 The ANAO examined a sample of watering decisions⁹¹ from 2008–09 and 2009–10 to identify whether delivery and monitoring actions were undertaken in accordance with the CEWH's directions. The ANAO has also assessed the CEWH's preparedness for managing a substantial increase in the volume of water.

Reliance on external parties

5.3 The central feature of the CEWH's delivery and monitoring arrangements in the period examined by the ANAO was that virtually all delivery and monitoring actions were performed by parties outside the department. The key external partners were state government agencies and catchment management authorities (CMAs). Community groups were also involved in some activities.⁹² Figure 5.1 illustrates the broader range of stakeholders involved in delivery and monitoring activities.

⁹¹ The same sample referred to in Chapter 4, and as listed at Appendix 3.

⁹² For example, Paiwalla wetland in South Australia is owned and managed by the Wetlands Habitat Trust, a community group who donate their time to the restoration and preservation of wetlands on the lower River Murray.

Figure 5.1**Stakeholders involved in the delivery and monitoring of Commonwealth environmental water, 2008–09 and 2009–10**

Source: ANAO, based on the department's records at 30 June 2010

5.4 The CEWH's use of external parties reflects the 'cooperative' environmental watering model adopted, as discussed in Chapter 4. This approach seeks to generate cost-efficiencies, take advantage of local expertise and recognises the need to coordinate Commonwealth watering actions with other managers of environmental water. A more specific reason why the CEWH uses state agencies and CMAs to deliver environmental water is because the Commonwealth does not hold the necessary licences to divert or extract allocated water from river systems in catchments where it owns water entitlements. The permanent entitlements purchased under the RtB program provide access to available water; they do not usually include any delivery rights.

Environmental Water Holdings Special Account

5.5 Although all delivery and monitoring actions are undertaken by external parties, the CEWH has a Special Account, called the Environmental Water Holdings Special Account, to help fund these and other activities. The Special

Account was established under the Water Act for the purposes of the FMA Act 1997.⁹³ Funds are to be used for the purposes of managing the Commonwealth's environmental water holdings. This may include costs involved in:

- paying charges relating to the holding, transfer and delivery of water rights;
- purchasing or disposing of water rights;
- obtaining expert advice; and
- entering into arrangements with external parties for delivery, monitoring or other activities.

5.6 The CEWH's Special Account was appropriated a relatively modest sum of \$800 000 in 2007–08. Since then, forecast funding requirements have increased sharply, and are currently expected to reach around \$37 million per annum by 2016–17. The department advised that this figure will be revised periodically to take into account changing circumstances, such as the Government's commitment to 'bridge the gap' by acquiring environmental water required under the final Basin Plan. The department also advised that annual management costs are forecast to be less than one per cent of the value of the holdings in the period 2016–17.

5.7 The cost drivers that account for much of the forecast increase in the CEWH's funding requirements are:

- water holding fees and charges, which relate to the number of entitlements held by the CEWH; and
- costs associated with delivering environmental water to sites, such as on-ground pumping costs as well as capital costs related, for example, to the construction of regulators.

5.8 The funding forecast for delivering water to sites also includes costs associated with future monitoring and evaluation activities (which are currently being determined by the CEWH and delivery partners). In the initial period of the CEWH's functions, monitoring and evaluation costs have been borne by state agencies or other external groups, often on an 'in-kind' basis. As discussed later in this chapter, monitoring and evaluation costs can be expected to increase steadily as more water becomes available for delivery.

⁹³ The FMA Act states that a special account is an appropriation mechanism that sets aside amounts within the Consolidated Revenue Fund for expenditure for special purposes.

There will therefore need to be clarity and agreement between the CEWH and external parties on how these costs will be shared.

Water delivery arrangements

5.9 The process for delivering water starts by the CEWH sending a letter to the relevant state agency setting out the terms of agreement for the use of the water. These terms include specifying the volumes to be delivered to particular sites, associated monitoring actions, and the costs to be borne by both parties. States are also requested to notify, and seek agreement from, the CEWH of changes to approved watering actions. The CEWH's letter stipulates that the approved use of water is not intended to create a commitment, or form a precedent, for future watering decisions. This was a deliberate approach taken in the first years until longer-term delivery and monitoring arrangements could be established.

