Summary of the Five-Year Forward Work Plan for Water Resource Management in South Australia

Version 1.0

19 February 2015

Government of South Australia
Department of Environment, Water and Natural Resources

Contents

Purpose

To provide stakeholders with a summary of the content of the Five Year Forward Work Plan for Water Resources Management in South Australia and an overview of the water allocation planning process.

Background

DEWNR and the NRM boards have developed a statewide Five Year Forward Work Plan for Water Resource Management (the Work Plan).

The Work Plan was designed to give the Minister, the NRM boards, the community and industry confidence that a rigorous decision making framework was used to ensure that DEWNR and the NRM boards will coordinate their efforts on the highest priority statewide water resource management tasks in the future.

It also provides NRM boards with certainty of commitment of DEWNR resources for individual water resource management projects and will eventually ensure that DEWNR and NRM board business planning and project planning aligns to support priority tasks delivered in an efficient and timely manner.

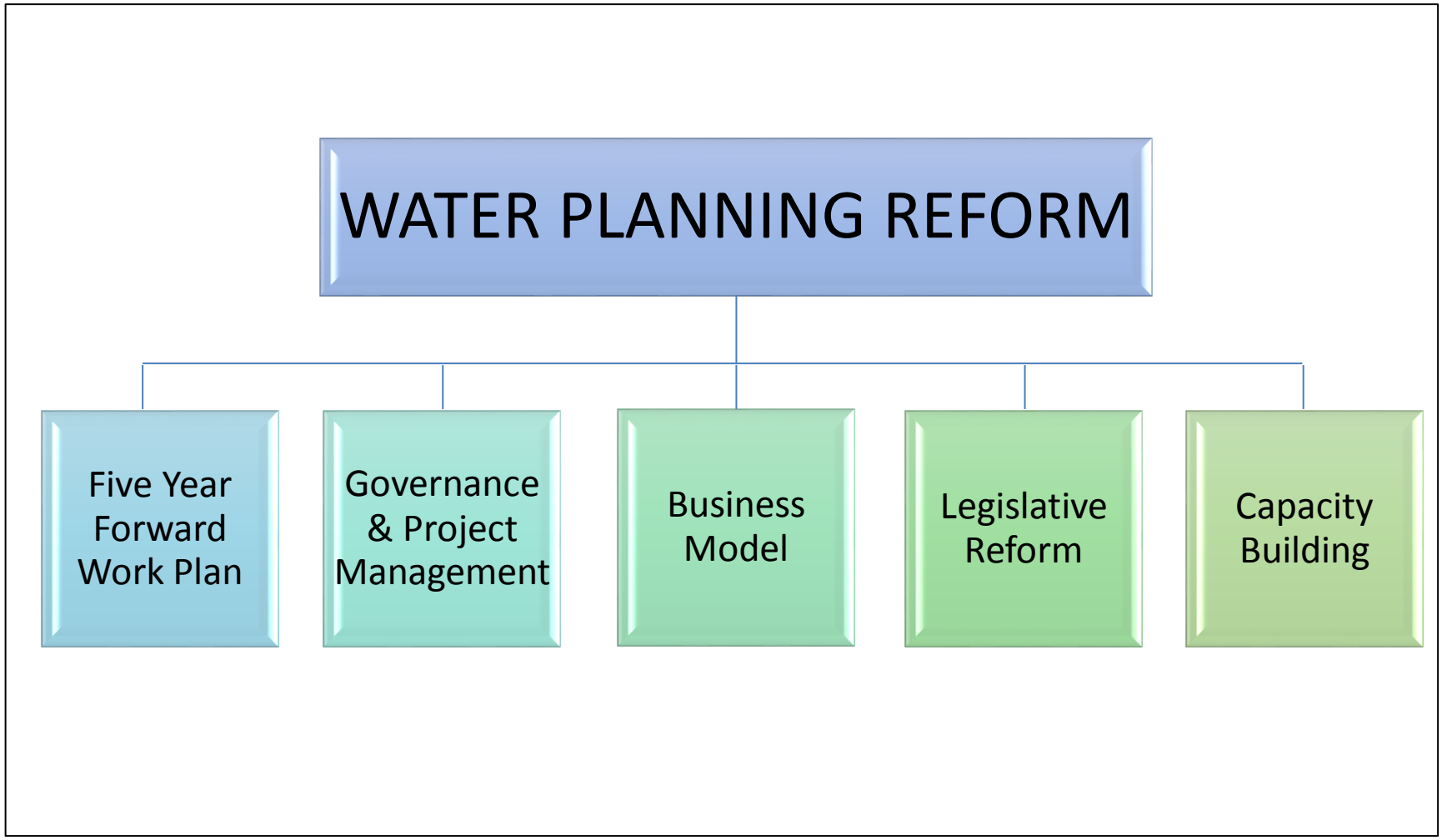
Key facts about water resource management in South Australia

