

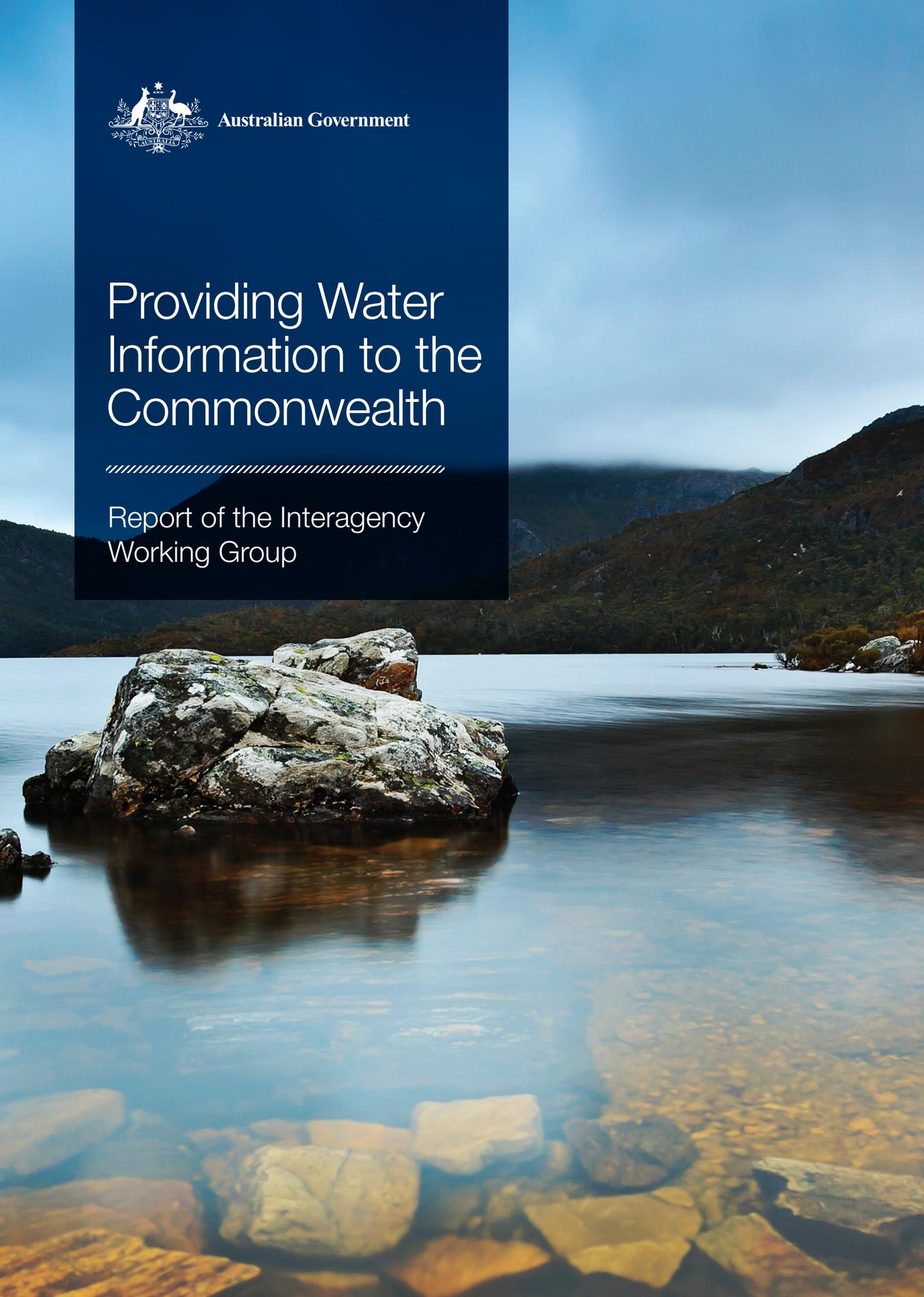


Australian Government

Providing Water Information to the Commonwealth



Report of the Interagency
Working Group





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Acknowledgements

The working group thanks all who contributed their knowledge and time by assisting with the review, including by way of written input and attendance at meetings with working group members. In particular, the working group thanks all who contributed during the consultation phases.

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In reply please quote

DIR 15 1193

The Hon Barnaby Joyce MP
Minister for Agriculture and Water Resources
Parliament House
CANBERRA ACT 2600

Dear Minister

I am pleased to present to you for consideration the report of the Interagency Working Group on Commonwealth Water Information Provision (the Working Group), in accordance with the Working Group's Terms of Reference published on 19 December 2014. Submission of this report to you satisfies Recommendation 18 of the Report of the Independent Review of the *Water Act 2007* and contributes to the Australian Government's deregulation agenda.

The report documents the Working Group's review of water information reporting burdens under the *Water Act 2007* (the Act), and additional regular reporting of water-related information to other Australian Government agencies. It estimates the costs of reporting under the Act borne by businesses, not-for-profit organisations and individuals and outlines the benefits derived from the information provided. It also describes practices that have already been implemented to reduce or minimise regulatory reporting burdens.

The Working Group has identified instances of duplicate information requested between Australian Government agencies, and proposes options to address these and to further streamline reporting requirements. The Working Group has agreed on four recommendations and six actions, the implementation of which would reduce the regulatory burden of providing water information to the Australian Government by greater than 20 per cent, whilst ensuring that critical objectives of information collection and publication are maintained. Completion of these recommendations and actions would largely remove duplication of requests by more than one Australian Government agency.

The report is the result of consultation with state and territory lead water agencies and the regulated community, including rural and urban water utilities.

The Bureau of Meteorology acknowledges the support and contribution of the Murray-Darling Basin Authority, the Australian Bureau of Statistics, the Australian Bureau of Agricultural and Resource Economics and Sciences, the Australian Competition and Consumer Commission and the Department of the Environment.

I commend the report to you.

Yours sincerely

DR ROB VERTESSY FTSE
Director of Meteorology and CEO
22 January 2016

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1 Executive summary

1.1 Scope of report

This report by the Interagency Working Group on Commonwealth water information provision (the working group) responds to recommendation 18 of the Independent Review of the *Water Act 2007* (the Water Act review). The Australian Government charged the working group with investigating options to reduce the regulatory burden of providing water information to the Commonwealth, while ensuring that critical objectives of information collection and publication are maintained.

The report documents water information reporting required under the *Water Act 2007* (the Water Act) and additional regular reporting to Commonwealth agencies. It estimates the costs of reporting to businesses and community groups and outlines the benefits derived from the information provided.

The report makes several recommendations to reduce the burden of providing water information while achieving the objectives of the Water Act and maintaining the associated water information products and services. It also identifies instances of duplication of information requested between government agencies and proposes actions and recommendations the agencies will take to remove duplication.

1.2 Purpose of Commonwealth requirements for water information

The Water Act puts in place the architecture for the Commonwealth to achieve several objectives:

1. Sustainably manage the Murray–Darling Basin (MDB) water resources across state borders in the national interest. The Murray–Darling Basin Authority (MDBA) sets and enforces compliance with sustainable diversion limits (SDLs) and water trading rules, as well as monitoring and reporting on water quality targets and environmental objectives.
2. Effective water markets in the MDB to ensure water markets achieve high value use through open competition. This is achieved under the Australian Competition and Consumer Commission's (ACCC's) monitoring, price setting, enforcement and advisory roles.
3. The management of water holdings by the Commonwealth Environmental Water Holder to protect and restore environmental assets of the Basin.
4. The provision of national water information services by the Bureau of Meteorology (BoM).

Three Water Act agencies (the BoM, the ACCC and the MDBA) require information to effectively discharge their functions. These agencies require a proportion of information from the regulated community¹ of businesses and some not-for-profit organisations. However, most information is obtained from state and territory government agencies as they have primary responsibility for the management of water resources.

In addition, two other Commonwealth agencies, the Australian Bureau of Statistics (the ABS) and the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES), regularly collect information from businesses and individuals on the economic aspects of water use, as part of their roles to provide public information on the Australian economy and on farm productivity respectively.

These five Commonwealth agencies (the BOM, the ACCC, the MDBA, the ABS, and ABARES) all collect water related information from the regulated community but they all have distinct functions leading to different types of information requested and used in different ways. Broadly, the information requirements are as follows:

- MDBA: compliance information on water trading rules and delivery and irrigation rights to encourage open, effective water trade

¹ Under the Australian Government's deregulation agenda, the regulated community comprises businesses, not-for-profit organisations and individuals.

- ACCC: information to monitor transformation arrangements, compliance with the water market rules and the water charge rules, and regulated water charges
- ABS and ABARES: economic performance information from businesses
- BoM: information on physical quantities of water to build up a picture of water resources across Australia and provide water information services back to businesses, governments and the public.

1.3 The requirements to provide information

Generally, agencies collect the required information through annual surveys or requests. However, the BoM requires more timely provision of some water data such as the record of water trades. The BoM requests data across many subcategories but only requires a copy of data that has already been collected by the business, avoiding additional effort and reducing the number of categories of information reported by most businesses.

The requirements of the regulated community to provide information are borne mainly by:

- Murray–Darling Basin irrigation infrastructure operators (IIOs) (the BoM, the ACCC, the MDBA and the ABS)
- urban and rural water entities nationally (the BoM and the ABS)
- farmers (the ABS and ABARES but no Water Act agencies).

The information provided to Commonwealth agencies is published in regular reports or, made publicly available, through information services such as the BoM's water information products or the ABS's data services.

1.4 Benefits derived from the information provided

The information provided to Commonwealth agencies delivers several major benefits, including ensuring effective water trade and markets in the MDB which have an annual value of \$1.4 billion² and are an important new adaptive management tool to Australia's extreme year to year variability in water availability. The sustainable management of MDB water resources through the establishment of sustainable diversion limits (SDLs), water quality targets and environmental objectives supports the agricultural industry in the Basin worth billions of dollars annually to the national economy.

Effective price regulation prevents monopoly providers over charging for water infrastructure, and ensures full cost recovery and transparent community service obligations, with benefits to water users. The Harper review of competition policy³ observed that reform of pricing and separation of service provision from regulation in the water sector was incomplete, recommending a continuing role for the Commonwealth government.

Publicly accessible and standardised information on urban water supplies has allowed urban water utilities to benchmark and track their performance over time, improving prices and service provision and supporting public confidence in water management. The provision of water supplies across Australia raises \$16 billion per year.⁴

The BoM Water Information Programme has complemented good local monitoring and use of water information with national services. Information standards allow information to be shared openly at a national scale. National data analysis, assessments, and water forecasts provide new services. These inform water management and investments in water supply infrastructure, provide public accountability in water management, and improve public literacy about water. Information products such as the BoM's intensity-frequency-duration analysis are used to ensure billions of dollars per year of construction is safe from flooding and stormwater.

² Annual water markets report 2012-2013

³ [Competition Policy Review, Final Report, 2015](#)

⁴ *Water Account, Australia, 2012-13*, ABS cat. no. 4610.0

Short to long term forecasts of water availability make irrigation, river operations, and water supplies more effective in the face of Australia's extreme climate variability.

The information provided to the ABS and ABARES measures improvements to the economic productivity of water use, which is a major input to the economy of regional areas and the national economy. The gross value of irrigated agricultural production in 2012–13 was \$13.4 billion, for example.

1.5 Costs of providing information

The annual costs to businesses of providing information under the Water Act were estimated using the Australian Government's regulatory burden measurement framework.⁵ The total annual cost on the regulated community is just under \$392,000 spread across 86 businesses and not-for-profit organisations, and individuals. The bulk of the cost is to provide regular information to the BoM (\$359,197). Current costs for providing information to the ACCC are \$18,391 and reflect recent significant reductions in information requests. The MDBA costs were \$14,000 on average. These are costs annualised over a ten year period, comprising a large initial cost that has already been incurred, with much smaller ongoing costs.

The BoM costs are generally proportional to business size and the bulk of the regulatory burden is on larger water utilities. These have annual total incomes ranging between \$18 million and \$2.6 billion. The costs of providing the information relative to the utilities' incomes are very small; therefore, while these costs are passed on to water users they have a negligible influence on water bills.

Commonwealth agencies have used several practices and measures to ensure the costs of providing information are kept reasonable. These include sourcing information from published sources or from state governments; automating data supply using IT systems; improving survey designs and prepopulating surveys with known data. Nevertheless, the working group has identified further reductions that can be made in regulatory burden.

1.6 Proposed reductions in burden and removal of duplication

The BoM recommends an amendment to the Water Regulations to reduce the information requests on rural water entities (including IIOs) from 37 subcategories of information to just 10 subcategories of information (see Recommendation 1 below). Under this proposal, the BoM would restrict its requirements to just water use information, internal trade data and announcements of water allocations. It will further investigate obtaining water use data just from state agencies (Recommendation 2). Only data on internal water trades within an IIO would need to be reported weekly, to support the water market information portal. Other information would in future only need to be provided annually.

In 2014, the ACCC reduced its annual requests for information on reporting entities. The total number of questions was reduced by between 37 and 77 per cent depending on the request for information format.

The working group investigated duplication of reporting between Commonwealth agencies. For rural water entities it found that less than 5 per cent of information requested was duplicated between agencies. This is because of the very different functions of each agency. Most of the duplication would be removed by either removing the requirement to provide information to the BoM (Recommendation 1 and Recommendation 2) or by prepopulating ACCC requests for information with data provided to the BoM (Action 1). For five entities that provide information to the BoM's National Water Account and the ABS Water Supply and Sewerage Services Survey, the BoM and the ABS plan to align definitions to streamline reporting (Action 2).

There was much greater duplication of requests of urban water utilities as a result of recent internal BoM duplication now that it has taken responsibility for the Urban National Performance Report

⁵ For detail on the framework, this URL links to a guidance note: <http://www.dpmc.gov.au/office-best-practice-regulation/publication/regulatory-burden-measurement-framework-guidance-note>

(Urban NPR) and duplication with the ABS. The BoM recommends consolidating its information requirements into a single request through the Urban NPR process (Recommendation 3). The ABS will work with the BoM and information providers to align requirements and remove duplication for 50 indicators that overlap (Action 3).

Water Act agencies do not request information from irrigation farmers. Streamlining of the ABS and ABARES requests of irrigation farmers is being dealt with in these agencies' National Agricultural Statistics Review.

Although reducing information requested from state agencies was peripheral to the terms of reference, the BoM has recommended reductions in information required (Recommendation 4) and actions to remove duplication with MDBA requirements (Action 4).

1.7 A single portal for information supply

The working group investigated the concept of a single portal for the supply of water information to the Australian Government. As noted in the Water Act review it is not effective to have a single government agency collect all the required information because of the very different roles of the agencies and hence different skills, capacities and analysis of the information.

However, it may be possible to meet the needs of several agencies from a single database of information for a particular type of business. The provision of urban water utility information is closest to this model at present and is the easiest to expand to a single portal.

Currently, urban water utilities are reporting performance indicators to a single national dataset which is also used for state and territory reporting. This could be expanded to include additional reporting required by the BoM and the ABS. The BoM will take the lead in investigating the merits of a single portal with all urban water stakeholders (Action 5).

A similar concept is less feasible and more difficult to apply to irrigation infrastructure operators and other rural water entities. The BoM will bring rural water entities and Commonwealth government agencies together to mutually investigate streamlining opportunities (Action 6). However, it should be noted that in contrast to the situation for urban water utilities, these entities provide diverse and almost completely distinct information to Commonwealth agencies. There are also fewer entities involved and direct engagement between the providers of information and the relevant Commonwealth agencies would still be needed to maintain relationships and ensure streamlined reporting. There is a risk of unnecessary complication and additional transaction costs if a single portal process is applied to genuinely different requests for information from rural water entities.

1.8 Recommendations and actions to be taken

The working group makes the following recommendations, and will take the following actions to achieve the outcomes described above:

Recommendation 1

The BoM recommends an amendment to the Water Regulations to relax reporting requirements for rural water entities, as described in section 7.1.1. The amendment would reduce the number of subcategories of water information requested from 37 to 10 and reduce the frequency of reporting on parts of Category 5 (water use) information. The BoM would seek Ministerial approval for the amendment, and anticipates that this could occur in early 2016.

Recommendation 2

To further reduce burden on rural water entities, the BoM will work with state agencies through its Jurisdictional Reference Group for Water Information (JRGWI) to explore sourcing all water use information (Category 5) from state agencies. The BoM aims to finalise new Category 5 options by early 2016. To implement the changes may require an amendment to the Water Regulations. The BoM would seek Ministerial approval for the amendment in 2016.

Recommendation 3

The BoM recommends an amendment to the Water Regulations to consolidate urban water information reporting requirements for the National Water Account, the Urban NPR and the Water Regulations to eliminate duplication between these three streams of data provision. A key part of this consolidation would involve substituting current Water Regulations Category 7 requirements with the Urban NPR reporting process. The BoM would seek approval from the Urban NPR round table group and Ministerial approval for the amendment to the Water Regulations. The aim would be to achieve this streamlining for the 2016-17 supply of information.

Recommendation 4

The BoM recommends an amendment to the Water Regulations to relax reporting requirements for lead water agencies (Category A organisations) and other agencies of a state or territory (Category B organisations) to reduce frequency of reporting on parts of Category 5 and 6 information. The BoM would seek Ministerial approval for the amendment, and anticipates that this could occur in early 2016.

Action 1

To remove duplication in requests, the BoM will share a subset of information on water access entitlements for conveyance loss and volume of water allocation traded within an IIO with the ACCC. The ACCC will use this information to pre-fill specific questions in IIO requests for information. By pre-filling questions, the burden of completing the questions will be reduced while still allowing the data to be checked.

The BoM will provide this overlapping information to the ACCC commencing from the 2014-15 water year.

Action 2

The ABS and the BoM will map the relationship between rural information required by the BoM for the National Water Account and WSSS indicators, and align definitions and aggregations where possible. This will assist the five entities who are meeting these requests to streamline data provision and aims to enable single figures for reporting to both the ABS and the BoM from 2015–16.

Action 3

The ABS and the BoM will work together to align information requirements and remove duplication for the 50 indicators identified as overlapping between the WSSS survey and the Urban NPR and/or BoM National Water Account. In many cases this will involve adjustments to definitions or aggregations of information. This action will require negotiation with stakeholders including water entities, the Urban NPR round table group and state government agencies.

The ABS and the BoM aim to put these changes in place during the 2015–16 financial year, so that duplication in reporting requirements will be removed for 2016–17 reporting.

Action 4

The BoM will share water trade and lease information with the MDBA. The MDBA will use it to pre-fill or eliminate that part of its annual request for information from state agencies under Section 71 of the Water Act.

The MDBA will continue and extend existing arrangements to share diversion data gathered through the Section 71 requests with the BoM. Access to this information by the BoM will satisfy part of the Basin State agency water use reporting requirements under the Water Regulations (Category 5).

The BoM and the MDBA will further investigate opportunities to align requirements for entitlement information, and seek to meet common needs through single provision from state agencies.

The MDBA and the BoM aim to put most of these sharing arrangements in place during the 2015-16 financial year to remove duplication in reporting requirements for 2016-17 reporting.

Removing duplication in provision of water trade and lease information may take longer to fully achieve as the BoM will need to ensure that all MDBA information requirements, including SDL level attribution and distinction between trades for environmental and consumptive purposes, are in place. The MDBA and the BoM aim to complete these sharing arrangements by June 2019 (when all Basin States have aligned data reporting to SDL resource units).

Action 5

The ABS and the BoM will work with urban water utilities, the Urban NPR round table group and state government agencies to establish, or extend existing, single point of delivery arrangements for input of urban data to meet their combined requirements.

- The ABS and the BoM will work with the NSW Office of Water and the Queensland Water Directorate to incorporate changes to requirements (including a streamlining of data items, particularly where there is duplication between the ABS and the BoM data items), and further develop and promote existing state hub arrangements for single delivery of information by urban water utilities.
- The ABS and the BoM will collaborate with state agencies in Victoria, South Australia and Western Australia to investigate establishing similar arrangements in these states.

The aim is to streamline reporting requirements for 2016–17 information reporting.