5.10 Once the CEWH's terms are acknowledged and agreed through return correspondence, staff transfer the water to delivery partners by way of a water allocation trade. The trade is recorded on the CEWH's register and associated fees and charges are paid out of the Special Account.

Discrepancies in water delivered versus water approved

5.11 In five (of 11) sites sampled, the volume of water reported as being delivered by external parties differed to what was approved for delivery by the CEWH (Table 5.1).

Table 5.1

Discrepancies in the volume of water delivered to environmental sites compared to the volumes approved for delivery by the CEWH

Environmental site	Agreed volume by CEWH (ML)	Amount delivered (ML)
1. Gum Flat	1500	1362
2. Backwater Lagoon	1000	344
3. Murbpook	1400	1272
4. Markaranka South	1500	2081
5. Markaranka East ¹	734	153

Note 1: The water that was not delivered to Markaranka East was provided to Markaranka South.

Source: ANAO, based on the department's records

5.12 None of the discrepancies in water delivery were large in absolute volume terms, and there is no indication that the changes in actual water delivered significantly compromised any ecological outcomes intended from the watering events. In fact, the principal reason why less water was delivered in the first three cases—Gum Flat, Backwater Lagoon⁹⁴ and Murbpook—was because recent rainfall in these locations meant that less water was required than originally thought when the watering decision was made. By contrast, the discrepancies for the Markaranka South and Markaranka East sites resulted mainly from inaccurate predictions about ‘flow behaviour’. These predictions were accepted by the CEWH during the decision-making process, even though the original proposal noted that this risk had eventuated in an earlier watering action in 2006.⁹⁵

5.13 While the water discrepancies in the ANAO’s sample were not significant, they highlight issues that will need to be actively managed when total water available for delivery increases substantially. These issues include:

- having suitable contingency arrangements in place to manage surplus water that is not used in particular watering events; and to avoid loss or forfeiture of water closer to the end of each water year;
- establishing suitable administrative processes with states to offset the extra water against future delivery volumes or re-credit the water to the CEWH’s register;
- ensuring clear communication between the parties, and timely action by delivery partners to alert the CEWH to emerging changes in approved water delivery arrangements; and
- having reliable data on how much water is required for particular sites and how that water will ‘behave’, in terms of flow patterns, drainage and wetting requirements.

⁹⁴ The smaller volume of water delivered to Backwater Lagoon was also attributable, in part, to poor contingency arrangements in securing a second pump to get the environmental water on site before the end of the water year, 30 June 2009.

⁹⁵ The land owner’s attempt to pump enough water into the south lagoon so that it would reach a level where it flowed naturally into the east lagoon was not successful. A similar attempt by the CEWH in 2009 had the same outcome. Subsequently, the water was pumped over the dividing bank.

5.14 To some extent, the department already had processes in place to deal with these issues, but on a case-by-case basis. Larger volumes of water will increase the risks on all parties⁹⁶, and will require greater planning and a clear understanding of the roles and responsibilities between the relevant parties. Timely and reliable scientific data on watering requirements for sites will also be an ongoing issue, although the development of the environmental asset database is intended to assist in this regard.

Pumping costs incurred

5.15 In all but two of the delivery events examined, pumping was required to deliver water to the environmental sites. The principal reason for this is because the river levels were too low to allow water to flow naturally into the chosen sites. Pumping was also used because there were no temporary or permanent structures, such as weirs and regulators, to aid the movement of water from the river systems to environmental sites. The exceptions in the ANAO's sample were Yanga National Park and the Macquarie Marshes, where water was delivered through permanent structures without the need for pumping. Figure 5.2 illustrates the use of a pump to provide water to the Overland Corner floodplain in South Australia, which the ANAO observed in June 2010.