- The government maintains sustainable water supplies for many industries including irrigated agriculture (worth $1.5bn annually), for mining development of $4.4bn annually and also for manufacturers including Coopers, Lion Co (Lion Nathan), and Coca-Cola Amatil.
- Drinking water sourced from sustainably managed water resources also underpins all rural and urban communities.
- Water resource management assists in meeting the government's environmental objectives and also contributes to the following economic priorities: "Unlocking the full potential of South Australia's resources, energy and renewable assets." and "Premium food and wine produced in our clean environment and exported to the world.
- Being a tradeable asset means that a water right can be borrowed against to raise capital. It can also be leased or sold, which allows water use to move towards the most profitable activities. This in turn increases the return per unit of water and increases the income of the region as a whole. The estimated market value of water on licence for the state is $2.8 bn.
- Water resource management planning is essential to maintain the state's water supplies and ensure that all water users get a fair share of water. Regional NRM plans and water allocation plans ensures our water resources are used sustainably, so they remain viable in the long-term.
- It provides a high level of security for the ongoing ability to take water and protects the resource from over exploitation. This security then enables long-term planning and investment with greater confidence.
- Water resource management can be a lengthy and complex business. As an illustration of this Annex 1 sets out a broad summary of the water allocation planning process in South Australia.

Water Planning Reform Program

- The government is seeking to continuously improve the water planning processes in South Australia and work is underway across five broad areas to reform the way water resource management planning is delivered (see figure 1 below).
- Building on the opportunity provided by the creation of DEWNR in 2012, and the integration of regional NRM staff, DEWNR and the NRM boards endorsed a package of water planning and management reforms in September 2013.
- A senior level Water Planning Steering Committee was established to provide strategic leadership and oversee delivery of the water planning and management reform program. The Steering Committee is chaired by Ben Bruce (Group Executive Director, Customer and Corporate Services branch), with membership comprising the NRM regional managers, directors of relevant DEWNR branches and Frank Brennan representing NRM board presiding members. The Program Director is Julia Grant (Executive Director, Water and Climate Change branch). The Steering Committee and the Program Director is supported by a sub group, comprising managers from all NRM regions and relevant DEWNR branches.
- A new governance framework for the delivery of major water planning tasks was endorsed by the Water Planning Steering Committee in March 2014. The new framework is a step-change from past practice as it requires DEWNR and the NRM boards to jointly implement clear and transparent project management arrangements, including appointed project sponsors and project managers with the authority to drive progress across functional areas. The framework has been successfully applied in the development of governance arrangements for the implementation of the Eastern Mount Lofty Ranges Water Allocation Plan and is being utilised for over water allocation plans.
- A state wide five year water resources management plan was developed in 2014 to improve our capacity to deliver water allocation plans and other tasks in a timely manner.
- The fundamental roles and responsibilities as outlined in the *Natural Resources Management Act 2004* were not reviewed at this point in time, and the commitment to effective community and industry engagement in water allocation planning remains unchanged.
- The Five-Year Forward Work Plan supports the government's commitment to water planning reform and builds on work already completed to develop water allocation plans for some of the state's highest profile water resources in the Murraylands, South East and the Mount Lofty Ranges. It is based on funding for water planning and management for 2014/15.
- Clearer timelines will also benefit water users and give them more certainty about future water allocation and licensing projects for their resource.
- There has been an unprecedented level of water resource management planning activity in South Australia over the last few years, with 19 water allocation plans active and all NRM boards administering regional NRM plans that contain rules for managing water affecting activities.
- For the first time, the Work Plan, co-designed by DEWNR and the NRM boards, provides a common understanding of upcoming water resource management planning work across the state. This will enable an improved coordination of efforts and efficient use of staff resources available across the agency and in conjunction with NRM boards.