Action 6

The BoM will bring rural water entities and Commonwealth government agencies together to discuss advantages and disadvantages of further streamlining water information provided by rural water entities in early 2016.

Implementation of some of the actions and recommendations would not occur until the 2016–17 financial year. This is because information providers need to be consulted and be given prior warning before a financial year begins to change any information requirements.

Proposed regulatory changes to reduce reporting requirements to the BoM (recommendations 1, 2 and 3) would result in savings to the regulated community of approximately \$100,600 per year. This total annual saving would be realised across 22 rural and urban utilities reporting water information to the BoM under the Water Regulations. Compared with the baseline burden of BoM water information requirements under the Water Act, the savings represent a 28 per cent reduction in costs borne by the regulated community.

2 Terms of reference

The terms of reference for the Interagency Working Group on Commonwealth Water Information Provision provided by the Parliamentary Secretary to the Minister for the Environment on 19 December 2014 were:⁶

Context

The Water Act empowers a number of water agencies to provide information on Australia's water resources, to monitor Australia's water markets and pricing and implementation of the Basin Plan.

The Independent Review of the *Water Act 2007* (the Review) found that significant progress has been made in improving Australia's water information since the Act commenced in 2008, but that further work was required to assess and address stakeholder concerns about the reporting burden imposed under the Water Act.

The Government accepts recommendation 18 of the Review regarding consideration of options to reduce regulatory burden on industry and water managers in respect of water information requirements, while ensuring that critical information on Australia's water resources continues to be collected and ensures effective standards.

In particular, the Government agrees with the Expert Panel's conclusion that *'Australian Government agencies should ensure that data is collected in the right form, at the right time, for the right purposes and used to create information that is of value while minimising regulatory burden and any duplication of requests imposed on data providers'* (Conclusion 7.2). This should be a guiding principle for the interagency group's work as outlined below.

Terms of Reference

The interagency group will be led by the Bureau of Meteorology and report on:

1. Current water information reporting requirements under the Act and associated regulatory burdens for data providers, including an estimate of current costs
2. The benefits of the suite of information products with reference to associated costs borne by data providers
3. Options to reduce the regulatory burden imposed on data providers in the order of 20 per cent or more compared to current regulatory burdens.

The interagency group will undertake the review in consultation with data providers and report to the Australian Government in the first half of 2015.

While it is desirable to work with States and Territories to identify and address any areas of duplication, I note that the Australian Government regulatory burden measurement framework focuses on reducing the burden on business, individuals and not for profit organisations. As such, I believe the framework should be used to measure the baseline and any reductions in burden from that baseline.

⁶ The terms of reference are published at this URL:
<http://www.environment.gov.au/system/files/pages/117d6268-6372-42dc-9ed5-e3f5be5dfa15/files/review-water-information-reporting-18-tor.pdf>

Working Group Membership Agencies

The core membership of the interagency group will comprise agencies with water information collecting powers under the Water Act:

- Australian Competition and Consumer Commission
- Bureau of Meteorology (Chair)
- Department of the Environment
- Murray–Darling Basin Authority.

These agencies are tasked with contribution to the overall regulatory reduction target specified in the terms of reference.

Other members of the interagency group are:

- Australian Bureau of Statistics
- Australian Bureau of Agricultural and Resource Economics and Sciences
- Treasury.

These agencies will assist with identifying ways to streamline broader Commonwealth water information reporting requirements and removing any areas of duplication

3 Introduction

This report is in response to the Australian Government accepting recommendation 18 of the Independent Review of the *Water Act 2007* (the Water Act review). Recommendation 18 addressed water information reporting required under the Act and recommended that an interagency working group be established to report on the costs and benefits of reporting and options to reduce the regulatory burden on data providers

The Government fully accepted recommendation 18 and the associated conclusion 7.2. The Parliamentary Secretary to the Minister for the Environment wrote to the Bureau of Meteorology (BoM) on 17 December 2014 requesting that it lead an interagency review of water information reporting burdens under the *Water Act 2007* (the Water Act). The terms of reference and composition of the interagency working group (the working group) given by the Parliamentary Secretary are set out in Chapter 2 of this report and follow the recommendation and conclusion *verbatim*.

The primary water information role in the Water Act is in Part 7 which defined a new role for the BoM to collect and publish water information in a nationally coordinated way. In addition, the Murray–Darling Basin Authority (MDBA), and the Australian Competition and Consumer Commission (ACCC) collect information to carry out some of their functions.

3.1 Independent review of the *Water Act 2007*

Terms of reference 2(b) of the Water Act review required the Water Act review panel (the panel) to examine and report on opportunities to reduce or simplify the regulatory and/or reporting burden while maintaining effective standards.

From a total of 73 submissions to the Water Act review from outside the Australian Government, 19 mentioned water information with 13 commenting on the reporting burden or the need to report to a number of government agencies. Submissions mentioned the BoM, the ACCC and the MDBA as having reporting requirements under the Water Act but they also named the Australian Bureau of Statistics (ABS) and the Australian Bureau of Agricultural Economics and Sciences (ABARES) as requiring reporting.⁷ Some stakeholders also noted overlap and potential duplication between Australian and state and territory government reporting requirements.

Several submissions to the Water Act review suggested that the collection and use of water information should be on a 'collect once, use many times' principle, preferably with a single portal, and that requests should be limited in frequency where appropriate. Other submissions suggested that there should be greater sharing and re-use of water information between state and Australian Government agencies.⁸

The panel considered that the baseline regulatory burden imposed on data providers should be estimated so that government and stakeholders are aware of the full cost of the reporting requirements under the Water Act.⁹ Additionally, the panel considered that further work was required to build on actions already taken and to ensure that stakeholder concerns are adequately addressed, noting the cumulative impact of a number of reporting requests.

Because of the scope of the issues raised by stakeholders and the limited time the Water Act review had to consider reporting requirements in detail, the panel recommended the issues be dealt with by an interagency working group.

The panel suggested that the working group should undertake its review in consultation with a cross-section of data providers to ensure that stakeholder concerns were further pinpointed and understood.¹⁰

⁷ [Report of the Independent Review of the *Water Act 2007*](#), p. 92

⁸ [Report of the Independent Review of the *Water Act 2007*](#), p. 93

⁹ [Report of the Independent Review of the *Water Act 2007*](#), p. 92

¹⁰ [Report of the Independent Review of the *Water Act 2007*](#), p. 95

3.2 Establishment of the interagency working group

The interagency working group on Commonwealth water information provision (the working group) comprises agencies that collect information to fulfil their responsibilities under the Water Act, as follows:

- Bureau of Meteorology (Chair)
- Australian Competition and Consumer Commission
- Murray–Darling Basin Authority.

Other members of the working group are:

- Australian Bureau of Statistics (other water reporting requirements)
- Australian Bureau of Agricultural and Resource Economics and Sciences (other water reporting requirements)
- Department of the Environment (DotE) (responsible for the Water Act and national water policy)
- Treasury.

3.3 Scope of the working group

The BoM coordinated the working group and led processes to identify and remove duplication of reporting between agencies. It also led the development of approaches to documenting water reporting requirements.

The DotE took the lead on methods to cost reporting burden, applying the government's deregulation framework overseen by the Department of Prime Minister and Cabinet.

Each member agency was responsible for reporting information requirements and costs; articulating the purpose and benefits of reporting; and identifying ways of reducing regulatory burden.

The terms of reference required Water Act members of the working group (the ACCC, the BoM, the DotE and the MDBA) to find reductions in the regulatory burden in the order of 20 per cent or more. Other members (ABARES and the ABS) assisted with identifying ways to streamline broader Commonwealth water information reporting requirements and removing areas of duplication.

Potential changes to reporting related to water charge rules were out of scope of the working group as they are covered by Recommendation 11 of the Water Act review. This requires the ACCC to undertake a separate review of the Water Charge (Infrastructure) Rules, the Water Charge (Termination Fees) Rules and the Water Charge (Planning and Management Information) Rules and the associated reporting requirements. The Australian Government also immediately accepted this recommendation and the review is taking place throughout 2015.

Likewise, MDBA information requirements under the Murray–Darling Basin Agreement were out of scope of the working group as this is an intergovernmental agreement between Commonwealth and Basin State governments and thus the Commonwealth is not free to act alone. These requirements were not raised in any submissions on Commonwealth water reporting burden.

The Commonwealth Environmental Water Holder (CEWH) has functions in the Water Act but these do not impose a water information reporting burden on businesses. They require state agencies to provide information associated in effect with the CEWH's licence to provide environmental water. As such, the working group did not further consider CEWH's functions.

The National Water Commission (NWC) had functions in the Water Act. Following its termination, a number of these functions were passed to the Productivity Commission and the DotE, while others were discontinued. The continuing functions do not require a regulatory requirement for information provision from businesses and so they are not in scope for the working group.

The Parliamentary Secretary noted in his letter to the Director of Meteorology, that while it is desirable to work with the states and territories to identify and address any areas of duplication, the Australian Government regulatory burden measurement framework focuses on reducing the burden on

business, not-for-profit organisations and individuals.¹¹ As such, the working group has not focused on water information reporting to the Commonwealth by state and territory agencies. Additionally, a systematic assessment of potential Commonwealth/state duplication of water information requirements on the regulated community was out of scope. The report has documented where processes have been put in place to reduce burden on the regulated community by removing Commonwealth and state duplication, and notes further work that is pursuing that objective.

3.4 Approach and rationale

The interagency working group undertook the following activities:

- documented the extent of provision of water information to Commonwealth agencies, the estimated cost of provision and the associated benefit of the water information collected
- consulted with data providers to better understand their concerns with data provision
- identified instances of duplication in provision across Commonwealth agencies, and ways to address these through more efficient data collection and data sharing arrangements
- identified ways to reduce or eliminate reporting requirements including consideration of the purpose, value, form, and timing of reporting.

In February 2015, the working group wrote to all information providers in the regulated community, state and territory lead water agencies (agencies with the primary water resource planning, management or policy function in their state or territory) and submitters to the Water Act review that had referred in their submission to the provision of water information. The working group invited these groups to provide input to its review and offered to meet with them.

The working group received 34 replies that identified instances of reporting that were of concern and making other suggestions. The main themes of replies were:

1. specific instances of duplication in reporting, both amongst Commonwealth requirements and between Commonwealth and state requirements, particularly in relation to water use and urban water management information
2. the need to align similar information requirements by resolving differences in definitions, spatial aggregations and categorisations
3. the need to better demonstrate the benefits of water information reporting, and to confirm the necessity of various requirements
4. concern about the costs of reporting, and the cost implications of changes to reporting requirements
5. efficiencies realised through automated reporting processes.

A number of the replies commented that Commonwealth water information reporting requirements are relatively modest and noted no significant overlap between requirements under the Water Act.

As a result of the responses, in May 2015 the working group met with representatives of the irrigation sector and farmers and with state and territory lead water agencies.

3.5 Report structure

The rest of this report is structured in Chapters which address:

- the overall role and benefits of the Commonwealth in water management and hence water information (Chapter 4)
- the requirements to provide water related information to Commonwealth agencies, the resultant outputs delivered by government, and their benefits (Chapter 5)

¹¹ Under the Australian Government's deregulation agenda, these groups comprise the 'regulated community'.

- costs of water information reporting to Commonwealth agencies, including the principles, practices and steps already undertaken to minimise costs or reduce reporting burden (Chapter 6)
- recommendations to remove unnecessary reporting burden, and instances of duplication in reporting requirements imposed on data providers and actions and recommendations to address them (Chapter 7).

4 The role of the Commonwealth in water related information

4.1 Introduction

This chapter outlines why the Australian Government collects water information. It describes the functions of Australian Government agencies that collect water related information and shows why information is required to undertake those functions. Much of the information is collected to support the objectives of the Water Act but there is other legislation and additional Australian Government objectives that are relevant as well.

The working group found that what submissions describe as 'water information' is actually much more than information about water itself. In addition, it includes information about the cost structures, charge rules and water trading rules of the Irrigation Infrastructure Operators (IIOs) and utilities that provide water. It includes information on the economics of water businesses and of the goods and services produced from water. The breadth of information collected explains why several Australian Government agencies are involved.

4.2 Objectives and responsibilities under the Water Act

Under the Australian Constitution, states and territories manage and own water resources. However, the Commonwealth has long worked with the jurisdictions to complement their role. The Water Act is the latest reform that recognises the Commonwealth's role in water management. It built on decades of intergovernmental action to manage shared water resources of the Murray–Darling Basin (MDB) and introduced new responsibilities for the Commonwealth. The Water Act legislates and builds on several of the principles of water management contained in the intergovernmental agreement on the National Water Initiative.

The Water Act puts in place the architecture for the Commonwealth to achieve several objectives:

- Sustainable management of MDB water resources across state borders in the national interest. The MDBA sets and enforces compliance with sustainable diversion limits (SDLs) and water trading rules, as well as monitoring and reporting on water quality targets and environmental objectives.
- The regulation by the ACCC of water charge and water market arrangements to promote efficient markets and transparent pricing of water.
- The management of water holdings by the CEWH to protect and restore environmental assets of the Basin.
- The provision of national water information services by the BoM to improve the information base on which decisions are made.

Three of the above agencies (the BoM, the ACCC and the MDBA) require information from the regulated community to effectively discharge their functions. The sections below further explain the functions of these agencies under the Water Act and outline the overall information needs associated with these functions.

4.2.1 Managing shared resources of the Murray–Darling Basin

The MDB is one of the most productive food and fibre regions in Australia. In 2011–12, the total gross value of agricultural production in the MDB region was \$18.6 billion,¹² of which around one third comes from irrigated agriculture. The Basin also contains highly valued rivers some of which have been under increasing stress for over half a century due to the combination of increased water use and low rainfall.

While recognising that good progress had been made in implementing water reform in the Basin, the Water Act and the making of the Basin Plan in 2012 introduced a stronger Basin-wide approach to managing water sustainably across borders and beyond state interests. The Water Act established the

¹² ABS Catalogue 4610.0.55.008 – Gross Value of Irrigated Agricultural Production, 2011-12.

MDBA. The MDBA has two distinct functions – carrying out River Murray Operation and Natural Resource Management activities on behalf of the Basin State governments, and developing and overseeing the implementation of the Basin Plan, funded by the Commonwealth. As explained in Section 3.3, only information required under the Water Act is assessed by this review. The bulk of the MDBA’s work to oversee and implement the Basin Plan requires information from state agencies.

It is only in the implementation and enforcement of water trade rules under the Basin Plan that the MDBA requires information from businesses, specifically IIOs. In many cases, trading arrangements were not designed using a consistent approach across jurisdictions. Across the Basin there are differences in governance, institutional and administrative arrangements, and approaches to specifying entitlements¹³ and trading rules, and fragmented and inaccurate price information.

Governments have recognised that water markets would benefit from more consistent approaches to those matters, and the introduction of Basin Plan trading rules on 1 July 2014 was a significant step in the new phase of market reform. The rules standardise certain rights and conditions to ensure participants have fair and equal access to trade. The rules are intended to reduce restrictions on trade and improve transparency of information.

4.2.2 Regulation of water markets and water charges

Under the Water Act, the ACCC was given four main functions in the MDB: a monitoring role; a price setting role; an enforcement role; and an advisory role. These roles directly and indirectly impact on the development of water markets in the MDB and aim to create an environment for making water markets work effectively. The ACCC collects information annually to monitor regulated charges, transformation arrangements and compliance with the water market rules and water charge rules.

Until 2009, many irrigators could only trade their right to water with the approval of the IIO or they faced very high fees to terminate their ‘water delivery rights’. Some IIOs would require irrigators to terminate their right of access to the irrigation network when they traded water externally. In addition, operators’ charging practices could be opaque and/or discriminatory against customers who had transformed their irrigation right (but still required water delivery services). Policy makers identified a need to remove unreasonable restrictions on trade and remove incentives to restrict water trade out of an irrigation area.

The rules assist irrigators to transform their contractual irrigation right held against their IIO into a more easily tradeable water access entitlement. The rules also regulate the application and level of termination fees that IIOs can impose on irrigators who wish to decrease or end their access to an irrigation network. The water charge rules regulate charges under one of three different approaches depending on the size and ownership of the infrastructure operator. Transparency of charges has improved information availability across the MDB, but comparing charges across operators or over time is difficult, and the ACCC has an on-going monitoring role in this area. The Harper review¹⁴ of competition policy observed that reform of pricing and separation of service provision from regulation in the water sector was incomplete, recommending a continuing role for the Commonwealth government.

To undertake its functions, it is essential the ACCC collects information on transformations, terminations and regulated charges from IIOs, bulk water suppliers and state government departments and water authorities. The results of this monitoring are reported in the ACCC’s annual water monitoring report. As a result of the information collected, the ACCC can take appropriate enforcement and compliance actions with regulated entities.

Irrigators and other water users are taking advantage of the liberation of water trade. They are now relying on water markets more than ever. The volume of water allocation trade has steadily increased over recent years and has more than quadrupled since 2007–08.¹⁵ The rules have given irrigators greater access to water markets throughout the MDB. These markets have enabled water resources to move more easily in

¹³ There is a large number of actively traded water access rights throughout the Murray–Darling Basin. These rights can be characterised by differences in priority and reliability, and form of take.

¹⁴ [Competition Policy Review, Final Report, 2015](#)

¹⁵ Australian water markets report 2012-13.

response to climatic conditions and commodity prices. For example, rice and cotton production in NSW in 2012–13 was the highest it has been for many years as irrigators took advantage of lower water allocation prices.¹⁶

The sections above reveal that the MDBA and the ACCC collectively gather information relating to rules and restrictions around water trades, markets and charges. The ACCC's role relates to institutional barriers to trade while the MDBA's role is partly to ensure trade is properly integrated into river operations and achievement of Basin Plan objectives. Through the Basin Plan, the MDBA aims to set a consistent framework for water trading across the states, without duplicating existing rules. In particular, the trading rules applying to Basin States are designed to remove restrictions on trade and improve information in the water market. Recommendation 8 of the Water Act review was that a detailed analysis of the benefits of reassigning the trade function from the MDBA to the ACCC be undertaken. As detailed in Chapter 5, there are distinct differences in the information requested by the ACCC and the MDBA as they are involved in different areas of water markets, and there is no duplication of information provision.

4.2.3 National water information services

Under the Water Act, the BoM was given an additional role to collate, analyse and disseminate information about Australia's water resources, their use, and management. The role complements its functions under the *Meteorology Act 1955*. The new role took advantage of the BoM's broader expertise on meteorology, climate and operational information systems to also provide national information on water, which is heavily influenced by weather and climate. Prior to the Water Act, the BoM had a flood forecasting role and the broader water information role also benefited the flood forecasting services by bolstering staff capabilities and information systems. The addition of water information to the BoM is part of the BoM's broader mission to provide environmental intelligence.

Toward the end of the Millennium Drought, prior to the Water Act, the lack of a coherent approach to water information was very apparent. At a time of severe water shortage across southern Australia and in metropolitan cities, the basic information required to support Australian Government investment in water management was not available. There are over 200 organisations responsible for different aspects of water management and they collect and manage information for their own purposes. However, at the time, much of that information was either not accessible or only available at a local scale. The needs of many other stakeholders in that information and in water were not met.^{17 18}

This created several impediments to water management. It meant that for an important national resource there was no large-scale or national assessment of the situation. If the information had been made available, it would have revealed that it was not collected in consistent ways across organisations with different terminologies and standards and thus could not be compiled easily into a timely, complete picture of Australia's water resources or even particular basin resources.¹⁹ There are several cross jurisdictional river basins and groundwater basins in addition to the MDB, for example.

Water is integral to many aspects of life which means that there are many different stakeholders with an interest in water and debate about water in Australia has often involved polarised views. Competing interests include those between irrigators and environmentalists; urban and rural populations; traditional owners and non-Indigenous populations; industrial water users and recreational water users; and between water providers and their customers.²⁰ A lack of transparent and independent information can fuel conflict and lack of trust.