Insufficient information obtained during the decision-making process

5.16 The need for pumping was known when sampled sites were formally approved by the CEWH—although in the case of Backwater Lagoon, the department's original assessment, which was based on the state's proposal, stated that pumping costs were not expected. However, the final cost of pumping water onto sites was not fully appreciated when watering decisions were made. Likewise, there was not always clear agreement about how pumping costs would be shared between the parties. For example, in the CEWH's initial dealings with the Victorian Department of Sustainability and the Environment (DSE), it was assumed by the CEWH that pumping costs for Commonwealth water delivered to sites in Victoria would be borne by the relevant state agencies. However, DSE made it clear that pumping costs would need to be shared between the parties, which is what eventually happened.

⁹⁶ For example, one risk is environmental water spilling from designated sites onto private property and causing damage.

Figure 5.2

Pumping of water from the River Murray onto Overland Corner in South Australia, June 2010



Source: ANAO, 21 June 2010

5.17 The cost of pumping water to sites is in addition to the cost of purchasing the water entitlements. The pumping costs incurred in watering events sampled by the ANAO have reached up to \$420 000 for one event. As discussed in Chapter 2, these costs are site-specific, and were not considered when the department purchased permanent water entitlements under the RtB program. The substantial pumping costs required to deliver water from a growing entitlement portfolio is one of the factors that has led to a sharp increase in the forecast funding requirements for the CEWH's Special Account.

Future delivery arrangements

5.18 Pumping water onto sites is expected to remain a necessary feature of the CEWH's watering arrangements for the foreseeable future. Major structures are also being built on certain high profile environmental sites to provide a more efficient and cost-effective means of moving available water around those sites. One such example is a regulator being built across Chowilla Creek in the Chowilla Floodplain under The Living Murray (see Figure 5.3). This project is being funded by the Commonwealth along with New South Wales, Victoria and South Australia.

Figure 5.3

Construction of a regulator across the Chowilla Creek in the Chowilla floodplain in South Australia, June 2010



Source: ANAO, 22 June 2010

Current initiatives

5.19 In his 2010–11 business plan, the CEWH foreshadowed an intention to examine the potential for establishing long-term arrangements with Basin state governments and others to provide water to high-priority environmental assets. The CEWH has a Memorandum of Understanding (MOU) with the NSW Department of Environment, Climate Change and Water on the cooperative use of environmental water. The MOU was signed in February 2009 and renewed in June 2010. Under the MOU, both parties commit to considering longer term cost-sharing arrangements associated with the delivery, monitoring, evaluation and reporting of watering events. The first environmental asset to be considered is the Macquarie Marshes, which is a Ramsar-listed site of national importance. Discussions with other Basin jurisdictions to arrange similar commitments have occurred, but no agreements had been finalised at 30 June 2010.

5.20 As a separate initiative, the department has established a panel of external parties to provide a range of services to assist the CEWH in carrying out his statutory functions. As discussed previously, these services include the development of large water use options and functions relating to water

delivery, such as river operations. (Other services are being sought to support the CEWH's decision-making processes, or to assist with monitoring and reporting activities.)

Monitoring and reporting arrangements

5.21 Under the Water Act, the CEWH is required to provide an annual report to the Minister, which must include achievements against the objectives of the EWP when finalised. The CEWH has met his obligation to provide annual reports. In addition, in advance of the EWP being finalised, the CEWH has taken a number of measures to provide transparency and accountability to Parliament and other stakeholders on the management of Commonwealth environmental water. This includes:

- posting an annual business plan on the department's website, which outlines the CEWH's approach to environmental watering and includes a range of other information about the CEWH's statutory functions;
- providing information on the department's website about the sites that have been watered as well as periodic updates on overall environmental water holdings; and
- publishing a report on the outcomes of Commonwealth environmental watering in 2008–09⁹⁷, with a similar report to be produced for 2009–10 watering events.