Figure 1: Five Pillars of Water Planning Reform



Risk Assessment

- To assist with development of the Work Plan a comprehensive risk assessment was completed for all of the major water resources in the State for both prescribed and non-prescribed areas.
- The results from the risk assessment were used to assist in identifying the need for future water resource management tasks on a consistent, transparent and repeatable basis across the State's water resources, while allowing for varying levels of data available. The methodology followed the steps of DEWNR's *Risk Management Framework for Water Planning and Management*.
- Existing data was utilised to inform the risk assessment and, where there were information gaps, the expert opinion of DEWNR staff was sought, with appropriate caveats. Opportunities to improve the risk assessments over time were identified and noted where appropriate for future reference.
- The set of risk criteria were based on the key government and community water planning objectives of balancing productive, environmental and social needs and are outlined in Table 1:

Table 1: Risk assessment criteria

Risk criteria	Details
Resource condition	This risk assessment considered consequences affecting environmental and beneficial use values
Social and economic factors	This risk assessment used volumes of water used for each main category of use e.g. usage volumes for irrigation, industrial, mining. Public water supply was used as a proxy for social values (see Annex 2 for further details)
Effectiveness of current controls	This was an assessment of the effectiveness of the current controls in each water resources area and the current level of implementation of the controls (if at all)
Financial risks	This was an assessment of potential loss of income to NRM boards and DEWNR and/or loss of investment from significantly delaying work
Reputational risks	This was an assessment of the 'political' consequences from postponing work and included intergovernmental obligations

- With the exception of the resource condition assessment, the risk assessment for non-prescribed areas mainly consisted of qualitative assessments and expert views only, given the absence of quantitative information.
- The assessment of the risk criteria for economic factors was based on the volume of water allocated by water use category. Economic categories were taken to be irrigation, industrial, mining, plus forestry in the Lower Limestone Coast Prescribed Wells Area and stock water in the Far North Wells Prescribed Wells Area. The use of water for town water supply was used as a proxy for social value.