¹⁶ [ACCC water monitoring report 2012-13](#)

¹⁷ [A National plan for water security, 2007](#)

¹⁸ [Australian Water Resources 2005](#)

¹⁹ [Australian Water Resources 2005](#)

²⁰ [How Australians value water, 2012](#)

The focus on locally provided information also fails to provide some of the more advanced and most useful information. This includes information such as forecasts of future conditions, which require coordination of several sources of information and advanced analysis. Complementing locally provided information with national information capabilities can overcome a failure to invest in longer-term risk horizons.

At a high-level, stakeholders demand several attributes of information, reflected in the ABS data quality framework.²¹ They want information that is:

- accessible to the public and all stakeholders who require information related to water
- comprehensive and relevant, being complete across Australia and the wide-ranging issues that affect all stakeholders
- transparent and independent of vested interests, being collected and held under clear processes
- authoritative and trustworthy, being of high quality and assured by a respected organisation
- timely, standardised, and accurate delivered in a coherent manner that is easy to interpret and of use to inform stakeholder decisions.

The BoM's Water Information Programme was established to overcome the deficiencies described previously. It aims to:

- establish enduring national water data sharing and licensing arrangements
- develop and disseminate national water information standards
- collate, standardise and archive water data from organisations named in Part 7 of the Water Regulations 2008 (the Water Regulations)
- support water data collecting organisations to improve coverage, currency and accuracy of water data
- provide the Australian public with free online access to reliable water information
- analyse and report on trends in water availability and quality across the nation
- publicly disclose water entitlements, allocations, trades and take for all major urban and rural water supply systems in an annual National Water Account
- provide effective and reliable streamflow forecasting services for high-priority water supply systems.

To achieve these aims, the BoM collects a copy of water data from about 200 organisations named in the Water Regulations. Most of the data collected is from state and territory government agencies and most data supply is automated through use of information standards and systems. Businesses that are required to provide a copy of their water information are mainly the larger rural and urban water utilities but also include hydroelectricity generators, owners of large public water storages and some not-for-profit catchment management groups.

There are many types of information covered by the Water Regulations but it is mainly information about physical quantities of water in the environment or information about quantities of water that are entitled to be used, traded or actually have been used.

A national approach to water related information benefits all stakeholders. It allows organisations and individuals to access standard information regardless of who holds the original data. Access to and sharing of data and information is known to resolve market and policy failures and enhance the decision-making processes of governments, industry and communities. It supports effective evidence-based policy development and evaluation, business innovation and productivity, value-added use of data, public confidence through increased transparency, and enhanced education and research. Examples of the scale of decisions that water information helps influence include:

²¹ [ABS Data Quality Framework, 2009](#)

- \$13.4 billion of irrigated agricultural production in 2012–13²²
- 8.5 gigawatt capacity of hydroelectric power stations²³
- \$120 billion of assets to support urban water supplies²⁴
- \$16 billion per year of total revenue from water sales and related services.²⁵

Further details of benefits of the Water Information Programme are given in Chapter 5.

4.3 Other Commonwealth agency collection of water information

In addition to the agencies that have functions defined under the Water Act, two other Australian Government agencies collect water related information annually from businesses and individuals: the ABS and ABARES. The context for their information collection is outlined below.

4.3.1 ABS monitoring of economic productivity of water

The ABS is Australia's national statistical agency. It produces a wide range of regular statistical information to inform decision making, reporting on economic, social and environmental performance. The *Census and Statistics Act 1905* and the *Australian Bureau of Statistics Act 1975* provide the legislative basis for its role, and give authority to the ABS to direct a person to provide statistical information.

Water is a key input to the Australian economy especially for the agriculture, mining and energy sectors, so the ABS has long collected information on water inputs to the Australian economy and the economics of water used by different sectors and to produce different commodities. The main reporting of the supply and use of water in the economy is the *Water Account, Australia* (ABS cat. no. 4610.0) which has been produced for more than 20 years, and is the only regular comprehensive analysis of the economic productivity of water in Australia. It includes supply and use of water in both physical quantity terms and monetary terms. Given the importance of water to agricultural production, information on water use by this sector is released in additional publications, *Water Use on Australian Farms* (cat. no. 4618.0) and *Gross Value of Irrigated Agricultural Production* (cat. no. 4610.55.008).

The ABS *Water Account, Australia* differs from the more recent BoM National Water Account which focuses on security of supplies by reporting on the assets and liabilities of water availability, entitlements and water supply in the main water using regions. It focuses on the physical quantities of water management for all purposes while the *Water Account, Australia* focuses on inputs to the economy.

To produce statistics on water use, the ABS surveys a wide range of businesses on their water use, including agriculture, mining and manufacturing businesses, and it surveys the water and sewerage supply sector about the volumes and economics of providing water supply and wastewater disposal.

ABS statistics on water in the economy support the setting and evaluation of government policies on water and show the economic impacts of those policies. The *Water Account, Australia* also tracks the impacts of drought on the economy and on particular commodities and how policies such as water trade have ameliorated those impacts. Businesses use the statistics to make comparisons between industry sectors and projections about future water use.

²² [4610.0.55.008 - Gross Value of Irrigated Agricultural Production, 2012-13](#)

²³ [Australian energy resource assessment, 2014](#)

²⁴ [National Performance Report 2012-13: urban water utilities](#)

²⁵ *Water Account, Australia*, 2012-13, ABS Cat. no. 4610.0

4.3.2 ABARES's research on agricultural industries

ABARES's role within the Department of Agriculture is to conduct economic and scientific research related to agricultural industries. Since 2006–07, ABARES has been conducting an annual survey of irrigators in the MDB to collect a range of farm-level physical and financial performance data to meet the needs of industry and government policy makers. The aim of the survey is to provide irrigation industry stakeholders and government with a better understanding of the economic characteristics of irrigation industries in key regions of the Basin, as well as allowing for monitoring of changes in irrigation farm performance and analysis of the drivers of these changes.

The ABARES survey goes into greater detail on water use and irrigation practices than the ABS survey of irrigation farmers which contains just a few questions on water use. The data collected in ABARES's survey facilitates monitoring of changes in on-farm water use, water use by source, water trading, irrigation technologies, and irrigation management practices. It also provides the necessary data to investigate relationships between water use, water trade, productivity, profitability, and the financial and social factors influencing the adoption of new technologies. In addition, the survey facilitates analyses of the trade-offs between agricultural and environmental outcomes, and can assist in designing policies that deliver specified outcomes at least cost.

The extent to which progress toward water policy objectives can be monitored is dependent on the existence of appropriate data. For example, in order to assess the economic goals of the Basin Plan it is necessary to have access to comprehensive data on the financial and physical performance of irrigation farms. The usefulness of the irrigation survey is suggested by the fact that a number of agencies have provided funding for it (including the DoE, the NWC, and the MDBA).

4.4 Diverse information requirements and diverse roles of agencies

To summarise the sections above, there are five Australian Government agencies that regularly collect water related information. While all five agencies collect information related to water, there is a wide range of types of information collected, and much of the information is not about water as a physical quantity itself, it's more about use or management of water. There are three broad types of information collected by the five agencies:

- regulatory
- economic
- physical quantities.

Each agency focuses on one type of information, which is central to its function in government. Figure 4.1 below summarises the Australian Government collection of water information by showing the different functions and types of information gathered by each agency.

The BoM is the only Australian Government agency with a national focus on physical water quantities. It collects and disseminates information about water in the environment and the quantities extracted from the environment. It combines water information with weather and climate information to provide higher value information on the current and future availability and security of water. This is a natural extension of the BoM's central role in weather and climate information.

ABARES and the ABS collect information about water in the economy. Most of the information collected is reported in financial terms. Information on physical water quantities is collected to provide context and explanation. The ABS collection of water information is integrated with its broader collection of statistics from businesses and is part of its central role as the Australian Government's statistical agency. The information collected by ABARES is more detailed and specific and is central to its role to provide independent research on agriculture.

The information collected by the ACCC and the MDBA from the regulated community is not focused on quantities or values of trade but on policies, rules, transformation arrangements and regulated charges as part of regulatory roles to ensure open trade and fair pricing. For the ACCC, its involvement in water markets is part of its broader functions to regulate national infrastructure and promote competition and fair trade in markets to benefit consumers, business and the community. The MDBA collects information about rules, water rights and policies, as well as physical information on water use and quality to fulfil its regulatory, compliance and reporting roles.

The details of information requests on businesses are given in Chapter 5, but it should be noted that because of the diversity of information required no businesses have to report to all five agencies and most report to one or two agencies.

As a result of the quite different types of information collected and the relationship of that information to the central function of each agency it would not be effective for information collection to be centralised into a single Australian Government agency. Each agency has the specialist skills, practices, reporting processes and stakeholder relationships that are particular to its role and type of information.

Given the number of agencies involved, it is quite possible that there is duplication in requests which can be removed, and processes could be improved to ensure that only essential information is collected and is collected efficiently so that the accumulated burden of requests is reasonable. For some businesses it might be possible to have a single coordinated process to meet the needs of several agencies. The merits of this are addressed in Chapter 7.

Water utilities and farmers have observed that they are subjected to additional ad-hoc requests for information typically from university researchers or government research agencies such as CSIRO. These are more difficult to regulate but response to those requests is also voluntary.

	Public good information			Regulation and compliance	
	Bureau of Meteorology	ABARES	Australian Bureau of Statistics	ACCC	Murray–Darling Basin Authority
Water Role	Collate, analyse and disseminate information about Australia's water resources, their use, and management – <i>Water Act 2007</i> [s120]	Research, analyse and advise on policy issues affecting agriculture to inform government and business decisions	Inform public and private decision making on water issues, and the consequences of decisions for the economy – <i>Census and Statistics Act 1905</i> ; <i>Statistics Act 1975</i> [Part 2 s6]	Develop, regulate and monitor compliance with Murray–Darling Basin water market rules and water charge rules – <i>Water Act 2007</i> [s94; s99]	Regulate, enforce, and evaluate Murray–Darling Basin water resource management, implementation of the Plan, and water trading rules – <i>Water Act 2007</i> [s71; s12; s32; s9]; (Schedule 12 of the Basin Plan)
Inputs	Data held by 200 water organisations across the nation on physical water availability, use, management and trade. Largely automated data from state agencies but includes larger rural and urban utilities, hydroelectricity generators, storage owners, and some catchment management groups	Voluntary farm-level data on irrigation water use, technology and water trade	Data from water and sewerage suppliers and wider businesses including agriculture, mining and manufacturing on water sources, volume supplied, economic use, discharge and cost	Information from entities in the MDB such as IIOs, bulk water suppliers, state government departments and water authorities. The information sought depends upon the functions carried out by the entity and includes water planning and management activity costs and charges, volume of water delivered and volume of water access entitlement held, schedule of charges information, transformation of irrigation rights, termination of water delivery rights, and trade data	Data, largely from Murray–Darling Basin state agencies, on water availability, flows, salinity, quality, diversions, entitlements and use. IIOs are also required to make available information on water rights definitions and trading rules. Sellers are required to report sale price as part of trade applications
Outputs	National water information database Water information services and products Data provision and hydrological advice	Research analysis, briefings and reports Data tabulations and modelling results	National datasets, information and integrated statistics on water supply, society and the economy Includes data tables and reports	Annual water monitoring report Regulatory and policy advice Knowledge base to ensure effective regulation	Basin Reports: Water Resources; Basin Plan Annual and five yearly Reports; Water recovery progress; Water Quality Water markets and trade information Regulatory and policy advice
Outcome	Public access to high quality, comprehensive, transparent, independent and nationally consistent information about water Better water resource policy and management decisions	Improved, evidence-based agricultural policy development and decisions	Public access to high quality and timely integrated water, economic and social statistics Consequences of water policy decisions on the economy, water resources, and the environment are understood	Water market performance and its regulation is monitored and understood Appropriate enforcement and compliance actions undertaken Markets operate freely and perverse outcomes from inconsistent arrangements are avoided	Effect of the Basin Plan is monitored enabling adaptive management Ability to understand and sustainably manage use and quality of the Basin water resources Efficient and effective water markets A healthy working Basin Public informed about environmental water recovery progress and compliance with SDLs

Figure 4.1 Summary of the role and functions of Commonwealth agencies, their requirement for water related information and resultant outcomes

4.5 Conclusions

There are five government agencies that require regular provision of water information from businesses:

- ACCC
- BoM
- MDBA
- ABS
- ABARES.

The first three agencies require information to undertake functions specified in the Water Act. The vast bulk of information required to achieve these functions is obtained from state government agencies as they have the main responsibility for water management. However urban and rural water utilities are also required to provide information.

The ABS and ABARES request economic information to support their functions of providing national statistics and agricultural research respectively.

The information requested by the five agencies supports policies to:

- sustainably manage the shared water resources of the MDB in the national interest
- facilitate water trade as an effective mechanism to allow high value use of water and adapt to variability in climate
- support more productive use of water in the Australia economy, effective government policy and public confidence in water management through national statistics, information services and research.

As well as supporting the specific objectives of the Water Act, the information collected and reported by each agency supports other government policies in which water is a component. Current relevant policies include:

- agricultural competitiveness
- development of northern Australia
- investment in public infrastructure
- emergency management of natural hazards such as floods.

The types of information collected by the agencies vary greatly and cover regulatory, economic and physical information about water. Each agency collects information related to its core function in government and these functions are quite distinct and particular, explaining why there are five agencies involved and why it is not effective to have just one agency collect information. This does however mean that information collection needs to be well coordinated, cost effective and streamlined which is the subject of subsequent chapters.

5 Commonwealth reporting requirements for water information and their benefits

The previous chapter described the roles of the Commonwealth in water and the associated broad information needs to support those roles. This chapter details the required information from the regulated community.

For agencies with functions under the Water Act (the BoM, the ACCC and the MDBA) this chapter then looks at the publicly available information products and functions generated from the information provided to the government along with the benefits of those products and functions.

For the ABS and ABARES the chapter gives a summary of the information requests and resultant publications so they can be compared with Water Act agencies and considered when addressing duplication. However the benefits of these other programmes are not addressed in detail as their work is outside of the scope of the Water Act review and meets other government objectives.

5.1 Reporting burden on states and territories

Because of their primary role in managing water resources, the vast bulk of information provision to the Commonwealth is from state and territory governments. However, governments are not considered part of the regulated community, so the working group review does not consider the costs of their reporting requirements. As an example, the majority of the MDBA's reporting requirements are on state agencies because the MDBA's role is to manage compliance with SDLs and provide the overarching plan for use of shared water resources, which Basin States are required to implement through accredited state water resource plans.

Similarly, nearly 50 per cent of the water information given to the BoM to support its national Water Information Programme comes from lead water agencies in the jurisdictions. The bulk of this information is supplied to the BoM through automated and standardised IT systems to reduce manual processing, reduce the burden of reporting and facilitate the sharing and publication of information. Improvements can still be made to ensure reporting by states and territories is as efficient as possible, requiring the minimum information to support the benefits being achieved, and is coordinated to avoid duplication of information provision from the regulated community.

The Commonwealth agencies imposing information requirements continue to work with the states and territories to improve reporting processes. Section 7.5 outlines recommendations and actions to be taken to reduce the burden on state and territory agencies.

The working group acknowledges that requests for information from state and territory agencies may result in 'flow through' reporting requirements that impact on the regulated community. However, a majority of information that the Commonwealth requires from state and territory agencies would already be collected by states and territories for their own water management purposes, which minimises additional flow through effects.

5.2 Reporting burden on the regulated community

The Commonwealth reporting requirements on the regulated community for water related information are summarised in Table 5.1 (below on page 25) showing the types of organisations required to report, the agencies to which they report and the general nature of the information requested including the relative level of burden imposed by each Commonwealth agency. Table 5.2 shows more details about the information reporting requirements including the frequency of the requirement and the number of organisations affected.

Overall, the BoM places the highest reporting requirement on the regulated community, followed by the ABS then the ACCC, whilst the MDBA and ABARES impose lower reporting burdens. As illustrated in Table 5.1, a majority of the information required by each Commonwealth agency is distinct from other requirements.

Rural water entities²⁶ carry the highest reporting requirement with obligations to report largely physical water information to the BoM, economic and financial information to the ABS, and regulatory information to the ACCC. The MDBA also requires rural water entities to provide or publish, and update certain information. The BoM reporting burden on rural water entities is limited to 13 of the largest entities whilst the ABS surveys include all rural water businesses. The ACCC and the MDBA requirements affect only those organisations within the MDB.

Urban water utilities also have a significant reporting burden, giving information to both the BoM and the ABS. Part of the reporting requirement to the BoM includes information for the Urban National Performance Report (Urban NPR). The BoM took over responsibility from the National Water Commission for this report in 2013–14. It collates the data, analyses it and reports on indicators under contract from the Urban NPR round table group representing all states and territories and the Water Services Association of Australia (WSAA).

Farmers and individual irrigators are not required to directly report to Water Act agencies, but are included in surveys conducted by both the ABS and ABARES.

The details of each reporting requirement, the public information products produced, and the benefits of those products are given in the sections below for each agency collecting data.

²⁶ Rural water entities include IIOs as defined in the Water Act, and other organisations and businesses in the regulated community that supply water for irrigation.

Table 5.1 Spread and approximate ‘density’ of regulated community water information reporting requirements to Commonwealth agencies

Sector reporting to Commonwealth Agency imposing requirements	Rural water entities (IIOs as defined in the Water Act, and other organisations and businesses in the regulated community that supply water for irrigation)	Urban water utilities	Farmers/individual irrigators	Others (hydroelectricity generators, electricity utilities, community based natural resource management bodies in WA, Qld)
ABARES			E,P*	
ABS	E	E	E	E
ACCC	R*			
BoM	P	P		P
MDBA	R*		E	

Key

Shading

	No reporting requirement
	Low burden (few organisations and/or relatively small reporting requirement)
	Medium burden (few organisations and relatively large reporting requirement, or many organisations and relatively small reporting requirement)
	Higher burden (many organisations and/or relatively large reporting requirement)

Text

P	largely physical water information
E	largely economic and financial information
R	largely regulatory information

* reporting requirement on MDB entities only

Table 5.2 Detailed reporting requirements on regulated community

Type of organisation	Commonwealth agency requiring information	Water information reporting requirement	Nature of requirement	Frequency	Number of organisations required to report
Rural water entities	ABS	Water Supply and Sewerage Services (WSSS) survey	82 indicators relevant to rural water entities	Annual	All rural water entities
		Energy, Water and Environment Survey (EWES) or Environmental Indicators Survey (EIS)	A subset of the questions relate to water sources, usage, supply, discharge and expenses	EWES: each three years EIS: the intervening years (when EWES does not run)	A sample of businesses which may include rural water entities EWES: 14,000 to 21,000 businesses EIS: 5,000 businesses
	ACCC	'Large' IIO Request for Information	Total of 48 questions	Annual	20 large IIOs
		'Small' IIO Request for Information	Total of 33 questions	Annual	8 small IIOs
		Bulk Water Supplier (BWS) Request for Information	4 main questions, for each billable area	Annual	6 entities
		Water Planning and Management (WPM) Request for Information	10 questions	Annual	8 entities (Basin State departments and water authorities)
		Required to have in place Network Service Plans (NSPs), under the water charge infrastructure rules*		Need to be revisited each 5 years	5 IIOs
BoM	Information for a total of 37 subcategories about surface water, groundwater, water storages, meteorological information, water use, information about water rights, allocations and trades and water quality	Specified information within the entity's possession, custody or control	Range of frequencies from daily, weekly, monthly to yearly	13 large rural water entities	
		Information for the National Water Account	Two information items	Annual	2 rural water entities
	MDBA	Provide notice to water access right holders that specifies water delivery and irrigation rights		Update on changes	All IIOs as defined under the Water Act
		Make trading rules publicly available			All IIOs as defined under the Water Act

Type of organisation	Commonwealth agency requiring information	Water information reporting requirement	Nature of requirement	Frequency	Number of organisations required to report
Urban water utilities	ABS	Water Supply and Sewerage Services (WSSS) survey	96 indicators relevant to urban water utilities	Annual	All urban water utilities
		Energy, Water and Environment Survey (EWES) or Environmental Indicators Survey (EIS)	A subset of the questions relate to water sources, usage, supply, discharge and expenses	EWES: each three years EIS: the intervening years (when EWES does not run)	A sample of businesses which may include urban water utilities EWES: 14,000 to 21,000 businesses EIS: 5,000 businesses
	BoM	Information for a total of 78 subcategories about surface water, groundwater, water storages, meteorological information, urban water management, information about water restrictions and water quality	Specified information within the entity's possession, custody or control	Range of frequencies from daily, monthly to yearly	75 urban water utilities
		Information for the National Water Account	Between approx. 6 and 24 information items (sourced from publicly available reports where possible)	Annual	25 urban water utilities
		Urban National Performance reporting	118 primary indicators, including 29 water use indicators	Annual	78 urban water utilities
Farmers/individual irrigators	ABARES	Survey of farmers that used water for irrigation during year in question, with an estimated value of operations > \$40k	Face to face interview. Water related questions make up only 5% of the survey	Annual	Sample of 270 farmers in the southern MDB
	ABS	Rural Environment and Agricultural Commodities Survey (REACS)	Water related questions make up only 10% of the 46 questions contained in the survey	Annual	Sample of 35,000 farms
		Agricultural Land and Water Ownership Survey (ALWOS)	Includes some questions on water entitlements	Triennial	Sample of 11,000–12,000 farms
	MDBA	Basin Plan water trading rules – sellers are required to report price	Supplying the price is part of the selling process in most cases and is completed as part of the trade approval process	Report for each sale	All farmers or irrigators that engage in trade

Type of organisation	Commonwealth agency requiring information	Water information reporting requirement	Nature of requirement	Frequency	Number of organisations required to report
Others in regulated community (hydroelectricity generators, other electricity utilities, major storage owners and a number of catchment/natural resource management bodies)	ABS	Energy, Water and Environment Survey (EWES) or Environmental Indicators Survey (EIS)	A subset of the questions relate to water sources, usage, supply, discharge and expenses	EWES: each three years EIS: the intervening years (when EWES does not run)	A sample of businesses which may include electricity utilities (including hydroelectricity generators) and major storage owners EWES: 14,000 to 21,000 businesses EIS: 5,000 businesses
	BoM	Hydroelectricity generators or other electricity utilities: <ul style="list-style-type: none"> Information for a total of 18 subcategories about surface water, water storages and meteorological information 	Specified information within the entity's possession, custody or control	Most daily (yearly for one subcategory)	10 entities
		Catchment/natural resource management bodies: <ul style="list-style-type: none"> Information for a total of 24 subcategories about surface water, groundwater, water storages and meteorological information 	Specified information within the entity's possession, custody or control	Range of frequencies from daily, monthly to yearly	18 entities

* Consideration of requirements relating to water charge rules (such as this requirement) is part of a separate review being undertaken in response to Water Act review Recommendation 11.