5.22 The 2008–09 outcomes report provided information on all ten sites watered that year—seven of which were in South Australia, two in Victoria and one in NSW. The report acknowledged that it would take several years for a more complete picture of environmental outcomes to emerge, but found that watering has provided clear benefits to environmental assets.

Compliance with monitoring requirements

5.23 The ANAO's sample of 11 watering events included six sites that were watered in 2008–09 and five sites that were watered in 2009–10. At the time of fieldwork, monitoring information was not on file for any of the 2009–10 sites. This was principally because the environmental water had recently been delivered or had not yet been finalised. Monitoring information was on file for

⁹⁷ The report can be found at <<http://www.environment.gov.au>>.

all six sites examined for 2008–09. This information provided the basis for the CEWH's outcomes report.

5.24 There was considerable variability in the quantity, timing and format of monitoring information provided to the department for 2008–09 watering events. The monitoring reports provided for sites in South Australia generally included greater detail than the monitoring reports for sites in Victoria. There was also no consistency between states on the way in which monitoring information was provided. Different report formats were used, and the submission of information was not aided by any template provided by the department. For most of the watering events examined by the ANAO, there was no specified timeframe in which monitoring reports were required to be provided. In general, reports were provided quarterly after the end of the water year. Much of the monitoring information on file was also undated, making it difficult to tell when it was received, or whether it was sent after prompting from the department. Overall, the variability of monitoring information made it difficult to determine whether the information provided related directly to the approved objectives of the watering events.

Broader monitoring issues

5.25 Much of the water allocated by the CEWH in 2008–09 and 2009–10 went to sites that were also being watered under The Living Murray initiative or sites that had previously received environmental water from other sources.⁹⁸ One of the reasons for this is because these sites had existing governance and management arrangements. This meant that the CEWH could leverage off existing arrangements, including monitoring activities, rather than implementing a new monitoring program. The fact that many sites were being co-watered also provided a basis for sharing costs associated with delivery, monitoring and reporting activities.

5.26 The much larger volumes of water now becoming available to the CEWH will likely provide more watering options for consideration. Along with other parts of the CEWH's processes, this will require a more strategic approach to arranging and funding monitoring activities. In this context, the key message from stakeholders that the ANAO spoke with during field visits, is that there needs to be greater direction from the CEWH on:

- the extent of monitoring required;

⁹⁸ For example, Paiwalla wetland and Markaranka wetland in South Australia.

- the type of reporting to be produced; and
- arrangements for sharing the costs of both.

Strategic framework for monitoring

5.27 Since May 2009, the department has been developing a strategic framework to support the monitoring, evaluation and reporting (MER) of watering events. The MER framework is being developed in consultation with EWSAC and is expected to be revised in light of any monitoring and evaluation information in the Basin Plan. The MER is designed to complement the CEWH's framework for determining environmental water use (as discussed in Chapter 4).

5.28 Key aims of the MER framework are to provide assurance that water is used for its stated objective, and to better inform the targeting of future water purchases. The framework identifies three levels of monitoring, to apply to watering events:

- *operational*—which establishes that the water held by the Commonwealth was used for its stated objectives, verifies the hydrological response, identifies and monitors identified risks;
- *intervention*—which evaluates the short and medium-term ecological responses to watering events in relation to the objective; and
- *program*—which evaluates the response at the ecosystem level over the long-term.

5.29 Although the MER framework was not formally in place when the CEWH's watering decisions were made in 2008–09, the key monitoring concepts in the framework were evident in the department's decision-making processes during this period. The processes that were in place to obtain the monitoring information were less developed than the arrangements now being implemented.

Monitoring costs not explicitly considered

5.30 The current version of the MER framework does not outline any principles for determining how the costs of monitoring actions are to be shared among the different parties involved in 'collaborative' watering events. As discussed previously, the costs of delivering water, and monitoring its effects, tend to be determined on a bilateral basis between the CEWH and the relevant

state authorities. Some of the factors that may require further consideration of cost-sharing arrangements are:

- how monitoring and reporting actions will be funded when the CEWH is the main or sole contributor of environmental water to sites;
- whether monitoring actions will be required in each case where Commonwealth water is provided; and
- the capacity of state agencies, CMAs or other parties to undertake monitoring activities when a larger number of sites are watered.