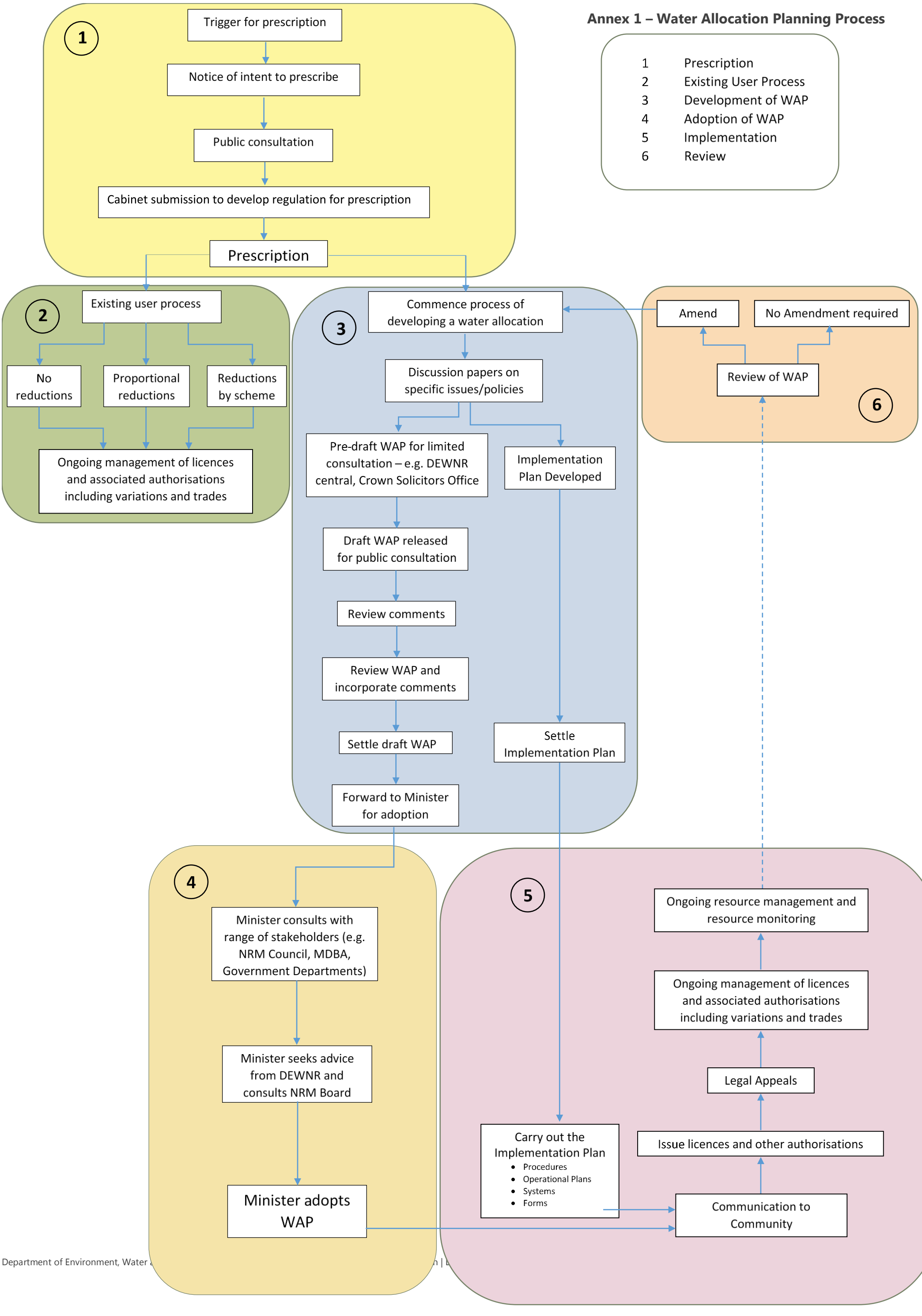
- This approach was used because of the availability of data to compare all the prescribed resources on a consistent basis. No attempt was made to monetise the value of water for economic use, nor were intrinsic values accounted for in the assessment of social value. Also the assessment did not account for how water is used for irrigated agriculture i.e. on what crop the water is used. Annex 2 shows a visual representation of allocation volume and usage category for each prescribed water resource in the state.
- The Work Plan recognises that a number of tasks are already underway or committed to and that many of the state's most important resources already have management controls in place. A summary table of the proposed treatments for the highest ranked work priorities is attached at Annex 3.

Review of the Work Plan

- The Work Plan will be maintained and reviewed regularly using an adaptive approach so that there is flexibility to reprioritise work based on new information or opportunities in the future. Opportunities to strengthen the risk assessment and in particular the socio-economic assessment will be pursued.