5.3 BoM information requirements, products, and benefits

The BoM's information requirements are part of the Improving Water Information Programme funded by the Australian Government and established by Part 7 of the Water Act. The Act gives functions and powers for the BoM to collate and manage the nation's water data, report on water resources, and to forecast future availability.²⁷

5.3.1 Information requirements

To build the mandated national and integrated datasets, Part 7 of the Water Regulations currently requires [232 organisations](#) that collect water information and are named in the regulations to supply the BoM with a copy of electronic water information that they hold. In general, the data required under the Water Regulations is on physical water volumes in the environment or extracted from it, water quality, and water management.

Whilst the reporting burden imposed by the BoM is relatively high, the Water Regulations requirements in Part 7 are limited to data already in an organisation's possession, custody or control. Organisations are not required to collect and report data which they would not already hold for their own business purposes. As a consequence, an organisation may only contribute a small subset of the total information required by the regulations.

The BoM requires additional data on water management, mainly from urban water utilities and state and territory water agencies, to produce the legislated National Water Account. From 2014, the BoM took over responsibility for producing the Urban NPR on behalf of the states, territories and large urban water utilities (as represented by the Water Services Association of Australia (WSAA)). This requires an additional annual data provision to the Urban NPR database. The data required for the National Water Account and the Urban NPR report are not reporting requirements under the Water Act but have been negotiated cooperatively with data providers and state agencies.

There is a matrix of types of data required to be supplied to the BoM, the types of organisations that need to supply it, and the water information products the data supports. This is shown in Table 5.3.

²⁷ An additional role, specified in section 6 of the *Meteorology Act 1955*, relates to flood forecasting.

Table 5.3 Summary of the BoM data requests and input to information products

Data	Who (named organisations) ²⁸	Key Products
Real-time flood data: water level, flow, and rainfall	Category H	Intensity-Frequency-Duration Seasonal forecasts Short term forecasts
Surface water	Categories A, B, C, E, F, G	Water Data Online Seasonal forecasts Geofabric Water Resource Reports Hydrological Reference Stations
Groundwater	Categories A, B, E, F, G, K	National Aquifer Framework National Groundwater Information System Australian Groundwater Explorer
Water storage	Categories A, B, C, D, E, F	Water Storages Geofabric Water Resource Reports National Water Account
Meteorological	Categories A, B, C, E, F, G	Intensity-Frequency-Duration
Water use: rural and urban	Categories A, B, E	Water Resource Reports
Water markets: rights, allocations and trades	Categories A, B, E	National Water and Climate briefing National Water Market reports TANGIP (national groundwater database)
Urban water management	Category F	Water Resource Reports
Water restrictions	Categories A, B, F	Water Resource Reports Water Restrictions website
Water quality	Categories A, B, E, F, G	Water Resource Reports TANGIP (national groundwater database)
Water management	Some Category A, E, F	National Water Account
Data on asset management, customer service, pricing, finance and public health	78 urban utilities	Urban NPR

²⁸ Category A: lead water agencies
 Category B: other agencies of the Commonwealth or a state
 Category C: hydroelectricity generators
 Category D: owners or operators of major storages
 Category E: rural water utilities
 Category F: urban water utilities
 Category G: catchment management authorities and others
 Category H: providers of water information for flood forecasting and warning
 Category K: providers of National Groundwater Information System and Aquifer Framework Information

5.3.2 Water information products

The information supplied to the BoM is used to support some 17 water information products that are freely available on the BoM website. Some have questioned the need for so many products and whether fewer products would result in a lower requirement for data. There is not however a direct relationship between a category of data and a single product. Instead there is a ladder of increasing value of products as categories of information are combined and additional information and analysis is used to add value to the original information. This is illustrated in Figure 5.1.

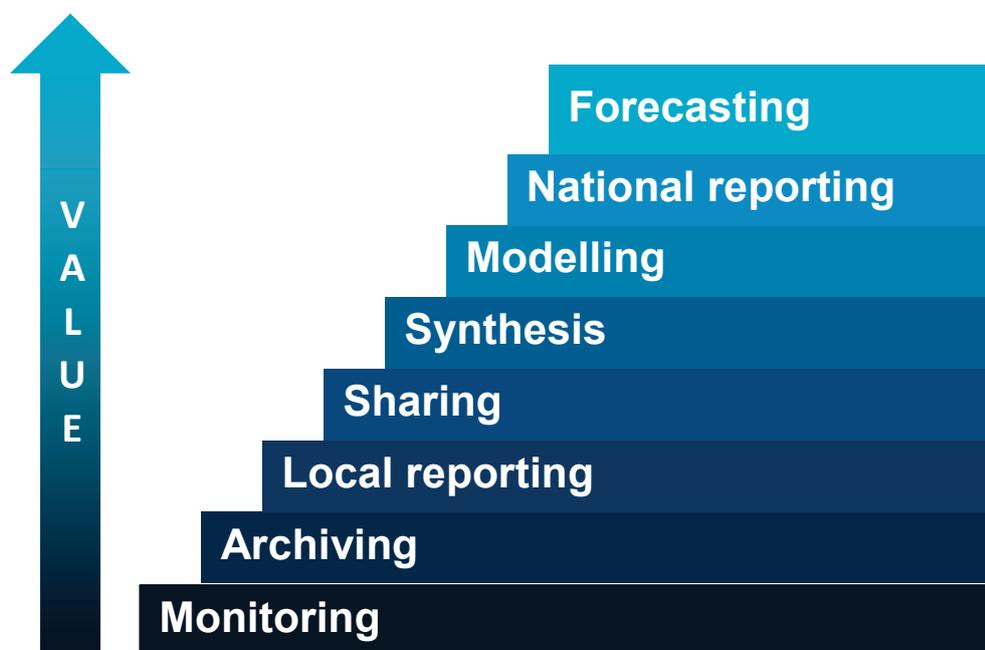


Figure 5.1 The value ladder of the Water Information Programme.

The lower three levels in figure 5.1 are provided by water managers. The upper four levels of value are provided nationally by the programme and at a state level by some agencies.

A category of data can be used to support a product at each level of the value ladder. For example surface water data is shared nationally through Water Data Online. It is synthesised with climate data to reveal past trends over time in the Hydrological Reference Stations product and is used to model surface water for the whole continent in the Australian Water Resources Assessment model. These products are all used as inputs to the Australian Water Resources Assessment and the National Water Account. Finally, surface water data are combined with rainfall forecasts to produce Short Term and Seasonal Flow forecast products.

A further reason to offer several products from a similar type of data is the varying needs for timeliness and analysis of data. For example, flood forecasting requires real time data; Water Data Online then provides a repository of quality checked data, updated each day; and infrequently updated products such as Hydrological Reference Stations provide the time for detailed analysis and interpretation.

Each product is targeted at a particular audience and purpose (shown in Appendix A).

There are three broad types of use of the water information products:

- information for water-dependent industries and the water industry itself
- national information that provides a standardised view across the country for use by governments and users of water
- public information providing transparency and engendering policy confidence.

Given that the aim of the programme is to make data available to stakeholders other than the collectors of the data, the primary beneficiary for a particular product is often not the organisation that

provides the data. Across the programme, however, all data providers benefit in some way from improved access to water information, especially the higher value products, and sometimes they benefit from products to which they do not contribute.

The Water Information Programme has also produced two additional outputs that complement the provision of information but which do not rely directly upon it. These are the Modernisation and Extension of Hydrological Monitoring Systems Program (the M&E Program) and Hydrometric Monitoring Standards. Both outputs improve water monitoring and data management systems in the entities that provide information.

Figure 5.2 graphs overall use of the BoM's products as captured by total web page visits. It demonstrates a demand for information and an awareness of the programme's products. Peak use occurs when there are significant water events such as floods and droughts and when new products are released. In 2013–14 the BoM's water information webpages received 840,000 unique visitors. This is expected to grow as seasonal streamflow forecasts, storage levels and other topical information is now broadcast monthly on ABC's *Landline* television program – potentially reaching 500,000 viewers.

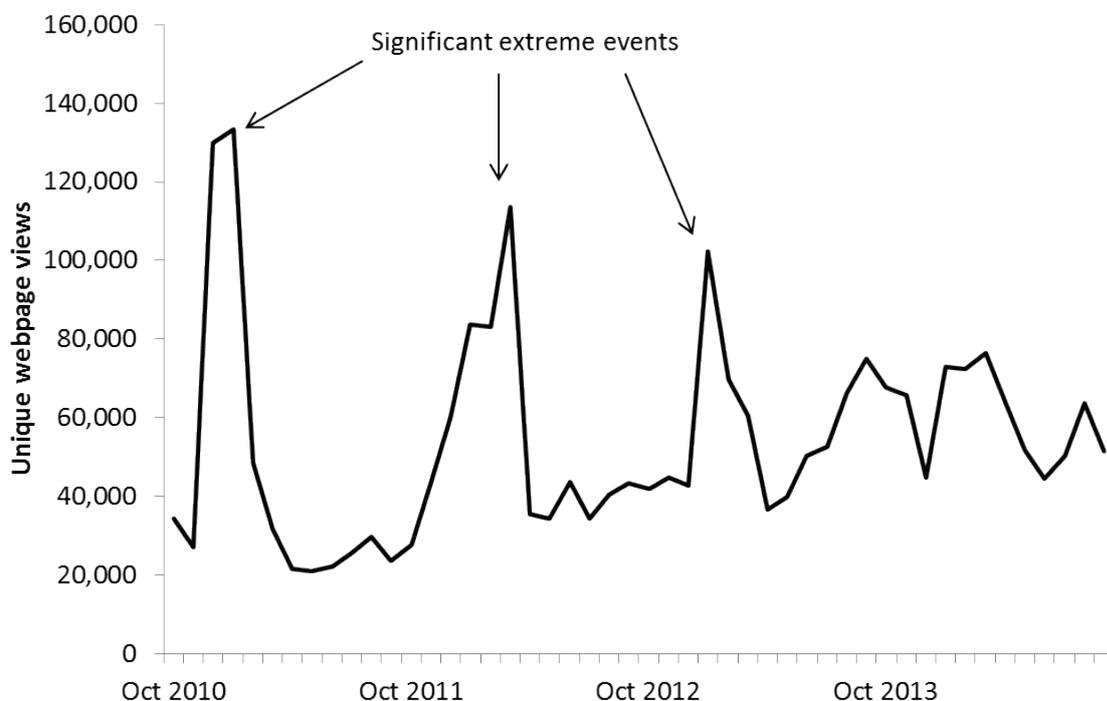


Figure 5.2 Total monthly unique webpage visits across water information products hosted by the BoM

5.3.3 Benefits of the BoM water information products

There are five broad benefits from national water information that apply to the water sector as a whole:

- Assessment: Understand where we have come from; know where we are at all times
- Evaluation: Judge how we are tracking; think through how we could do better
- Foresighting: Anticipate the future; pre-position for change
- Accountability: Be transparent with stakeholders; welcome scrutiny; build trust
- Education: Build 'water literacy'; explain what we do and why; bust myths.

Short outlines of benefits from particular products are given below.

5.3.3.1 Investments to improve water monitoring and observations

Prior to 2008, a lack of investment to maintain and improve the nation's hydrologic monitoring networks led to a decline in the quality and coverage of data.²⁹ This was compounded by inefficiencies in how information was managed across the numerous water data collecting agencies.

From 2008 to 2012 the BoM administered the \$80 million M&E Program to improve the currency, coverage and accuracy of water resources information collected in Australia, and to support the BoM with new technologies to share, process and store water data. Funding was provided for 463 projects, across 80 different organisations. The M&E Program investment led to improvements in the:

- national coverage of water resource monitoring and the safety of network operators
- cost and reliability of data acquisition, with a reduction in the number and length of system outages
- quality, accuracy, currency and sharing of data among organisations, for example:
 - installation of new telemetry systems to provide real-time information from over 600 sites across Australia
 - purchase of 145 Acoustic Doppler Current Profilers which enable hydrographers to take more surface water flow measurements with greater accuracy under a wide range of flow conditions
- development of a high quality national dataset held by the BoM under a common licensing arrangement which allows for improved water assessments and derived products such as streamflow forecasts.

Two independent reviews by the Australian National Audit Office³⁰ and GHD Australia³¹ both concluded that there have been "significant improvements in modernisation of existing networks with data capture at higher time resolution" which has "improved the accuracy, quality and frequency of the data available to the BoM to provide national water information".

5.3.3.2 Standards to free up and extend Australia's water information

National standards allow improved access to and comparability and quality of information. With Australia's water data being collected by over 200 separate organisations it is inevitable that as a whole set it is inconsistent, incomplete, non-standard, and often unavailable due to licensing arrangements and the lack of standard terminology and definitions for key parameters.

The BoM has worked in partnership with states, territories and industry groups to develop:

- National Industry Guidelines for hydrometric monitoring to ensure the quality, precise definition and comparability of water monitoring data
- the water data transfer format (WDTF) to translate and encode data held into a common format so that it can be input into a consistent national database and be compared and analysed nationally
- the Geofabric to provide a geographical database of water features and monitoring points across Australia
- the national aquifer framework to classify groundwater systems into a common national system
- the Water Accounting Standards 1 and 2 to enable water accounts to be produced to a consistent high standard.

²⁹ [A National plan for water security, 2007](#)

³⁰ [Administration of the Improving Water Information Program, 2014](#)

³¹ Review of Modernisation and Extension Program Final Report, August 2010

5.3.3.3 Sharing the nation's water information

A number of the BoM products provide public good or fundamental information which private providers or state and territory agencies have limited incentive or ability to produce:

- the Intensity-Frequency-Duration (IFD) design rainfall estimates have been updated with Engineers Australia to assist over 18,000 engineers, local councils, insurers, and regulators in the safe and efficient design of infrastructure
- the Water Storage web application provides 25,000 users per month with the only nationally consistent assessment of Australia's public surface water storages. It has key users that include the Reserve Bank of Australia
- the Water Markets Dashboard provides market operators, analysts, large brokers, the CEWH and market participants with the only complete, timely picture of water trades and associated allocations and entitlements across the MDB
- Water Data Online provides current and historical water monitoring data from thousands of water monitoring stations across Australia from a single web access point—with users and data providers already benefiting from reduced duplication and increased use and re-use of the information³²
- the National Groundwater Information System is a national spatial database developed with states and territories of 800,000 bores and bore logs from across Australia
- Climate Resilient Water Sources supports a request from industry for a public resource to explore recycled and desalination water information across Australia.

The national scale and consistent information seeks to raise public awareness and confidence to support policy reform and decision making processes. The DoE, and other government agencies, use BoM products and services to inform analysis and policy advice to the Government on a range of issues concerning national water reform and management. High quality national information is critical when providing context and a broad view of the state of water resources, often linked to policy decisions.

Examples of the importance of water information for policy-related matters include the development and monitoring of the Murray–Darling Basin Plan, and decisions on regional issues including drought management, regional development and water supply.

5.3.3.4 Assessments and accounts of Australia's water resources

Nationwide and consistent water information held within BoM databases allows for the systematic assessment of the state of Australia's water resources. For the first time, we have reliable long-term information across jurisdictions on the use, management and availability of water. The BoM now provides regular, comprehensive and independent reports that allow for effective:

- benchmarking and national comparison
- identification of resource trends
- analysis and monitoring of the impact of nationally significant policy, infrastructure and management decisions.

The National Water Account is a requirement under the Water Act. As Australia's most comprehensive water information report, the National Water Account offers extensive quantitative and qualitative information, reporting annually on the management of Australia's water resources using an asset and liability approach.

The Australian Water Resource Assessments provide regular standardised reports at a national and regional level on trends in water availability and links to climate.

³² Submission to the working group from the Department of Environment, Water and Natural Resources

Prior to these products there was no regular national reporting on the condition of Australia's water resources and the occasional reports that did occur were not comparable in approach meaning that trends could not be observed.

5.3.3.5 Products for prediction of future water availability

Seasonal outlooks provide an understanding of future long-term streamflows for irrigators, urban and rural water supply authorities, environmental managers and hydroelectricity generators. Forecasts of likely streamflow for the next three months and beyond are generated for 74 locations in 32 river basins across Australia and include many important storages and irrigation areas identified by users. There are now over 2,200 registered stakeholders who request regular email forecasts of streamflow while between July 2013 and June 2014 there were also over 125,000 webpage views.

The BoM has developed a new short term forecast service to assist river managers to make informed decisions about how to best manage inflow. It provides daily forecasts of likely streamflow volume for the week ahead and links the BoM's current flood and seasonal forecasts. The prototype service is available to 120 key stakeholders and covers 62 catchments and 114 forecast locations across Australia.

Reliable streamflow forecasts help water managers and key users to plan operations and to manage risk, specifically:

- seasonal forecasts can inform decisions on: water market planning; allocation and supply; cropping strategies; environmental watering; water supply restrictions; and drought management
- short term forecasts are sought by stakeholders to provide a "heads up" flood guidance; more efficient irrigation allocations; better reservoir and streamflow management; and improved information to meet recreational and environmental flow objectives.

5.4 ACCC information requirements, products, and benefits

The Water Act empowers the ACCC to develop and enforce water charge and water market rules in addition to its monitoring, price setting and advisory roles. The aim of these functions is to ensure water markets in the MDB operate effectively and the water markets are an efficient means of allocating scarce water resources between competing uses.

Sections 94 and 99 of the Water Act require the ACCC to monitor and report to the Minister on:

- regulated water charges
- compliance with the water market rules and water charge rules
- transformation arrangements.