5.31 The principles for sharing costs with external partners on the delivery, monitoring and reporting of Commonwealth water could be incorporated into the existing MER framework. Such principles would provide a better basis for all parties to resource and budget for future watering actions.

Conclusion

5.32 The CEWH's delivery and monitoring arrangements in the first two years were characterised by a case-by-case approach with external partners, and modest volumes of available water. Overall, the CEWH's processes provided adequate assurance that allocated water was delivered as specified. As well, sufficient monitoring information was obtained, albeit of variable quality, to indicate whether the intended ecological responses were being achieved (at least in the short term). The monitoring information provided the basis for the CEWH's outcomes report. Along with other measures, this report has aided the transparency of Commonwealth watering actions in the Basin.

5.33 The CEWH has recognised the need to establish longer term arrangements with external partners and stakeholders to accommodate much larger volumes of water. Key initiatives include the development of an MER framework, which will be guided by the Basin Plan; and the execution of bilateral agreements with state governments on joint water delivery and monitoring activities. However, one of the central issues that remains to be formally considered, and agreed, is how delivery and monitoring costs will be shared in the longer term between the CEWH and external partners. Clarity on this issue will become especially important in situations where the CEWH is the main or sole contributor of water to sites, and when a much larger number of sites are able to be watered.

Recommendation No.2

5.34 To provide more certainty to external partners in resourcing and budgeting, the ANAO recommends that the Department of Sustainability, Environment, Water, Population and Communities, in consultation with the Commonwealth Environmental Water Holder and other stakeholders, articulate the principles that will be used to determine the basis for sharing costs on the delivery, monitoring and reporting of Commonwealth watering actions.

Department's response

5.35 Agreed. As the ANAO notes, at least with respect to the monitoring and reporting costs, this could be done as part of the Monitoring, Evaluation and Reporting Framework being developed. Cost sharing arrangements could also be dealt with in longer term arrangements the CEWH is seeking to establish with delivery partners.



Ian McPhee
Auditor-General

Canberra ACT
10 February 2011

Appendices

Appendix 1: Department's full response to the audit



Australian Government

Department of Sustainability, Environment, Water, Population and Communities

Audit-in-confidence

Reference: 00941/2010

Mr Matt Cahill
Group Executive Director
Performance Audit Services Group
Australian National Audit Office
GPO Box 707
Canberra ACT 2601

24 JAN 2011

Dear Mr Cahill,

Thank you for your letter of 16 December 2010 seeking input from the Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) on the proposed audit report on the Restoring the Balance in the Murray-Darling Basin (RtB) program and the use of water by the Commonwealth Environmental Water Holder (CEWH).

I enclose the Department's response, including a summary response and a response to each recommendation as text for inclusion in the final report. Overall, the Department considers that the report provides a balanced assessment of the implementation of the RtB program and operations of the CEWH.

I would like to acknowledge the professional approach taken by the members of your audit team.

Thank you for providing the opportunity to comment on the proposed performance audit report.

Yours sincerely,

Paul Grimes
Acting Secretary

Attachment A: Summary of the Department's response



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www.environment.gov.au



Department's response to audit as a whole

The Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) notes that the ANAO has concluded that overall the Department has established adequate arrangements for the administration and implementation of the Restoring the Balance in the Murray-Darling Basin (RtB) program.

SEWPaC acknowledges the ANAO suggestion that there could be potential benefits from a closer and more formalised relationship with the Commonwealth Environmental Water Holder (CEWH). Better information will be available in the future to support prioritisation of water purchases, including from the accumulated experience of the CEWH in assessing environmental watering options and the finalised Basin Plan. The Department will further develop the relationship with the CEWH and other stakeholders to assist with the administration of the RtB program.