These reports provide the Minister with detailed information for policy development and evaluation. They give the community an understanding of water market function within the MDB.

The ACCC requires annual information to ensure compliance with water market rules and water charge rules, and to monitor regulated water charges and transformation arrangements in the MDB. Although the water charge rules are out of scope for the working group review, the ACCC's requests for information include information in relation to its monitoring role of both the water market rules and the water charge rules which is the key reason the ACCC currently collects information. Therefore, they are included for completeness of the analysis of water information collected.

5.4.1 Information requirements

The ACCC requires various entities within the MDB, reflecting different water storage and/or delivery services and water management functions that they undertake, to complete its requests for information.

The requests for information are required from:

- eight Basin State departments and water authorities that undertake activities or set charges relating to water planning and management
- six bulk water suppliers
- 28 IIOs.

Where an entity engages in more than one function it receives requests for information for each of its functions. For example, Goulburn-Murray Water in Victoria is a bulk water supplier, IIO and also undertakes some water planning and management activities. In this case, Goulburn-Murray Water is issued with all three requests for information formats. Each request for information reports an entity's compliance against particular rules made under the Water Act.

The water planning and management request monitors compliance with the Water Charge (Planning and Management Information) Rules 2010. These rules require the publication of information on the details of the charge and the process for determining the charge. The rules seek to improve the consistency, availability and transparency of information about water planning and management charges and the associated costs.

The bulk water supplier request monitors compliance with the Water Charge (Infrastructure) Rules 2010. Amongst other things, these rules relate to regulated water charges for bulk water supply. They seek to provide consistency and transparency in water charging to promote efficient and sustainable use of water resources and water infrastructure assets.

Information requested of the IIOs is used specifically to monitor compliance with the Water Charge (Infrastructure) Rules 2010, the Water Charge (Termination Fees) Rules 2009 and the Water Market Rules 2009. The Water Charge (Infrastructure) Rules regulate certain aspects of the fees and charges payable to an IIO for access to the IIO's irrigation network or services provided in relation to that access. They seek to address issues that arise from infrastructure operators in the rural water market having market power as natural monopoly service providers. The Water Charge (Termination Fees) Rules seek to address a potential trade barrier and contribute to the efficient functioning of water markets. The Water Market Rules deal with actions or omissions of an IIO that prevent or unreasonably delay transformation arrangements or trade of a transformed irrigation right.

5.4.2 Benefits of the annual water monitoring report

The ACCC publishes the material obtained from its requests for information in its annual water monitoring report. The report interprets the results to monitor and publicly disclose progress on improving water charges and facilitating open trade of water access entitlements. This allows governments, water utilities, water users, and the public to evaluate the success of measures to reform water pricing and trade, and the progress made.

The water monitoring report does not seek to assess the entire water market, but instead focuses much of its attention on issues associated with IIOs, as well as on regulated water charges. It compares performance across organisations for matters such as revenues raised, the structure of charges, termination fees, water bill size, transformations and changes to these arrangements over time. It enables operators to establish benchmarks of performance and provides independent review of performance.

More broadly, the measures that have opened up trade, result in far greater adaptation to drought maintaining agricultural productivity at higher levels than would be possible otherwise. They also result in overall increases in production by allowing water to be traded to higher value uses, without the perverse consequences of artificial pricing.

Benefits to water market participants of the analysis presented in the water monitoring report include:

- improving transparency of regulated charges for irrigators, including by creating the ability to compare hypothetical irrigator bills across the MDB
- facilitating an efficient and effective water market by providing high quality information to help water market participants make decisions regarding their infrastructure access and use
- facilitating efficient participation in the water market by ensuring that transformations are completed in a timely manner
- analysis of water use, trade, transformation and termination data to inform policy development to aid efficient and sustainable use of water resources and infrastructure assets.

5.5 MDBA information requirements and benefits

The MDBA was established under the Water Act to plan and coordinate the sustainable management of Basin water resources, and monitor and report on the quality and quantity of Basin water resources. The Water Act also requires the MDBA to develop, implement and oversee the implementation of the Basin Plan – which is a Basin-wide approach to managing water sustainably across borders and in the national interest.

Overseeing the implementation of the Basin Plan includes the MDBA assessing compliance with sustainable diversion limits (SDLs), regulating and enforcing water trading rules, and monitoring, evaluating and reporting on the achievement of Basin Plan objectives, outcomes and targets. These activities require the MDBA to collect water information. It poses little reporting burden on businesses, communities or individuals. Instead it gets most of its information from Basin State water agencies.

5.5.1 Sustainable diversion limits

Since 1996, through the Murray–Darling Agreement, Basin States have provided water information, through lead water agencies, about annual water use, trade, and storage each water year. This information has been used to determine Cap compliance, and improve modelling capacity by ensuring models incorporate the most up-to-date information. The information informed the development of the SDLs in the Basin Plan.

By 2019, Basin States are required to develop Water Resource Plans that incorporate the SDLs, and the MDBA is required to assess and report on Basin State compliance with the SDLs. In order to transition from Cap compliance to SDL compliance, from the commencement of the Basin Plan (November 2012), Basin States have been required to report on an expanded list of water information to include interception and groundwater. Allowing the MDBA to consider all forms of take is essential for determining SDL compliance. During the transition period, the continuation of reporting water information for Cap compliance and the other forms of take has occurred.

Environmental water information requested from states on an annual and quarterly basis, through their lead water agencies, has enabled the MDBA to identify and develop a register of Held Environmental Water across the Basin, as required by section 32 of the Water Act. The MDBA publishes its assessments of water availability in the Basin in the annual Water Resources Report (previously the Water Audit Monitoring Report).

In the future, the Water Resources Report will contain information on total Held Environmental Water, how much of this water was available each year and the proportion that was used. The MDBA will use this information to maintain a register (the Register of Take) for accounting and assessing compliance with SDLs, in the long term. By publishing the Water Resources Report, the MDBA provides a comprehensive assessment on available water across the Basin and confidence to the public that current forms of take are within Cap targets and will meet SDLs in 2019.

The environmental water information, provided on a quarterly, basis allows an assessment of how the recovery of environmental water is progressing towards Bridging the Gap³³ between the baseline diversion limit and the SDL. There is considerable interest from the Basin community in how much progress has been made in the recovery of environmental water and the way this water has been recovered, either by direct purchase or through infrastructure projects. This information has been used in making decisions on where future recoveries need to be targeted and in considering the social and economic effects that can be attributed to the water recovery by governments. The reporting of these estimates to the public is done in consultation with the DoE where the Department publishes monthly recovery for the Commonwealth only, while the MDBA reports on both the Commonwealth and state recoveries.

Ensuring that states comply with SDLs ensures sustainable levels of water use in the MDB and improved environmental outcomes for birds, fish and vegetation.

³³ Bridging the Gap is an Australian Government commitment to implement the required level of diversions and extractions without risks to property rights, by securing water entitlements for environmental use.

5.5.2 Regulation and enforcement of water trading rules

Economic modelling indicates that between 2006–07 and 2010–11, interregional and intraregional water trading reduced the impact of drought on regional gross domestic product (GDP) in the southern Basin from \$11.3 billion to \$7 billion over a five year study period.³⁴ Notwithstanding the success of the water trading market, in many cases, trading arrangements were not designed using a consistent approach across jurisdictions (different governance, institutional and administrative arrangements, and approaches to specifying entitlements³⁵ and trading rules, and fragmented and inaccurate price information). Governments have recognised that water markets would benefit from more consistent approaches to those matters.

The introduction of Basin Plan trading rules on 1 July 2014 is a significant step in the new phase of market reform. The MDBA is responsible for implementing and enforcing the Basin Plan water trading rules. The rules standardise certain rights and conditions to ensure participants have fair and equal access to trade. The rules are intended to:

- reduce restrictions on trade
- improve transparency of information
- improve market confidence.

The water trading rules require:

- people who sell or dispose of water access rights to declare their sale price. This requirement helps market participants make informed decisions about buying and selling water by increasing the quality of price information
- Basin States to provide to the MDBA information about the characteristics of water access rights on issue in their state, and the trading rules in their state
- large IIOs to provide the MDBA with a copy of their trading rules. These rules cover the processes for trading within the IIO's network.

In 2013–14, both the New South Wales and Victorian governments removed some limits on trade (in terms of volume) to be consistent with Basin Plan water trading requirements. The removal of these restrictions allows entitlement holders, rather than governments, to decide if, when and how much to trade.

The MDBA uses the information it collects to create a single information portal that:

- reports water access right information, and enables easier comparison between different types of water rights
- links to Basin State trading rules
- links to IIO trading rules
- contains explanatory guidelines to help people understand the water trading rules.

The MDBA also published a compliance strategy which includes annual reviews to ensure compliance with the new trading rules.

The new trading rules will lower transaction costs on water trade, including through good information flows in the market and compatible entitlement, registry, regulatory and other arrangements across jurisdictions. This will provide more opportunities for trading, within and between Basin States and produce a more effective and efficient water market through greater availability of information and transparency.

³⁴ National Water Commission 2012, *Impacts of water trading in the southern Murray–Darling Basin between 2006–07 and 2010–11*, NWC, Canberra

³⁵ There is a large number of actively traded water access rights throughout the Murray–Darling Basin. These rights can be characterised by differences in priority and reliability, and form of take.

5.5.3 Evaluating achievement of Basin Plan objectives, outcomes and targets

The MDBA monitors, evaluates and reports on the environmental and socio-economic effects of the Basin Plan (Schedule 12 of the Basin Plan). In undertaking these functions, the MDBA gathers information about:

- the extent to which local knowledge and solutions inform the implementation of the Basin Plan
- the achievement of environmental outcomes, implementation of the environmental management framework, and identification and use of environmental water and how it aligns with Basin annual watering priorities
- the implementation, where necessary, of the emergency response process for critical human water needs
- the implementation of the water trade rules
- the efficiency and effectiveness of the operation of water resource plans
- the accountability and transparency of arrangements for water sharing.

The MDBA collects this information from Basin States, the Basin Officials Committee and the CEWH. The MDBA has developed these reporting processes to complement without duplicating the information provided by Basin States for SDL compliance.

On the basis of the water information collected, the MDBA evaluates the effects of the Basin Plan and publishes its evaluation in the Basin Plan Annual Report. This information will also be used by the MDBA to undertake comprehensive 5 yearly evaluations of Basin Plan implementation. Improved understanding of the effects of the Basin Plan enables adaptive management resulting in better decision making by governments.

5.5.4 Basin water quality and salinity

In order for the MDBA to know if the Basin Plan is ensuring sustainable salinity levels and export rates it collects essential water quality information. This includes information about salinity levels, salt loads and flow. Basin State agencies provide the information.

The MDBA uses this information to assess and report on the End-of-Valley salinity targets listed at Appendix 1 of Schedule B to the Murray–Darling Basin Agreement, and the Basin Plan salt export target. The MDBA assessments are reported in the Basin Salinity Management Strategy Annual Report and the Basin Plan Annual Report.

5.6 ABS information requirements, products, and benefits

The ABS provides the only comprehensive national and state/territory statistics of water supply and use within the economy. This is distinct from the BoM's role to document the quantity and quality of water resources in the wider physical environment.

The complex inter-relationships between the environment, society and the economy require integrated information, which is a key focus of the ABS water statistics program. The program actively engages with partners to understand information needs and to coordinate the development of statistics from the wide range of data available in this field.

The information collected relates to water supplied to the economy either through extraction directly by industry or through the water supply industry. Water use information from industry and households is integrated with information on its cost and other variables. This is used to relate the impact of water use on specific industries such as agriculture as well as the wider economy and society.

The ABS derives a majority of water information from four main survey sources:

- Water Supply and Sewerage Services (WSSS) Survey. This is an annual survey of all rural and urban water businesses (approximately 360 organisations). The survey starts in October, and information is compiled from January. It collects information about approximately 100 indicators relating to abstracted water amounts, water sources, own water use, water supplied to other users, environmental flows, water returns, recycled (reuse) water as well as information about costs and revenue derived from water.
- Rural Environment and Agricultural Commodities Survey (REACS). This survey is sent annually to a sample of approximately 35,000 farms. Every fifth year, an agricultural census is conducted in place of the REACS. Part of the REACS includes questions related to water use focused on water sources, including volumes of water received via irrigation channels or pipelines, volumes of self-extracted water from farm dams, groundwater and other sources, and irrigation expenditure and water use on various crops and pastures. Water related questions make up only 10 per cent of the 46 questions contained in the survey. The survey gathers a broad range of agricultural information including details about land area and use details, livestock, horticultural and broadacre crops, nurseries, cut flowers and cultivated turf, certification and soil management.
- Agricultural Land and Water Ownership Survey (ALWOS). This triennial survey goes to a sample of 11–12,000 farms and includes some questions about water entitlements. It is used to collect information on the foreign ownership of agricultural businesses, land and water entitlements.
- Energy, Water and Environment Survey (EWES) and Environmental Indicators Survey (EIS). One or other of these surveys is sent to a sample of businesses. The ABS runs the EWES once every three years and samples between 14,000-21,000 businesses across most industries (excluding agriculture). The ABS runs the EIS (sent to a smaller sample of 5,000 businesses) in the years that the EWES is not. These surveys include a series of water questions about water sources and usage for various purposes, volumes of water supplied to others or discharged and water expenses. Those particular questions are removed from EWES forms sent to entities that also receive the WSSS survey, eliminating potential duplication between these ABS information requests.

The ABS also derives information from non-survey sources, such as publicly available web pages.

The annual ABS *Water Account, Australia* (cat. no. 4610.0) is a key product which presents information on water abstracted from the environment and used within the economy for the whole of Australia.

The ABS water account includes data on: supply of water by industry of supplier (in both physical (i.e. megalitre) and monetary terms); use of water by industry and by households (in physical and monetary terms); water supply and use by state/territory; household expenditure on distributed water by state/territory; various aspects of bulk water, reuse water and distribution losses; value of irrigated agricultural production and related information on irrigated agricultural production (area, crop type, etc.); and a range of other items of information related to supply and use of water within the Australian economy. All data collected are essential to the development of the accounts.

Australian industry has used water accounts to estimate water consumption by different industries. The water accounts have been useful for water supplying businesses to better understand their customers' activity, particularly to predict future demand for water. They have also been used to investigate the impact of various restrictions on water availability.

More generally, the ABS water accounts facilitate informed decision making, research and discussion within governments and the community, including industry associations (e.g. water supply and mining industries), researchers and academics, international organisations (e.g. United Nations, Organisation for Economic Co-operation and Development, Food and Agriculture Organisation), various policy departments (e.g. Productivity Commission, the DotE, the MDBA, the BoM, Geoscience Australia, Department of Agriculture, Department of Industry) and state and territory government departments.

Given the importance of water to agricultural production, the ABS also releases information on water use by this sector in more detailed publications: *Water Use on Australian Farms* (cat. no. 4618.0) and *Gross Value of Irrigated Agricultural Production* (cat. no. 4610.55.008).

5.7 ABARES information requirements, products, and benefits

ABARES's role is to conduct economic and scientific research on agricultural industries to inform government policy development and business decision making. An annual, voluntary survey of Basin irrigators provides irrigation industry stakeholders and government an understanding of the economic characteristics of irrigation industries.

ABARES surveys irrigation farms in the southern Murray–Darling Basin to collect a range of farm-level physical and financial performance data. Data are collected annually from a random sample of 270 farmers through face to face interviews conducted by ABARES field officers. Farmers complete ABARES's survey voluntarily providing only data that are readily available to them. The target population for the irrigation survey is those agricultural businesses that used water for irrigation during the year in question, and with an estimated value of agricultural operations greater than \$40,000. The water information component accounts for only 5 per cent of the questions within this survey, and includes data on crop areas, type of irrigation used, volume of water used and source of irrigation water. Data is also collected on type of water licence held, volume of entitlement or unit share, sales/purchases of entitlements and sales/purchases of temporary water allocations.

The water related data collected provide the only MDB-wide farm-level analysis of trends in:

- on-farm water use by crop type and irrigation method
- characteristics of water trading farms
- use of irrigation technologies and related management practices
- irrigation farm performance
- progress towards water reform objectives.

Over the medium and longer terms, the data assists in delivering better policy outcomes by providing a factual basis for policy making.

ABARES has published a large number of reports detailing the results of research and analyses of the irrigation survey data, including tabulations of data in the form of region/industry averages or distributions.

A sample of reports published in recent years includes:

- *Irrigated agriculture in the southern Murray–Darling Basin: Murrumbidgee, Murray and Goulburn–Broken regions, 2006–07 to 2012–13*, ABARES research report 14.10. A summary of trends in farm physical and financial results for the Murrumbidgee, Murray and Goulburn–Broken regions over the period 2006–07 to 2012–13, as well as analysing the impacts of policy changes on irrigators with respect to water allocation trading, sale of permanent water entitlements, and investment and irrigation technology
- *Irrigation technology and water use on farms in the Murray–Darling Basin, 2006–07 to 2011–12*, ABARES research report 14.3. Presents the results of analysis of trends in farm investment and use of irrigation technologies and water applied to crops and pasture
- *An economic survey of irrigation farms in the Murray–Darling Basin: Industry overview and region profiles 2010–11*, ABARES research report 13.5. Presents farm physical and financial results from the latest irrigation survey within the Murray–Darling Basin for 2010–11 as well as preliminary estimates for 2011–12
- *Responding to change: Irrigation in the Murray–Darling Basin 2006–07 to 2010–11*, ABARES research report 12.6. Presents detailed analysis of adjustments made by irrigators in the Murray–Darling Basin, including farm financial performance, water trading, water use and irrigation technologies.

5.8 Conclusions

While noting that the bulk of information provision to the Commonwealth is from state and territory governments, this chapter has detailed the information reporting requirements on the regulated community. A majority of the information required by each Commonwealth agency is distinct from other Commonwealth requirements. Rural water entities carry the highest reporting requirement,

followed by urban water utilities then farmers and individual irrigators. The Water Act places no direct reporting requirement on farmers and individual irrigators.

The information provided to Commonwealth agencies allows them to deliver a suite of products and functions, along with the resultant benefits outlined in the chapter. High level benefits include ensuring effective price regulation, water trade and markets in the MDB, providing publicly accessible, standardised national water information, data analysis, assessments and water forecasts, as well as the ability to measure improvements to the economic productivity of water use.

There is not a one-to-one relationship between water information provided and individual products and functions and their associated benefits. Instead there is a ladder of increasing value of products as information is analysed and combined to add value to the original information. For example streamflow data provided to the BoM contributes to multiple benefits across a suite of forecasting, analysis and data accessibility products in which it is used.

In recognition of the clear benefits to water users, governments and the general public, the working group has not made any recommendations relating to changes to the existing suite of products and functions being delivered by Commonwealth agencies.

6 Costs of current reporting requirements

This chapter focuses on the costs to the regulated community of meeting the data provision requirements under the Water Act described in Chapter 5. Costs imposed by agencies outside the Water Act (the ABS and ABARES) are out of scope for the response to the Water Act review. The chapter provides a brief description of the Government's regulatory burden measurement framework, sets out the estimated costs of complying with each Water Act agency's requirements and looks at some of the ways agencies have tried to minimise the imposts on information providers.

6.1 Regulatory burden measurement framework

In his letter to the Director of Meteorology, the Parliamentary Secretary advised that the working group should use the Australian Government regulatory burden measurement (RBM) framework to measure the baseline burden of the water information requirements in the Water Act.

The Government developed the RBM framework to assist portfolios in identifying the cost of complying with regulation.³⁶ The framework assesses the different types of costs that a regulation may impose such as the cost of record keeping and reporting or the cost of purchasing and maintaining mandatory equipment. The RBM framework focuses on reducing the burden on the regulated community.

The framework divides compliance costs into ten categories as described in Table 6.1 below:

Table 6.1 Regulatory Burden Measurement Framework cost categories³⁷

Cost Category	Description
Notification	Costs of having to report to a regulatory authority, such as providing emissions data
Education	Costs arising from keeping up to date with regulatory requirements, such as time spent by staff to understand how regulations affect business operations
Record Keeping	Costs to keep documents up to date and any costs arising from having to keep records to meet compliance requirements
Enforcement	Costs from cooperating with audits, inspections and enforcement activities, such as time spent by staff to respond to regulator queries
Publication & documentation	Costs from producing documents to 3rd parties, such as assessment reports or financial statements
Permission	Costs from applying for and maintaining permission to conduct an activity, such as permissions to conduct commercial activities in a park
Purchasing	Costs from purchasing a service (advice) or product (materials or equipment) to comply with the regulation
Procedural	Non-administrative costs imposed by some regulations, such as requirements for insurance
Delay	Costs from time taken to complete an application that prevents entity from commencing its intended operations
Other	Costs from a delay in time taken by regulator to communicate a decision regarding an application that prevents entity from commencing its intended operations

³⁶ [Environment Portfolio Deregulation Report 2014](#), p. 9

³⁷ [Environment Portfolio Deregulation Report 2014](#), p. 23

6.2 Water Act agency regulatory costings

Each Water Act agency applied the framework to estimate the costs imposed on the regulated community from providing information under the Water Act. The DotE's Deregulation Unit reviewed and approved the costings for the Water Act agencies that fall within the DotE portfolio. In the case of the ACCC, the Department of the Treasury Deregulation Unit advised that the level of detail provided and the methodology of the ACCC cost estimate would be appropriate for a Treasury regulatory burden costing exercise of this nature and magnitude.

Using the RBM methodology, the regulatory burden of the water information requirements under the Water Act is just under \$400,000 per annum. Unsurprisingly, given its nationwide focus on collecting Australia's water information, Part 7 of the Water Regulations administered by the BoM imposes the bulk of the regulatory burden (greater than 91 per cent). Most of the burden is shared by 86 businesses and community groups that regularly report to the BoM and/or the ACCC. Two thirds of these organisations are water utilities. There is a large range of costs among these 86 organisations with the larger ones bearing greater costs than the smaller ones. The MDBA reporting requirements add an additional small burden to IIOs and sellers of water in the MDB.

The bulk of the burden is borne by water utilities, which comprise bulk water suppliers, urban water retailers and rural water entities (including IIOs). The bulk water suppliers and many of the urban water retailers are wholly state or territory government-owned businesses. The main other groups that bear the costs are not-for-profit regional catchment bodies and electricity utilities, including hydro-electricity operators.

The BoM requirements are generally proportional to business size and the bulk of the regulatory burden is on larger water utilities. Their total income ranges between \$18 million and \$2.6 billion. The reporting costs of water utilities and energy generators would be passed on to customers in water and electricity charges but given the very small proportion of total income that these costs comprise, the increase in water prices would be negligible. There is no direct Water Act reporting burden placed on water consumers such as individual irrigators and farmers.

Table 6.2 summarises the estimated costs under the RBM framework for information providers giving water related information to the Water Act agencies. These cost estimates take into account cost reduction measures detailed in section 6.4 below:

Table 6.2 Costs of Water Act agency requirements

Water Act agency	\$ per annum
ACCC	18,391
BoM	359,196
MDBA	14,360
Total	391,947

6.2.1 ACCC costings

The ACCC sends a total of 33 information requests to 30 infrastructure operators involved in the supply and/or delivery of water in the MDB. The requests seek different information depending on the activities of the infrastructure operators and their customers. This affects the time and information required to complete each request for information and the corresponding regulatory burden placed on each infrastructure operator. Estimated costs range from \$262 for small infrastructure operators to \$1,178 for large infrastructure operators and \$589 for infrastructure operators that manage bulk water. Total estimated cost of providing information to the ACCC is given in Table 6.3.

Water planning and management request for information formats are only provided by Basin State departments and water authorities which are not included in the regulated community.

Table 6.3 Estimated costs of ACCC reporting requirements in its requests for information

Request for information sent to	Annual regulatory burden \$
IIO holding less than 10 gigalitres of water access entitlement	2,094
IIO holding between 10 and 125 gigalitres of water access entitlement	5,105
IIO holding more than 125 gigalitres of water access entitlement	8,247
Infrastructure Operator delivering / managing bulk water	2,945
Total	18,391

6.2.2 BoM costings

The BoM imposes a regulatory burden under Part 7 of the Water Regulations 2008. It also requests information for its National Water Account and the Urban National Performance Report. These two requests are not regulatory requirements under the Water Act, but are included because they contribute to the overall burden on entities.

6.2.2.1 Water Regulations 2008—Part 7

The BoM estimated costs for a subset of 66 organisations named in the regulations that broadly may be regarded as businesses and community/not-for-profit organisations. The remainder of the organisations named in the regulations are government agencies and not part of the regulated community. Costs of complying with Part 7 of the regulations for these 66 organisations are categorised as notification and education costs. They total \$359,196 under the framework.³⁸

An organisation's reporting requirement depends in which Person Categories³⁹ it is listed and what relevant water information it holds on its data management system. Procedures and systems (and thus costs of extracting and providing data) vary between organisations. To attempt to standardise these variables, BoM assigned the 66 organisations to zero, low, medium and high reporting requirement cohorts. However, because each organisation's information provision is unique to it, there is some uncertainty about this estimate.

³⁸ The Water Act review referred to the compliance costs of Part 7 of the Water Regulations. The costs estimated in 2008 were a forecast made before the regulations took effect. They included large uncertainties and method differences compared with the current estimate.

³⁹ The Water Regulations group organisations named in the regulations into categories based on their functions. These categories determine which water information the organisations must give to the BoM.

The BoM estimated costs in accordance with four tasks as follows:

Table 6.3 Estimated costs of the BoM reporting requirements in the Water Act

Task	Total regulatory cost per annum
Task 1: Water information provision Send electronic data to the BoM (ongoing labour costs)	\$183,964
Task 2: Repair time in case of transfer system failure Organisations with large reporting requirements will automate their processes. There are therefore costs related to system repairs in the event of system failures on automated transfers (occasional labour costs)	\$60,642
Task 3: Stakeholder engagement Communication with the BoM consists of stakeholders digesting BoM's routine correspondence about regulation matters as well as other <i>ad hoc</i> liaison activities between individual stakeholders and the BoM (periodic labour)	\$39,169
Task 4: Review requirements and adjust to changes in regulation requirements as necessary Regulation requirements do not routinely change each year. The BoM works to minimise changes. For example, since 2008, there has been one amendment to the regulations that may have affected the organisations in this analysis (periodic labour)	\$75,421
Total	\$359,196

6.2.2.2 National Water Account

Section 122 of the Water Act requires the BoM to annually publish a National Water Account. The BoM requires additional data for the National Water Account which it obtains in a collaborative and cooperative process with reporting partners that include lead water agencies and urban and rural water entities. Of these, the BoM considers that 22 are in the regulated community.

The provision of National Water Account data to the BoM is not currently a regulated requirement for the reporting partners, and hence the associated costs of data provision are not included in the BoM's regulatory costing estimate. However, the BoM estimates the costs of providing the data to be approximately \$38,600 per annum across the 22 organisations in the regulated community.

6.2.2.3 Urban National Performance Report (Urban NPR)

Under the National Water Initiative (NWI), state and territory governments agreed to prepare an annual independent, public report on urban water utilities to benchmark pricing and service quality. The Urban NPR was produced jointly by the National Water Commission, state and territory governments and the Water Services Association of Australia (WSAA).

With the abolition of the National Water Commission, the states contracted the BoM to compile the Urban NPR. Because the Urban NPR is a joint agreement by parties to report and not a requirement under the Water Act, it is out of scope of the BoM's regulatory costing estimate as part of this review. However, Urban National Performance reporting is part of the burden of urban water utilities. A recent WSAA survey showed that the participating utilities valued the ability to benchmark their performance with other utilities and valued having progress recorded over time through independent analysis. The benefits clearly outweigh the costs for the states involved because they have voluntarily kept the reporting going at their own expense.

6.2.3 MDBA costings

The MDBA regulatory functions of relevance to the regulated community are limited to the regulation and enforcement of Basin Water Trading Rules (item 12, section 22 of the Water Act) and reporting of instances where Basin annual watering priorities are not followed (section 8.44 of the Basin Plan).

The MDBA categorised the costs of complying with these requirements as notification and education costs. They total \$14,360 per annum. These are costs annualised over a ten year period, comprising a large initial cost that has already been incurred, with much smaller ongoing costs.

The MDBA estimated costs as follows:

Table 6.4 Estimated costs of the MDBA reporting requirements in the Water Act

Measure	Total regulatory cost per annum
<p>Basin Plan water trading rules – sellers are required to report price Supplying the price is part of the selling process in most cases and is completed as part of the trade approval process. As it is part of the trade application, the time dedicated to price reporting is only seconds per trade.</p>	\$9,163
<p>Basin Plan water trading rules – Irrigation companies are required to provide notice of rights IIOs have provided definitions of the rights to their rights holders. Any alterations to the rights must be supplied to the rights holders. This may be done by email.</p>	\$327
<p>Basin Plan water trading rules – Rules commenced 1 July 2014 The Basin Plan water trading rules complement existing rules. Twenty IIOs contributed to the consultation associated with the development of the Basin Plan water trade rules. The operators invested time with MDBA staff to become familiar with the rules and the requirements of the rules. The time taken (32hrs) assumes two individuals from each irrigation company met with the MDBA four times during 2013–14 for a period of two hours (including travel time) and two hours preparation time. This was a one-off cost, averaged over a ten year time period.</p>	\$4,189
<p>Basin Plan water trading rules – Irrigation companies are required to document trading rules and provide them on request Twenty IIOs are required to supply the rules on request and if they have a web site they must be published on that. If the irrigation company holds at least 10 gigalitres in water access entitlements, it must publish the rules on its web page and provide them to the MDBA to be published on the MDBA website as well. The information must be updated when changes occur. Any changes are to be emailed to the MDBA which the MDBA estimates would take approximately half an hour.</p>	\$655
<p>Chapter 8 Environmental Watering Plan (Clause 8,44(1) – Reporting required where Basin annual environmental watering priorities not followed) – Persons undertaking environmental watering must give the MDBA a statement of reasons if they undertake watering that is not in accordance with the annual priorities. By far the majority of organisations undertaking environmental watering are government bodies. There is a small number of environmental not-for-profit organisations who may undertake environmental watering. The MDBA estimates that there would be two occurrences in a ten year period and that it would take two hours to prepare a response.</p>	\$26
Total	\$14,360

6.3 Non-Water Act agency costs

The Water Act review recognised that the burden of information provision under the Act should be put in context with the total water information reporting burden. Chapter 5 identified that the ABS and the ABARES impose an additional burden through their six water related surveys. The burden of these surveys has not been estimated using the RBM framework. Based on a very small sample, the average time to complete the ABS's WSSS is 4.6 hours. It should be noted that the ABARES survey is completed voluntarily by a quite different segment of the community (farmers) than any of the Water Act reporting requirements. For these reasons, the ABARES survey does not add to the accumulated burden imposed by Water Act agencies on the regulated community.

6.4 Principles, practices and measures already taken to keep costs reasonable

Overall, the reporting burden is relatively low considering the quantum of data that is supplied and the comprehensive national reporting that it supports. This is because agencies have taken several measures to ensure that the costs of providing data are kept to a manageable level. This is not to say that further reductions in costs cannot be achieved, which is the topic of Chapter 7.

Agencies work to minimise the burden on information providers in an ongoing process of continuous improvement and review. Likewise, regulatory provisions were drafted to impose the least compliance burden whilst also achieving the legislation's objectives.

6.4.1 Regulatory design

The largest amount of reporting comes through the BoM's requirements under the Water Regulations but these requirements were deliberately limited to supplying only information that is already in the possession, custody or control of the organisation. In practice, this means that only water information kept on an organisation's data management system is required. The BoM regulatory provisions do not impose any requirement on an organisation to collect additional information.

Similarly, the surveys and requests for information by the ACCC and the ABS on water related aspects of businesses are generally requests for information that businesses would already hold as part of their normal operations.

When it developed the Basin water trading rules, the MDBA consulted with the ACCC and affected stakeholders, to ensure that no information to be collected as part of this process was being collected elsewhere. As part of the consultation, MDBA made a number of changes to minimise reporting obligations.

6.4.2 Sourcing information from publicly available material

In many cases, agencies collect information from publicly available sources, rather than seeking it from businesses themselves. For example, the BoM does this where possible for the National Water Account. The ACCC previously collected information relating to regulated charges as part of its annual request for information. However, the Water Charge (Infrastructure) Rules require infrastructure operators to publish their schedule of charges so now the ACCC sources this information from the publicly available schedules. In addition, the ACCC uses infrastructure operator websites to gather information where necessary about particular operators. It also uses other websites to source information.

6.4.3 Reviewing requirements

With a view to improving their processes and reducing burdens on information providers, Commonwealth agencies engage in an ongoing process of review of regulatory requirements and cost minimisation. In recent years, the ABS, ABARES, the ACCC and the BoM have undertaken key reviews of their requirements, resulting in significant changes and burden reduction. Results of these reviews include the sourcing of ABS data from state information hubs, and reductions in the number of line items and other requirements for the BoM National Water Account.

During 2014, the ACCC significantly revised its requests for information to reduce the burden placed on entities and ensure only essential information for its monitoring role is collected. Consequently, it

has little scope to further reduce its burden within the working group process. However, the ACCC reviews its requests for information annually to identify any opportunities for further refinement and streamlining. Changes already made to reduce the overall size of requests for information, thereby reducing the burden on reporting entities include:

- reducing the number of questions asked within requests for information by between 37 and 77 per cent
- pre-filling answers where possible using information provided in previous requests or from public sources
- removing questions in the IIO request for information relating to regulated charges, and instead sourcing this information from public sources
- changing the request for information design, layout and format to improve clarity and readability, and providing a glossary of terms to minimise confusion
- individualising requests for information for each IIO.

ABARES regularly reviews its survey processes to minimise respondent burden. It regularly rotates the survey sample so that individual farms are not being continually surveyed, and only those questions of relevant policy interest are included in the survey. Also, ABARES only asks farmers to provide data that is readily available to the farmers at the time of interview.

6.4.4 Minimising impacts

The BoM maintains and develops Part 7 of the Water Regulations in accordance with a set of overarching published principles. It works with organisations and assists them to meet their obligations and to minimise the impact of changes to requirements. Recognising the costs of adjusting to changed requirements, the BoM limits regulations changes. For most water information providers there has only been one regulations amendment that affected their data provision. The BoM provides reasonable lead times when introducing changes which allow organisations opportunity to prepare for new requirements. The BoM has changed the format in which lead water agencies need to supply their data to make it easier to use. However, the BoM assists organisations with such changes and has no plans for further changes to formats.

6.4.5 Open data sharing

A key goal of Part 7 of the Water Act and the Water Regulations is to ensure that water data held by over 200 entities across Australia is shared freely as a public resource. The Act gives the BoM authority to publish water information, but this authority does not extend to third party use of the information. The BoM worked with data providers to gain their agreement for providing water information under a Creative Commons Attribution Licence (CC BY). This licence allows for third parties to freely use the data, so long as they acknowledge the data owner. By applying an open access licence to their data, providers also reduce their reporting burdens as multiple agencies can utilise the available material without each one requesting the same data from the provider. Currently, 192 out of the 232 organisations named in the Water Regulations apply a CC BY licence to their data.

Similarly, the BoM, ABARES, the ABS and the MDBA publish their water information products and reports under a CC BY licence.

6.4.6 Automating data provision

The BoM, in partnership with CSIRO, developed the water data transfer format (WDTF) as a national water data transfer standard to allow efficient exchange of information. Provision of data to the BoM in WDTF has been a key factor in the BoM's ability to ingest and interpret information from a multitude of different sources. More than half of the organisations providing information to the BoM utilise WDTF to deliver some or all of their data.

Between 2007 and 2012, the BoM administered the M&E Program which delivered \$78.1 million to help water data providers named in the Water Regulations. Whilst the majority of funds went to government agencies, 33 of the funded organisations were in the regulated community. These 33 organisations received \$14,708,120 to complete 129 projects.

Over the course of the program, the Bureau funded 50 organisations to undertake over 100 projects to the value of \$15.17 million aimed at improving water data management systems. Many of these projects focused on enabling organisations to export data to the BoM in the WDTF. They included funding to purchase and upgrade systems as well as training to support ongoing data sharing. In the final round of the program, the BoM funded organisations to upgrade five major data management systems (Aquarius, Hydstra, Rubicon, SWIM and WISKI) to support data export in the latest version of WDTF. By automating their water information provision, including using WDTF, costs to organisations of providing ongoing information are significantly reduced thus lowering the regulatory burden of the Water Act.

6.4.7 Avoiding duplication with the states and territories

Water Regulations provisions also allow for situations where the same data may be required by different named organisations. Specifically, organisations named in the regulations are not required to give water information that is already in the BoM's possession. In practice, this means that if an irrigation entity gives the same water information to a state regulator as it is required to give to the BoM, and the state regulator is also required to give that information to the BoM, then the irrigation entity is not required to give the information to the BoM if it notifies the BoM in writing. Currently, 26 named organisations utilise this procedure. Of these, 11 are in the regulated community.

Similarly the MDBA designed its reporting requirements of water trading rules so that state databases can be used to collect the information and ensured that its additional requests were only for information that is not already available from other state or Commonwealth agencies.

In Queensland and New South Wales, the ABS is collecting data for its Water Supply and Sewerage Services survey from state data hubs, streamlining provision of data for around 165 utilities. It is aiming to establish similar reporting arrangements in other states.

6.5 Conclusions

The costs to the regulated community of providing information under the Water Act are relatively low. This is because the bulk of national water information is collected from state and territory agencies. It is also because the Commonwealth agencies that collect the information have implemented principles and practices to keep the costs reasonable and they obtain the required data from outside the regulated community wherever possible.

The bulk of costs are borne by large organisations, principally bulk water suppliers and large urban water utilities. The costs are a very small part of their income and thus have negligible influence on water prices and the households, irrigators and businesses that consume water.

The costs are greatly outweighed by the benefits to water consumers of regulation of prices in monopoly markets, the benefits of an open water market, the increased public confidence in water management, and the benefits of water information services that enable resources to be managed more effectively. These benefits were described in Chapter 5.

Several practices and measures have been used to ensure costs of providing information are kept reasonable. These include sourcing of information from published sources or from state governments; automating data supply using IT systems; improving survey designs and prepopulating surveys with known data.

For many organisations the costs have been offset by investments from the BoM-administered M&E Program to finance the implementation of standards and information systems to ease and automate the provision of data.

None of the above means that improvements cannot be made to remove duplication or reduce the burden on businesses, and this is addressed in Chapter 7.

7 Reducing the reporting burden

This chapter makes recommendations and outlines actions that the working group agencies intend to take to further reduce the reporting burden on the regulated community, detailed in Chapter 5. Practices that have already been put in place to keep the burden reasonable and steps taken to date to reduce the reporting burden are described in Chapter 6.

There are four main ways in which Commonwealth agencies can reduce reporting burden:

- *Remove duplication.* Identify and remove reporting requirements that overlap between two or more agencies. Data sharing arrangements can satisfy common needs and deliver efficiencies for information providers. This may also necessitate changes to better align similar requirements so that they can be met through a single information stream.
- *Create efficiencies.* Collect information in a more efficient way such as by aligning timing of different requests into a single request, by using information technologies to automate information supply, or by prepopulating surveys with data obtained from other sources.
- *Remove unnecessary burden.* Over time, and as arrangements are tested, certain reporting requirements may become redundant or may no longer meet clear objectives nor deliver benefits which justify costs of reporting. Agencies need to regularly review and confirm the purpose, value, form and timing of reporting and remove unnecessary impost.
- *Reduce or change objectives.* If a Commonwealth agency reduces or changes the scope of its objectives and deliverables, associated information requirements should also be able to be adjusted or removed. This may result from changes to government priorities, budget implications or completion of certain activities.