The Department notes the ANAO's observations on the Twynam purchase. The Department acknowledges that the short term water yield to entitlement purchases depends on water availability in the years immediately following the completion of the purchase. This makes it difficult to predict when water allocations will be available to licences. When the Twynam purchase was undertaken, acquiring a large parcel of entitlements in a single transaction offered the prospect of more immediate environmental benefits compared with the alternative of purchasing the equivalent volume of entitlements over an extended period.

SEWPaC acknowledges the ANAO's observations about the challenges that the CEWH will face in managing larger volumes of water entitlements in the future. As the ANAO has noted, SEWPaC is taking a number of steps to enhance the capacity of the Department to support timely and effective decision making by the CEWH, including:

- trialling and using new methods and tools for identifying and prioritising watering options;
- working with the Murray Darling Basin Authority on an environmental assets database;
- making improvements to the register of environmental water holdings;
- developing a strategic framework to support monitoring, evaluation and reporting of watering events;
- establishing longer term arrangements with external partners and stakeholders to accommodate much larger volumes of water in coming years; and
- executing bilateral agreements with state governments on joint water delivery and monitoring activities.

SEWPaC agrees with the ANAO's recommendation that better articulation of roles, responsibilities and the principles for sharing delivery, monitoring and reporting costs in the long-term would provide more certainty to external delivery partners. As the ANAO notes, at least with respect to the monitoring and reporting costs, this could be done as part of the Monitoring, Evaluation and Reporting Framework being developed. Cost sharing arrangements could also be dealt with in longer term arrangements the CEWH is seeking to establish with delivery partners.

Appendix 2: Methodology used to select the ANAO's sample of applications from the first four tenders

Background

1. In February 2010, when the ANAO commenced this audit, three tenders had been completed under the RtB program and three more were underway. The ANAO's sample of 133 applications to sell water entitlements was chosen from the first four tenders and comprised applications from:
 - a variety of states and catchments;
 - a selection of various licence types; and
 - an overall combination of approved and rejected applications.
2. Table A 1 contains information on how many applications passed each tender evaluation criterion and the overall pass and rejection rates.
3. The selection was based on: data provided by the department; program summary on entitlements purchased (on the department's website); and, discussions with staff.

Table A 1

Breakdown of the applications sampled by the ANAO, by tender

Period	Location	Assessed by the department	Passed criterion 1	Passed criterion 2	Passed criterion 3	Rejected by the department
2007–08	Basin-wide	22	18	15	11	11
2008–09	Northern	23	21	16	16	13
2008–09	Southern	71	71	64	47	26
January 2010	Southern	17	16	16	6	11

Source: ANAO, based on the department's data

Appendix 3: Sample of the CEWH's watering decisions examined by the ANAO

Table A 2

Watering actions examined by the ANAO

Watering site	Volume allocated by CEWH (ML)	Watering time	State
2008–09			
Lindsay Island	1,000	Autumn 09	Vic
Backwater Lagoon	1,000	Autumn 09	NSW
Chowilla Floodplain (Gum Flat)	1,500	Autumn 09	SA
Hattah Lakes	2,124	Autumn 09	Vic
Markaranka Floodplain	2,236	Autumn 09	SA
Murbpook Lagoon	1,400	Autumn 09	SA
2009–10			
Hattah Lakes	16,400	Spring 09 – Autumn 10	Vic
Lake Albert	20,000	Summer – Autumn 10	SA
Chowilla - Coombool Swamp - Lake Limbra	4,500 3,650	Autumn 10	SA
Macquarie Marshes	933	Summer - Autumn 10	NSW
Lowbidgee Floodplain	48,740	Spring 09 - Winter 10	NSW

Source: ANAO, based on the department's records

Appendix 4: List of environmental watering sites visited by the ANAO

South Australia

- Paiwalla wetland
- Markaranka wetland
- Overland corner
- Chowilla floodplain (multiple sites)

Victoria

- Lake Wallawalla
- Mulcra Island (potential site for Commonwealth water)
- Hattah Lakes (multiple sites)