The Water Act review identified that there was potential duplication in reporting requirements. The working group sought further input from information providers about where duplication to Commonwealth agencies is occurring, and where the reporting burden is considered unreasonable. In parallel with this consultation with information providers, working group members assessed all water information reporting requirements imposed by Commonwealth agencies with a view to identifying and removing duplication, and reducing the overall reporting burden.

The working group found that, apart from urban water utilities, there is only a low level of duplication (in the order of 5 per cent), in the sense that it is only small parts of each Commonwealth agency's information request that overlap with other requests. For this reason, it is necessary to address the duplication in terms of individual questions or specific data fields supplied. In the case of duplication in requests of urban water utilities, the working group proposes broader actions and recommendations that move towards single provision of information as a means to remove duplication. State agencies raised concerns about duplication of reporting to the Commonwealth, but these issues will be addressed through other processes as they are beyond the terms of reference of the working group.

In addition to duplication, the BoM, which imposes the largest reporting burden, has identified ways of reducing regulatory burden by relaxing a number of current water information requirements on both rural and urban water utilities.

7.1 Reducing burden on rural water entities

As noted in Chapter 5, amongst the regulated community the highest water information reporting burden is placed on rural water entities within the MDB which include IIOs as defined in the Water Act, and other organisations and businesses in the regulated community that supply water for irrigation. Four Commonwealth agencies (the ABS, the ACCC, the BoM and the MDBA) impose a level of water information reporting burden on these entities.

The working group examined the reporting requirements in detail and found a small degree of overlap between the ACCC and the BoM, and between the ABS and the BoM. A summary of the overlap is outlined in sections below, along with recommendations and proposed actions to remove it through data sharing arrangements and alignment of requests. More significantly, the BoM proposes to reduce its requirements for water information from rural water entities. In addition to reducing the overall reporting burden, this will have the effect of eliminating areas of overlap between the BoM and the ACCC and ABS requirements.

7.1.1 Removing unnecessary burden

The BoM has identified opportunities to significantly reduce water information requirements for the 13 rural water entities which are currently required to give a broad range of information to the BoM under the Water Regulations.

In addition to information about water use and water rights, allocations and trades, the BoM currently requires provision of time series data from sites monitoring surface water level and flow, groundwater level and pressure, meteorological observations, water quality and information on water storages. The BoM is proposing a series of reductions to remove these additional reporting requirements. The reductions can be made whilst maintaining the BoM's ability to deliver existing products and associated benefits.

The BoM will seek Ministerial approval to relax reporting requirements in the Water Regulations for rural water entities by:

- reducing the number of subcategories required from 37 to 10 (this would include removing the requirement to report data on irrigation rights on issue, subcategory 6a)
- removing the daily frequency of reporting on Category 5 (water use information), so that all Category 5 information is reported annually.

As a result of these changes, rural water entities would only be required to give Category 5 and 6 information, and would no longer have any requirement to report daily to the BoM. The reduced Water Regulations requirements would be as follows:

- annual provision of water use data in subcategories 5a, 5aa, 5ab, 5ac, 5b, 5d and 5e
- weekly provision of water trade information in subcategory 6b and 6c (no change)
- provision of data in subcategory 6d at the time of the announcement (no change).

Annual provision of Category 5 information is an input to the BoM's annual Water in Australia and National Water Account reporting. Continued provision of weekly water trade information is required for the BoM to continue its water trade reporting, where timeliness of reporting is an important aspect.

Recommendation 1

The BoM recommends an amendment to the Water Regulations to relax reporting requirements for rural water entities, as described in section 7.1.1. The amendment would reduce the number of subcategories of water information requested from 37 to 10 and reduce the frequency of reporting on parts of Category 5 (water use) information. The BoM would seek Ministerial approval for the amendment, and anticipates that this could occur in early 2016.

Further to these reductions, the BoM is considering alternative requirements for Category 5 (water use) information, with the BoM aiming to collect annual figures aggregated at the water resource planning area level of total water diverted or abstracted, total water supplied (consumed) and total water returned. The BoM is currently investigating options to obtain this information from state and territory agencies and information already being shared with the MDBA. If sufficient information is available from these agencies, the BoM will seek Ministerial approval to remove the requirement for rural water entities to report Category 5 (water use) information altogether.

Recommendation 2

To further reduce burden on rural water entities, the BoM will work with state agencies through its Jurisdictional Reference Group for Water Information (JRGWI) to explore sourcing all water use information (Category 5) from state agencies. The BoM aims to finalise new Category 5 options by early 2016. To implement the changes may require an amendment to the Water Regulations. The BoM would seek Ministerial approval for the amendment in 2016.

In its most recent requests for information, the ACCC reduced the burden placed on entities by reducing the number of questions in its requests by between 37 and 77 per cent (Section 6.4.3). No

further reductions are proposed as the reporting is now the minimum required to discharge the regulation function. Similarly, the ABS is not proposing to reduce reporting burden on rural water entities, apart from reductions achieved through addressing minor duplication with the BoM information requirements noted in section 7.1.2 (below).

The MDBA reporting burden is small, and the majority has already occurred with IIOs being compliant with the Basin Plan water trading rules from 1 July 2014. The only ongoing reporting burden occurs when information is updated which will be minimal.

7.1.2 Removing duplication between agencies

To a large extent, the ABS, the ACCC, the BoM and the MDBA each require separate information from rural water entities to meet discrete needs. The BoM requires predominantly physical water information, the ABS requires economic and financial information, whilst the ACCC and the MDBA primarily require information on water market activities and charges for different regulatory purposes. Consequently there is only a small amount of overlap in information requirements between Commonwealth agencies.

Overlap in the ACCC and the BoM requirements

The ACCC and the BoM reporting requirements partially overlap in relation to information about volume of water delivered, water access entitlements, irrigation rights and allocation trades. The partial overlap applies to 10 entities from a total of 39 rural water entities in the MDB which provide information to the ACCC and/or the BoM. The overlap is confined to six questions within ACCC requests for information sent to large IIOs and bulk water suppliers; there is no overlap between the ACCC's Water Planning and Management and small IIO requests for information and the BoM Water Regulation requirements.

Table 1 summarises the areas of duplication, showing the 10 entities and the applicable questions with overlapping ACCC and BoM requirements. The coloured cells indicate a total of 24 of the 36 instances of duplication which can be removed: seven through data sharing and the remaining 17 through recommended changes to BoM requirements.

Table 7.1 Overlapping BoM/ACCC requirements and actions/recommendations to remove duplication

Organisation	IIO Request for Information questions				BWS Request for Information questions	
	Water delivered (Qu 1.4)	Water Access Entitlements for conveyance losses (Qu 1.6)	Irrigation rights (Qu 2.1e)	Volume of water allocation traded within IIO (Qu 2.4c)	Water delivered (Qu 1.4a)	Water Access Entitlements for bulk water services (Qu 1.3)
Coleambally Irrigation (NSW)					N/A	N/A
Central Irrigation Trust (SA)		N/A			N/A	N/A
Murrumbidgee Irrigation (NSW)					N/A	N/A
Murray Irrigation (NSW)					N/A	N/A
Goulburn-Murray Water (Vic)			N/A			
Lower Murray Water (Vic)			N/A			
SunWater (Qld)			N/A			
Department of Natural Resources & Mines (Qld)	N/A	N/A	N/A	N/A		
Grampians Wimmera Mallee Water (Vic)	N/A	N/A	N/A	N/A		
State Water Corporation (NSW)	N/A	N/A	N/A	N/A		

Key:

Duplication will be removed through sharing between the BoM and the ACCC (Action 1)

Duplication would be removed through reductions to BoM requirements (Recommendation 1 and Recommendation 2)

Data unable to be shared due to absence of data held by the BoM or differences in data requirements

N/A

The question does not apply to the organisation

In the case of information about water access entitlements for conveyance losses and volume of water allocation traded within an IIO, the working group identified that seven instances of duplication can be removed through sharing of information from particular rural water entities between the BoM and the ACCC.

Action 1

To remove duplication in requests, the BoM will share a subset of information on water access entitlements for conveyance loss and volume of water allocation traded within an IIO with the ACCC. The ACCC will use this information to pre-fill specific questions in IIO requests for information. By pre-filling questions, the burden of completing the questions will be reduced while still allowing the data to be checked.

The BoM will provide this overlapping information to the ACCC commencing from the 2014-15 water year.

Sharing can't be achieved for all organisations due to differences in the information requirements between these agencies. For example, to meet its reporting objectives the ACCC requires a higher level of detailed information in relation to water access entitlements than the BoM. Specifically, the ACCC distinguishes between water access entitlements held by the IIO or customers and water access entitlements held for conveyance losses, and the BoM only holds this information for Coleambally Irrigation Cooperative Limited and Murrumbidgee Irrigation Limited. These are the only two entities for which the BoM proposes sharing this information with the ACCC. In relation to volume of water allocation traded, the ACCC seeks information from IIOs about total volume of water allocation traded into, out of and within an operator's irrigation network. The BoM only holds information about internal trades at an IIO level for five of the overlapping entities.

Should Recommendation 2 be implemented, overlap between the BoM and the ACCC in relation to information about water delivered will be removed by the BoM no longer collecting the information from rural water entities. The remaining area of overlap is information sought by the ACCC and the BoM about irrigation rights held by IIO customers. The BoM has no ongoing need for data on individual irrigation rights on issue and recommends changes to cease collection of this information, removing the duplication with the ACCC (see section 7.1.1 and Recommendation 1).

Overlap in ABS and BoM requirements

Reporting requirements partially overlap for 13 rural water entities which are required to give information about water use and delivery to both the BoM and the ABS.

The ABS Water Supply and Sewerage Services (WSSS) survey is issued annually to 360 rural and urban water businesses. Only nine rural water entities that report to the BoM under the Water Regulations are currently providing information that partially overlaps with information also reported to the ABS through the WSSS survey. In addition to the Water Regulations information requirements, the BoM makes direct requests to five entities for information required for the National Water Account.

The overlap between the BoM and the ABS relates to only five indicators out of the total 82 indicators required from rural water entities in the WSSS survey. The five overlapping indicators concern total volumes of water abstracted from surface water and groundwater, returns to surface water and water supplied to irrigators. The duplication of reporting under the Water Regulations would be removed by the BoM no longer requesting the information (see Recommendation 1 and Recommendation 2).

The working group explored options to remove the remaining small overlap between the ABS and the BoM National Water Account requirements (only one or two indicators from five entities). It concluded there is limited opportunity to reduce the duplication through sharing due to timing of availability of information. The BoM does not receive the National Water Account information from entities in time to provide it to the ABS before it issues the WSSS survey in October. Similarly, the information gathered by the ABS through the WSSS survey could not be shared with the BoM until May/June the following year which is too late to input to the production of the National Water Account. In addition to these timing constraints, confidentiality provisions within ABS legislation (*Census and Statistics Act 1905*) prevent sharing of ABS data at organisation level unless that organisation provides written consent. Nevertheless, the BoM and the ABS will undertake Action 2 to streamline these two requirements.

Action 2

The ABS and the BoM will map the relationship between rural information required by the BoM for the National Water Account and WSSS indicators, and align definitions and aggregations where possible. This will assist the five entities who are meeting these requests to streamline data provision and aims to enable single figures for reporting to both the ABS and the BoM from 2015-16.

7.2 Reducing burden on urban water utilities

This section focuses on reducing water information reporting burden placed on urban water utilities. Two Commonwealth agencies, the ABS and the BoM, require water information from these businesses. There is overlap between the BoM and ABS reporting requirements and also between different BoM reporting requirements

7.2.1 Removing duplication in BoM requirements

The BoM imposes reporting requirements on 75 urban water utilities under the Water Regulations (Category 7 information) and makes additional requests to 25 entities for information needed to compile the National Water Account. The BoM also now collects information from 78 urban water utilities for the Urban NPR. Most of the entities overlap and 67 are currently satisfying two or three of these information requirements.

In consultation with the Urban NPR round table group (the governing body for the report), the BoM has identified opportunities to streamline these three reporting requirements. The BoM proposes to use the Urban NPR framework as the means of meeting all BoM reporting requirements through a single database. This means that Water Regulations Category 7 requirements will be satisfied through provision of Urban NPR information. This removes duplication of reporting and has the advantage of cementing a role for the BoM in Urban National Performance reporting (mandated in the NWI). This will remove the need for 75 urban water utilities to report 51 subcategories of information currently required under Water Regulations Category 7.

Recommendation 3

The BoM recommends an amendment to the Water Regulations to consolidate urban water information reporting requirements for the National Water Account, the Urban NPR and the Water Regulations to eliminate duplication between these three streams of data provision. A key part of this consolidation would involve substituting current Water Regulations Category 7 requirements with the Urban NPR reporting process. The BoM would seek approval from the Urban NPR round table group and Ministerial approval for the amendment to the Water Regulations. The aim would be to achieve this streamlining for the 2016-17 supply of information.

7.2.2 Removing duplication between the BoM and ABS requirements

The primary ABS requirement for water information from urban water utilities is the annual WSSS survey that is issued to all rural and urban water businesses. Although some urban water utilities may also be included in the sample of businesses which receive the Energy, Water and Environment Survey (EWES) or Environmental Indicators Survey (EIS), the ABS has already taken measures to remove water questions from the EWES, eliminating potential duplication between these ABS information requests.

The working group identified considerable overlap⁴⁰ between the urban water information reporting required by the ABS and the BoM. A total of 50 out of the 96 indicators relevant to urban water utilities in the ABS WSSS survey partially overlap with Water Regulations/Urban NPR requirements and/or BoM National Water Account requirements. These overlaps exist for up to 32 urban water utilities that are currently reporting to both the ABS and the BoM. Sixteen indicators closely overlap whilst the remaining 34 only partially overlap due to differences in definitions or different levels of aggregation.

The ABS and the BoM have closely examined the areas of overlap and determined that an important step toward removing the duplication is to align requirements wherever possible. Requests for similar but subtly different information places unnecessary burden on urban water utilities, and both the BoM and the ABS will work together to eliminate differences in definitions or aggregations for the 50 overlapping indicators.

Action 3

The ABS and the BoM will work together to align information requirements and remove duplication for the 50 indicators identified as overlapping between the WSSS survey and the Urban NPR and/or BoM National Water Account. In many cases this will involve adjustments to definitions or aggregations of information. This action will require negotiation with stakeholders including water utilities, the Urban NPR round table group and state government agencies.

The ABS and the BoM aim to put these changes in place during the 2015-16 financial year, so that duplication in reporting requirements will be removed for 2016-17 reporting.

7.3 Reducing reporting burden on farmers

Two Commonwealth agencies, ABARES and the ABS (neither of which are Water Act agencies), currently ask irrigation farmers for water information. ABARES conducts an annual survey of 270 irrigation farms in the MDB that includes a small component focused on water information (<5% of the questions). The ABS surveys a much broader cross-section of 35,000 farms across Australia through the annual Rural Environment and Agricultural Commodities Survey (REACS). The ABS also gathers information on water entitlements through the triennial Agricultural Land and Water Ownership Survey (ALWOS) which goes to a sample of around 12,000 farms.

The ABS and ABARES are currently undertaking the National Agricultural Statistics Review to assess the agricultural statistical system in Australia and its adequacy for informing decision-making, planning and policy making, both now and into the future. Through extensive stakeholder consultation and research, the review has investigated the priority information needs of stakeholders, where these needs are not being met by existing sources of data, potential overlaps and inconsistencies in data, and opportunities to improve efficiency in the system. The ABS released a preliminary report on 31 March 2015.⁴¹ Final recommendations are being considered to address the issues raised in the preliminary report, including the need to reduce reporting burden, improve coordination and improve information quality.

The working group has not recommended any additional actions to reduce reporting burden for these organisations.

⁴⁰ Despite there being a large overlap in data items collected on the ABS WSSS and the Urban NPR there remains a number of data items collected on the WSSS that are not reported to the Urban NPR. These include:

- (a) a breakdown, by industry, of water (including reuse) supplied to retail customers,
- (b) returns to the environment, split by location (e.g. groundwater, surface water, sea), and
- (c) numerous data items referring to water-related expenditure and revenue.

⁴¹ <http://www.abs.gov.au/ausstats/abs@.nsf/mf/7105.0.55.003>

7.4 Reducing burden on others in the regulated community

Other businesses that have reporting requirements are hydroelectricity generators, other electricity utilities, major storage owners and non-government catchment/natural resource management bodies (in Queensland and Western Australia). The ABS and the BoM require water information from these entities but there is no duplication of reporting and information is required to support particular water information products. Streamflow gauging data from Hydro Tasmania is provided twice to the BoM, once in real time for flood warning and later for stream gauging data sharing purposes. The same situation applies for state and territory agencies and some data providers construe it as duplication of reporting, although the data have some differences. The BoM will investigate this matter further through JRGWI.

7.5 Reducing burden on state and territory agencies

This section considers the water information reporting burden placed on state and territory agencies by the Commonwealth. These agencies are not part of the regulated community and have therefore been a secondary focus for the working group as per its terms of reference.

Four Commonwealth agencies (the ACCC, the BoM, the CEWH and the MDBA) impose a level of water information reporting burden on state and territory agencies. Of these, the BoM imposes the highest reporting requirement and relies heavily on information provided by state lead water agencies which accounts for almost 50 per cent of the data delivered to the BoM under the Water Regulations, in terms of both file size and number of files. The BoM is not proposing significant reductions in reporting requirements other than those under Categories 5 (water use) and 6 (information about water rights, allocations and trades) discussed in Section 7.5.2 (below).

The working group examined state and territory agency water information reporting requirements to Commonwealth agencies and found a small degree of overlap between Basin State agency reporting requirements to the BoM and the MDBA. Actions to address this duplication are proposed in Section 7.5.3 (below). Information required by the ACCC and the CEWH from state agencies does not overlap with or duplicate the BoM or MDBA water information reporting requirements. In addition, the ACCC collects information from state departments and water authorities to monitor compliance with the Water Charge (Planning and Management Information) Rules which are currently being reviewed.

7.5.1 Actions already taken to reduce burden

The BoM and the MDBA have signed a collaborative heads of agreement to share information for the purposes of Basin Plan reporting. This agreement is intended to minimise duplication of reporting from state agencies between the two organisations. The BoM makes available to the MDBA a broad range of water information received through the Water Regulations. Through the agreement, these agencies are evaluating improved options for data sharing, access and delivery.

The MDBA provides the BoM with most of the information needed for the MDB regional account, within the National Water Account. This removes the need for the BoM to request the necessary information from state and territory lead water agencies. The MDBA already collects these data along with other information from lead water agencies required for water audit monitoring purposes. Currently, 32 data items out of 73 total data items in the MDB account are received from the MDBA. These data items cover over 80 per cent of the information needs for the account. With the MDBA's data collection restructure under Section 71 of the Water Act, the MDBA's contribution to the MDB account will increase in future. The MDBA data will be used to supply at least three more data items that the BoM currently sources directly from the SA Department of Environment, Water and Natural Resources.

In 2014 the ACCC made changes to the water planning and management request for information that reduced state agency reporting requirements. The changes included reducing the total number of questions asked by 37 per cent and pre-filling information, where possible, using published information or information provided in previous requests for information.

7.5.2 Removing unnecessary burden

In line with reductions to reporting burden for rural water entities, the BoM will seek Ministerial approval to relax reporting requirements in the Water Regulations for state and territory agencies (Category A and B organisations) in relation to water use information (Category 5) and information on water rights, allocations and trades (Category 6) by:

- removing the daily frequency of reporting on Category 5 information (subcategories 5a, 5aa, 5ab, 5ac and 5b), so that all Category 5 information is reported annually
- reducing the frequency of reporting for subcategory 6a information from monthly to annually, so that Category 6 information is required only at weekly and annual timeframes.

Recommendation 4

The BoM recommends an amendment to the Water Regulations to relax reporting requirements for lead water agencies (Category A organisations) and other agencies of a state or territory (Category B organisations) to reduce frequency of reporting on parts of Category 5 and 6 information. The BoM would seek Ministerial approval for the amendment, and anticipates that this could occur in early 2016.

In addition to these reductions, the BoM is considering alternative requirements for Category 5 (water use) information required under the Water Regulations as discussed in section 7.1.1 and Recommendation 2. The new arrangements would lead to changes to requirements for Category 5 information by state and territory agencies. Only annual figures aggregated at the water resource planning area level would need to be provided, which would amount to a reduction from current requirements.

7.5.3 Removing duplication between the BoM and MDBA requirements

Under Section 71 of the Water Act, the MDBA makes an annual request to state lead water agencies to gather a wide range of information about available water volumes, water permitted for take, water actually taken at agreed diversion points and details of allocations and trades. Much of the information gathered through this request is aggregated to the Sustainable Diversion Limit (SDL) resource unit level. There is partial overlap between this annual MDBA requirement and the BoM Water Regulations requirements, specifically in relation to water diversions, water trade and lease information and water entitlements.

The working group notes that established procedures of information collection are in place for both the BoM and the MDBA in line with specific business drivers and targeted to meet reporting obligations. Data provision by state agencies to the MDBA occurs under both the MDB agreement and the Basin Plan. As such, all data collected by the MDBA for Basin reporting purposes is from, and sanctioned by the states' lead water agencies. Considering this, and despite differences in the data coverage, aggregation and timeliness, the working group agreed on actions to remove duplication in provision.

Whilst both the BoM and the MDBA require entitlement information to be provided from Basin State agencies, there are currently differences in the information each agency gathers in relation to attribution of entitlements to spatial regions, distinction between licences held for irrigation or non-irrigation purposes and other details of licence purpose. Further work is needed to achieve alignment between the BoM and MDBA requirements and remove duplication.

Action 4

The BoM will share water trade and lease information with the MDBA. The MDBA will use it to pre-fill or eliminate that part of its annual request for information from state agencies under Section 71 of the Water Act.

The MDBA will continue and extend existing arrangements to share diversion data gathered through the Section 71 requests with the BoM. Access to this information by the BoM will satisfy part of the Basin State agency water use reporting requirements under the Water Regulations (Category 5).

The BoM and the MDBA will further investigate opportunities to align requirements for entitlement information, and seek to meet common needs through single provision from state agencies.

The MDBA and the BoM aim to put most of these sharing arrangements in place during the 2015-16 financial year to remove duplication in reporting requirements for 2016-17 reporting.

Removing duplication in provision of water trade and lease information may take longer to fully achieve as the BoM will need to ensure that all MDBA information requirements, including SDL level attribution and distinction between trades for environmental and consumptive purposes, are in place. The MDBA and the BoM aim to complete these sharing arrangements by June 2019 (when all Basin States have aligned data reporting to SDL resource units).

Additionally, the working group notes that Basin State agencies currently duplicate provision of a subset of real time flow and salinity information to the BoM, under Water Regulations requirements, and the MDBA at certain monitoring sites. These data are required by the MDBA, in accordance with MDB Agreement funding arrangements, to support Section 172 (Murray River Operations), and Section 25 (Water quality and salinity management plan) and Basin Plan reporting requirements. In these cases, data provision to both agencies is automated so there is minimal cost once the data supply system is established.

Eliminating this duplication in provision of real time flow and salinity data would not deliver significant efficiencies for state agencies nor provide benefit to either the MDBA or the BoM. There would be an additional impost on states if they were required to filter and remove particular sites from scheduled bulk data deliveries to one or other agency. Hence the working group is not proposing actions to alter current arrangements.

7.6 Single portal for water information

The option of a single portal solution for Commonwealth water reporting was raised in submissions to the Water Act review. The aim would be to enable data providers to supply water related data once, through one means and to one entity, from where it would be distributed for many uses. This would facilitate streamlining of reporting requirements and removing duplication. While this is an appealing concept, the Water Act review observed that there are several issues that would need to be resolved to achieve the concept and there were several risks involved such as disruptions to established processes and removal of direct engagement of information suppliers with the users of the information.

The analysis above has shown that there is not a lot of duplication of reported items in the requests. If all recommendations and actions to remove duplication are implemented, there is less than five per cent of duplication in the total request. The BoM also plans to reduce its request on the regulated community significantly. For many entities there are at most two separate requests from different Commonwealth agencies. Nevertheless the analysis above does suggest there is potential for a single portal solution for particular types of organisations which bear the brunt of the burden, primarily organisations involved in urban water supply.

For urban water utilities, reporting is starting to evolve toward a single portal solution. For the 2013–14 reporting period the BoM assumed responsibility for Urban NPR reporting from 78 water utilities. This includes a broad range of financial, physical, customer service and other data fields that the BoM collects on behalf of state water agencies and price regulators. With approval of those stakeholders,

the BoM is planning to add additional data fields to the database to include those required by the National Water Account from some utilities.

Both the ABS and the BoM are already well progressed toward state based single access point arrangements in New South Wales and Queensland. Urban water utilities in these states provide a range of information to state agency hubs run by the NSW Office of Water and the Queensland Water Directorate respectively to satisfy multiple reporting requirements for state and Commonwealth agencies. Urban NPR fields for urban utilities are collected from these hubs, as is a large proportion of the data required by the ABS for its WSSS survey in these states. As a result of being able to access information centrally, the ABS no longer sends WSSS surveys to approximately 60 and 105 entities in Queensland and New South Wales respectively (mainly urban water utilities). The BoM is working with these state agencies to expand the data hubs to include additional indicators required for the National Water Account, and to introduce built-in data validation processes at the point of data entry. The ABS has begun initial discussions with state agencies in Victoria, South Australia and Western Australia to explore opportunities for establishing similar arrangements in these states. There is limited value in establishing state hub arrangements in either Tasmania, the Australian Capital Territory or the Northern Territory given only one or two utilities operate in these jurisdictions.

State hub arrangements facilitate alignment of similar information requests (Action 3) and removal of duplicate requirements by centralising reporting and promoting the principle of information exchange through single provision and multiple use.

It would not be much of an additional step for the ABS to be added to the Urban NPR group of stakeholders that drive the collection of data from urban utilities. The national Urban NPR database could be expanded and modernised to include all urban utility data required for the ABS, National Water Account, Urban NPR and other BoM products. Ideally this would extend to collating the national data through state based hubs where the state agencies also have their needs met. The collection and management of the data could be governed by an expansion of the Urban NPR round table group to include the ABS. This has the advantages of providing a governance structure for the ABS to work with states and uses the advantages of the BoM information systems; stakeholder relationships with utilities and states and its capabilities in information systems and data sharing. The working group notes however, that the Urban NPR database would not cover the full scope of the ABS WSSS collection (i.e. 360 organisations) and the ABS would rely on state hubs for data from organisations not reporting under the Urban NPR.

Action 5

The ABS and the BoM will work with urban water utilities, the Urban NPR round table group and state government agencies to establish, or extend existing, single point of delivery arrangements for input of urban data to meet their combined requirements.

- The ABS and the BoM will work with the NSW Office of Water and the Queensland Water Directorate to incorporate changes to requirements (including a streamlining of data items, particularly where there is duplication between the ABS and the BoM data items), and further develop and promote existing state hub arrangements for single delivery of information by urban water utilities.
- The ABS and the BoM will collaborate with state agencies in Victoria, South Australia and Western Australia to investigate establishing similar arrangements in these states.

The aim is to streamline reporting requirements for 2016-17 information reporting.

A similar concept is less feasible and more difficult to apply to IIOs and other rural water entities. These entities provide diverse and almost completely distinct information to the BoM, the ACCC, the ABS and the MDBA. As seen in section 7.1, once changes have been implemented there is little to no duplication between information requirements of these agencies. Unlike the situation for urban water utilities, the wide variety of information needed to meet each agency's requirements is not easily incorporated into a single data supply process. For example, the information reported by rural water entities to the ACCC on transformation arrangements and other activities required for compliance of the rules, is not similar to tabulated quantities required by the ABS and the BoM.

Of all entities that report to the ACCC and the ABS, less than 30 entities report information to both these agencies. Direct engagement between the providers of information and the government agencies involved would still be needed to ensure streamlined reporting. For urban utilities, this can be achieved through a governing committee that includes all stakeholder groups. A common governing process is efficient where there are common interests between stakeholders, however, if the needs and contexts are distinctly different it can be an additional transaction cost with no benefit.

In conclusion, there may be some opportunities to streamline processes for rural water entities but there is also a risk of unnecessary complication if a single portal process is applied to genuinely different requests. The costs and benefits need to be evaluated by all parties (Action 6).

Action 6

The BoM will bring rural water entities and Commonwealth government agencies together to discuss advantages and disadvantages of further streamlining water information provided by rural water entities in early 2016.

Other reporting requirements such as the ABS and ABARES farm surveys are too distinct in terms of data providers, types of information and use of information to warrant being aggregated with other requests. That would only create inefficiencies.

7.7 Continuing activities

It is important to recognise that the recommendations and actions outlined above are not the end of the matter for the Commonwealth. Much of the working group's report is focused on improvements to reduce regulatory burden as it currently stands. However, as evidenced in section 6.4, member agencies are also alert to the need to continuously adapt and improve their information requirements and the burden they impose on information providers. As new technologies emerge and programmes mature and evolve, agencies will continue to explore opportunities to reduce information requirements and find more efficient means of collecting information.

The working group's review has enhanced members' understanding of water related information collection by the Commonwealth. In the future, this may lead to more sharing of water related information, subject to privacy restrictions. It will also deter agencies from adding overlapping requirements and inefficiencies in the future.

In addition, each of the agencies will continue their consultations with information providers and other stakeholders.

The BoM will continue with its secretariat role by tracking the progress of the actions and recommendations agreed by the working group. It will be a point of reference for these actions and recommendations.

Additionally, the BoM has convened an informal Commonwealth level water information forum – the National Water Information Exchange (the NWIE) which will meet three times a year. The membership comprises a subset of the working group membership (officers from ABARES, the ABS, ACCC, BoM, DotE, and MDBA) with the addition of the CSIRO and Geoscience Australia. One of the aims of the NWIE, which held its inaugural meeting on 2 June 2015, is:

- to provide a forum for policy agencies to flag their current and emerging policy development areas that need underpinning with good water information, building inter-agency understanding of these needs and increasing opportunities for more proactive and targeted information exchange and co-ordination.

While the NWIE is not an official decision making committee and has a broader purpose than the working group, it can ensure that reporting requirements continue to be coordinated across the Commonwealth.

7.8 Conclusions

Collectively, the proposed actions and recommendations would remove more than 90 per cent of duplication in provision of water information by the regulated community to Commonwealth agencies.

Subject to Ministerial approval, reductions in water information requirements proposed by the BoM for rural water entities and urban water utilities (Recommendation 1, Recommendation 2 and Recommendation 3) will significantly alleviate reporting burden on these two groups which comprise a majority of the regulated community under consideration of the working group.

These proposed regulatory changes would result in savings to the regulated community of approximately \$100,600 per year. This figure has been estimated in accordance with the Australian Government's Regulatory Burden Measurement Framework, and would be the total annual savings realised across 22 rural and urban utilities reporting water information to the BoM under the Water Regulations. These businesses would need to spend less time to report a reduced set of data to the BoM. There would also be some smaller savings resulting from a reduced need to liaise with BoM about data requirements. Compared with the baseline burden of BoM water information requirements under the Water Act of \$359,196 (refer to table 6.2), the savings represent a 28 per cent reduction in costs borne by the regulated community.

Reducing burden on rural water entities

Recommended changes to the BoM reporting requirements under Recommendation 1 amount to substantial reductions in burden for 13 large rural water entities overall. The number of subcategories of information which these entities would be required to give to the BoM reduces by more than 70 per cent, and the requirement to perform any daily reporting is removed.

Implementation of Recommendation 2 would further reduce the BoM reporting obligations placed on rural water entities by seeking to obtain water use information from state agencies or the MDBA.

There will be additional small reductions in burden resulting from proposed Actions 1 and 2 to address duplicated requirements between the BoM and both the ACCC and the ABS.

Reducing burden on urban water utilities

Over the medium to long term, Recommendation 3 (if implemented) and Actions 3 and 5 amount to substantial reductions and streamlining of reporting requirements for urban water utilities.

The BoM's Recommendation 3 to consolidate and streamline its urban water reporting requirements would simplify and reduce burden for over 70 urban utilities currently meeting BoM requirements under the Water Regulations Category 7, the Urban NPR and for the National Water Account. These changes are expected to be in place in time for the 2016–17 reporting period, and would remove one out of up to three sets of BoM reporting requirements currently imposed on any given utility.

Action 3 will align the BoM and ABS information requirements and remove duplication for 50 indicators which currently overlap between the WSSS survey and the Urban NPR and/or the BoM National Water Account. Development of existing and new state hubs through Action 5 will move toward eliminating all duplication of reporting between the BoM and the ABS, and result in a single delivery of data which meets the needs of the ABS to report on water in the economy as well as the BoM's National Water Account requirements and performance reporting through the Urban NPR.

Reducing burden on state agencies

Whilst reducing burden on state agencies has not been a focus of the working group, Action 4 will remove a degree of duplication in provision of water trades, water diversion and entitlement data by states to both the MDBA and the BoM. Recommended relaxation in frequency of provision of water use and entitlements information to the BoM (Recommendation 4) represents an additional small reduction in burden.

Appendix A: Targeted users of BoM water information products

Product/User	Commonwealth and its agencies	State governments	Peak bodies, NGOs	Prof services	Water utilities	Water using businesses	Engaged public
Standards		Primary			Secondary		
Improved Monitoring		Primary			Secondary		
Water Data Online				Primary	Secondary	Secondary	Secondary
Geofabric	Secondary	Primary		Secondary			
Water restrictions						Primary	Primary
Water storages						Primary	Primary
National Water Market Portal	Secondary			Secondary	Secondary	Primary	
Regional Water Information	Secondary	Secondary	Secondary			Secondary	Primary
Hydrologic Reference Stations		Primary			Secondary		
Rainfall Intensity-Frequency-Duration (IFD)				Primary	Secondary		
Climate Resilient Water Sources	Secondary	Secondary			Primary	Secondary	
Australian Groundwater Explorer		Primary		Primary		Secondary	
Monthly Water Update						Secondary	Primary
AWRA water balance model	Primary	Secondary		Secondary		Secondary	
Short to seasonal forecasts		Secondary			Primary	Primary	
National Water Account	Primary	Secondary	Primary				Secondary
Water in Australia	Primary	Secondary	Primary				Secondary

Key

Primary targeted audience



Secondary targeted audience

Appendix B: List of abbreviations

ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
BoM	Bureau of Meteorology
BWS	bulk water suppliers
CEWH	Commonwealth Environmental Water Holder
DotE	Department of the Environment
EIS	Environmental Indicators Survey
EWES	Energy, Water and Environment Survey
IIO	Irrigation infrastructure operator
JRGWI	Jurisdictional Reference Group for Water Information
M&E Program	Modernisation and Extension of Hydrologic Monitoring Systems Program
MDB	Murray–Darling Basin
MDBA	Murray–Darling Basin Authority
NPR	National Performance Report
NWC	National Water Commission
NWI	National Water Initiative
NWIE	National Water Information Exchange
RBM	regulatory burden measurement
REACS	Rural Environment and Agricultural Commodities Survey
RFI	Request for information
SDL	Sustainable Diversion Limit
Water Act	<i>Water Act 2007</i> (Cth)
WCIR	Water Charge (Infrastructure) Rules 2010
WCPMIR	Water Charge (Planning and Management Information) Rules 2010
WCTFR	Water Charge (Termination Fees) Rules 2009
WDTF	water data transfer format
WMR	Water Market Rules 2009

WPM	water planning and management
WSAA	Water Services Association of Australia
WSSS	Water Supply and Sewerage Services survey

Appendix C: Glossary of terms

Basin	the Murray–Darling Basin as defined in the Water Act
Basin Plan	<i>Basin Plan 2012</i> (Cth)
Basin State	means New South Wales, Victoria, Queensland, South Australia, or the Australian Capital Territory.
Bulk water suppliers (BWS)	persons who impose a bulk water charge for a bulk water service
infrastructure operator	defined in section 7 of the Water Act as a person that owns or operates infrastructure for one or more of the following purposes: <ul style="list-style-type: none"> (i) the storage of water (ii) the delivery of water (iii) the drainage of water for the purpose of providing a service to another person
Irrigation infrastructure operator (IIO)	defined in subsection 7(4) of the Water Act as an infrastructure operator that operates the water service infrastructure for the purposes of delivering water for the primary purpose of being used for irrigation
Modernisation and Extension of Hydrologic Monitoring Systems Program (M&E Program)	An \$80 million Australian Government grants program administered by the Bureau of Meteorology between 2008 and 2012. The objective of the M&E Program was to assist water information collectors to modernise and extend their water monitoring systems.
Person Categories	The Water Regulations group organisations named in the regulations into categories (A to H and K) based on their functions. These categories determine the water information parameters that organisations give to the BoM. Organisations may be in more than one Person Category.
regulated community	businesses, not-for-profit organisations and individuals
regulatory burden measurement (RBM) framework	standard method set by the Office of Best Practice Regulation to quantify the cost of Commonwealth regulation on business, not-for-profit organisations and individuals (the regulated community)
rural water entities	irrigation infrastructure operators (IIOs) as defined in the Water Act, and other organisations and businesses in the regulated community that supply water for irrigation

Subcategories of water information	<p>the Water Regulations classify water information into ten categories. Subcategories further divide each category of water information. For example:</p> <p>Category 1 – Surface water resource information, comprises:</p> <p style="padding-left: 40px;">Subcategory 1a: watercourse level</p> <p style="padding-left: 40px;">Subcategory 1b: watercourse discharge</p>
termination	when a person terminates or surrenders the whole or part of a right of access to the IIO's network, typically by terminating water delivery rights
transformation	the process by which an irrigator permanently transforms their entitlement to water under an irrigation right against an IIO into a water access entitlement held by the irrigator (or anybody else other than the IIO), thereby reducing the share component of the operator's water access entitlement
Water access entitlement	perpetual or ongoing entitlement, by or under a law of a state, to exclusive access to a share of the water resources of a water resource plan area
Water access right	<p>defined in section 4 of the Water Act as any right conferred by or under a law of a state to hold and / or take water from a water resource, and includes:</p> <ul style="list-style-type: none"> (i) stock and domestic rights, (ii) riparian rights, (iii) a water access entitlement, (iv) a water allocation
Water allocation	the specific volume of water allocated to water access entitlements in a given water accounting period
Water allocation trade	the change of ownership and / or location of a particular volume of water allocation
Water Charge (Infrastructure) Rules 2010 (WCIR)	<p>water charge rules for fees and charges payable to an infrastructure operator for:</p> <ul style="list-style-type: none"> • bulk water charges • access to the irrigation infrastructure operator's network or services provided in relation to that access • matters specified in regulations made for the purposes of s. 91(1)(d) of the <i>Water Act 2007</i>
Water Charge (Planning and Management Information) Rules 2010 (WCPMIR)	rules relating to charges for water planning and water management activities in the Murray–Darling Basin and requiring the publication of information on the details of the charge and the process for determining the charge

Water Charge (Termination Fees) Rules 2009 (WCTFR)	water charge rules for fees or charges payable to an IIO in relation to terminating access to an operator's irrigation network (or services relating to such termination), or surrendering a right to delivery of water through the operator's irrigation network
Water delivery right	a right to have water delivered by an infrastructure operator—a water delivery right typically represents some or all of the holder's right of access to an irrigation network (there may also be a right to drainage), and can be terminated
Water information	<p>defined in section 125 of the Water Act to mean:</p> <p>(a) any raw data, or any value added information product, that relates to:</p> <ul style="list-style-type: none"> (i) the availability, distribution, quantity, quality, use, trading or cost of water; or (ii) water access rights, water delivery rights or irrigation rights; or <p>(b) any metadata relating to data of a kind referred to in paragraph (a);</p> <p>and includes contextual information relating to water (such as land use information, geological information and ecological information)</p>
Water information categories	the Water Regulations classify water information into ten categories. Subcategories further divide each category of water information into specified parameters for provision to the BoM
Water Market Rules 2009 (WMR)	rules dealing with actions or omissions of an IIO that prevent or unreasonably delay transformation arrangements or trade
Water Regulations	Water Regulations 2008 (Cth)

Appendix D: References

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