New South Wales

- Lowbidgee floodplain (rain affected)

Appendix 5: Average prices of offers pursued for each water entitlement tender

Catchment	Security Level	Average prices of water entitlement offers pursued for each tender (per ML)					
		2007-08 Basin-wide	2008-09 - northern and southern Basin	2009-10 1st southern tender	2009-10 2nd southern tender	2009-10 3rd southern tender	2009-10 northern tender
NSW							
Barwon-Darling	B Class		\$872				
Barwon-Darling	C Class		\$763				
Barwon-Darling	Colymongie Refill		\$872				
Gwydir	General Security	\$2,212	\$2,242				
Gwydir	Supplementary		\$1,045				
Lachlan	General Security	\$660	\$692				
Lachlan	High Security	\$2,200	\$2,250				
Lower Darling	General Security				\$949		
Macquarie	General Security	\$1,283	\$1,267				
Macquarie	Supplementary		\$161				
Murray Valley - Above the Barmah Choke	General Security	\$1,145	\$1,322	\$870	\$796		
Murray Valley - Below the Barmah Choke	General Security	\$1,099	\$1,276	\$967	\$926		
Murray Valley - Below the Barmah Choke	High Security		\$2,292		\$2,050		
Murrumbidgee	General Security		\$1,118	\$930	\$861		
Murrumbidgee	High Security		\$2,400				
Murrumbidgee	Supplementary		\$218				
Namoi	General Security		\$2,050				
QLD							
Border Rivers	Medium Priority		\$2,276				
Lower Balonne	Unsupplemented						
SA							
Murray	High Security	\$2,370	\$2,392	\$2,047	\$1,930	\$1,841	
Vic							
Campaspe	High Reliability	\$2,350	\$2,376				
Campaspe	Low Reliability		\$173			\$1,740	
Coliban River System			\$1,000				
Goulburn	High Reliability	\$2,363	\$2,390	\$2,054	\$1,953	\$1,862	
Goulburn	Low Reliability	\$192	\$196				
Loddon	High Reliability		\$2,388			\$1,636	
Loddon	Low Reliability		\$200				
Murray Valley - Above the Barmah Choke	High Reliability	\$2,119	\$2,176	\$1,795	\$1,700	\$1,613	
Murray Valley - Above the Barmah Choke	Low Reliability	\$175	\$194				
Murray Valley - Below the Barmah Choke	High Reliability	\$2,349	\$2,378	\$2,072	\$1,957	\$1,824	
Murray Valley - Below the Barmah Choke	Low Reliability	\$175	\$201				
		\$1,433.30					

Source: ANAO, based on data provided by the department

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Department of the Environment, Water, Heritage and the Arts

Department of Climate Change and Energy Efficiency

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Centrelink Fraud Investigations

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Direct Source Procurement

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Home Insulation Program

Department of the Environment, Water, Heritage and the Arts

Department of Climate Change and Energy Efficiency

Medicare Australia

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Food Standards Australia New Zealand

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*Centrelink's Role in the Process of Appeal to the Social Security Appeals Tribunal and to the
Administrative Appeals Tribunal*

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Department of Education, Employment and Workplace Relations

Department of Families, Housing, Community Services and Indigenous Affairs

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Defence Materiel Organisation

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*Government Business Managers in Aboriginal Communities under the Northern Territory
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Restoring the Balance in the Murray-Darling Basin

Department of Families, Housing, Community Services and Indigenous Affairs

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Army Aboriginal Community Assistance Program

Department of Families, Housing, Community Services and Indigenous Affairs

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Administration of the Wine Equalisation Tax

Australian Taxation Office

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Indigenous Housing Initiatives: the Fixing Houses for Better Health program

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Indigenous Business Australia

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The Design and Administration of the Better Regions Program

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Administration of the Trade Training Centres in Schools Program

Department of Education, Employment and Workplace Relations

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Management of the Tender Process for a Replacement BasicsCard

Department of Human Services

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