Annex 1 – Water Allocation Planning Process

1 Prescription
2 Existing User Process
3 Development of WAP
4 Adoption of WAP
5 Implementation
6 Review



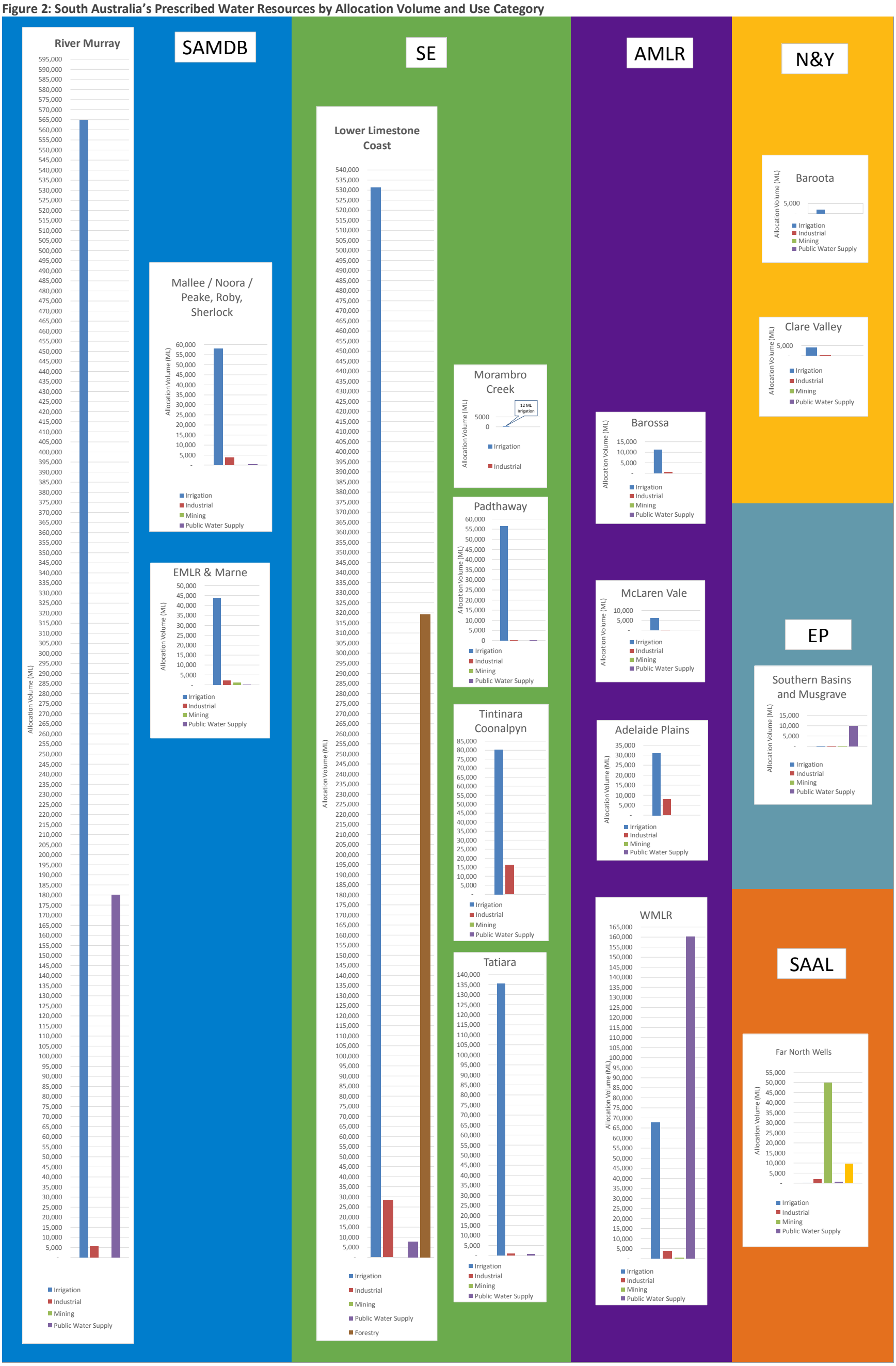
Annex 2 – Social and economic factors

The approach to base the economic risk assessment on the volume of water allocated by water use category was used because of the availability of data to compare all the prescribed resources on a consistent basis. No attempt was made to monetise the value of water for economic use, nor were intrinsic values accounted for in the assessment of social value. Also the assessment did not account for how water is used for irrigated agriculture i.e. on what crop the water is used. Figure 2 shows a visual representation of allocation volume and usage category for each prescribed water resource.

The information available to assess social and economic factors was a combination of qualitative and quantitative information, sourced mainly from within DEWNR. Data sources are outlined in Table 2.

DEWNR will work with stakeholders to assess how the social and economic assessment could be strengthened in the future and this will be incorporated into future reviews of the Five Year Forward Work Plan.

Figure 2: South Australia's Prescribed Water Resources by Allocation Volume and Use Category



Notes:

- Data provided by DEWNR.
- The categories used are irrigation, industrial, mining and public water supply. In Far North Well stock is also graphed and in Lower Limestone Coast forestry is graphed.
- Licensed uses that are clearly outside of these categories e.g. recreational, special purpose environmental allocations have been excluded as they are generally minor uses and have not been consistently regulated and recorded across resources.
- Stock and/or domestic has not been graphed, except for Far North Wells because in most areas this is not a licensable use
- The graphing of "industrial" also includes Commercial, Intensive Animal Keeping, Intensive Farming, Aquaculture, Industrial - Dairy, Pulp & Paper Mill
- 'Delivery Supplement' and 'Specialised Production - Frost' have been included in irrigation.
- Baroota figure based on an earlier data extract and has all been attributed to irrigation
- All of the 'Taking' allocations in McLaren Vale have been attributed to irrigation.
- 'Specialised Production' where there is no indication whether it is irrigation or industrial has been split in proportion to the volume already allocated between irrigation and industrial.
- To avoid double counting, all recharge and rollover allocations have been excluded.
- In a number of resources, volumetric conversion has not yet been completed. In those zones where the total area not converted is minor (e.g. Barossa - 23 ha), the area based allocations have been ignored. In the Lower Limestone Coast the figures presented in the current water allocation plan have been used.
- For Morambro Creek, licences have been issued in terms of:' volume',' flow rate' and 'percentage share of VLA'. Only volumetric allocations have been graphed.
- The mining figure for the Far North Wells does include co-produced water because it is a necessary consequence of the enterprise. This is for the petroleum industry where a volume of 60ML/d is set aside for its water needs including co-produced water in the Far North Water Allocation Plan.
- The mining figure for Far North Wells also includes 42 ML/Day authorised under the Roxby Downs Indenture.
- The Adelaide Plains data is a combination of data from WILMA for Northern Adelaide Plains, a spreadsheet of licence applications for Central Adelaide Groundwater Area and the identified Sustainable Extraction Limit for Kangaroo Creek.
- For Central Adelaide Groundwater Area the categories of Garden, Lawn, Turf and Recreational Turf have not been applied consistently during data entry. For the purpose of this project they are assumed to all be recreational and therefore not included, although it is recognised that these categories include some water used to commercially produce turf for landscaping.
- The irrigation figures for Eastern Mount Lofty Ranges & Western Mount Lofty Ranges include water licensed for recreational use.

Annex 3 – Prioritising water resource management tasks

Table 3 outlines the proposed treatments for the highest ranked work priorities, as well as commitments under the Murray-Darling Basin Plan. The treatments are in accordance with the NRM boards' plans and acknowledge the stage each water resource area is at in the water planning lifecycle. The size of the task is not based on a detailed assessment of the resources required but reflects the complexity of the tasks and the range of expertise required to deliver them.

The detailed internal work related to this table aims to ensure that priority tasks can be efficiently delivered through the cycle of review, development and implementation of a plan within the current capacity of the Department (the 2014/15 budget).

Table 3: Suggested treatments for priority statewide work

Area (NRM region)	Work priority	Scale of work	Comments	Suggested treatment
Southern Basins & Musgrave (Eyre Peninsula)	**High**	**Medium**	The EP NRM Board committed to the preparation of a new WAP encompassing the Southern Basins and Musgrave Prescribed Wells Areas in 2010. The new draft WAP is nearing completion for public consultation in 2014/15, following significant agency-wide consultation, research, investigation and policy development.	Complete preparation of draft WAP for public consultation in 2014/15 and then prepare the WAP for the Minister's consideration as a statewide priority. Undertake implementation planning prior to adoption of the WAP.
Lower Limestone Coast (South East)	**High**	**Major**	These three strategically important WAPs were adopted in late 2013. They are currently at various stages of implementation planning.	Implement the Lower Limestone, Western Mount Lofty Ranges and Eastern Mount Lofty Ranges WAPs from 2014/15 onwards as a statewide priority.
Western Mount Lofty Ranges (Adelaide & Mount Lofty Ranges)				
Eastern Mount Lofty Ranges (SA Murray-Darling Basin)				

Area (NRM region)	Work priority	Scale of work	Comments	Suggested treatment
Anangu Pitjantjatjara Yankunytjatjara (APY) Lands (Alinytjara Wilurara)	**High**	**Minor**	The AW NRM Board is focusing on implementing the new water affecting activity policies contained in the AW Regional NRM Plan, which was amended in late 2013.	Continue implementation of the water management actions contained in the AW Regional NRM Plan.
Yalata and Maralinga (Alinytjara Wilurara)				
Cooper Creek (SA Arid Lands)	**High**	**Medium**	The SAAL NRM Board is developing a new NRM plan, which will incorporate specific water affecting activities for Cooper Creek, Western Rivers and Georgina Diamantina as well as the North East Pastoral region, which forms part of the SA Murray region Water Resource Plan area under the Basin Plan.	Commence development of the new SAAL Regional NRM plan in the last quarter of 2014/15
Lake Eyre Basin Western Rivers & other non-prescribed water resources (SA Arid Lands)				
South East regional surface water (including drainage system) (South East)	**High**	**Medium**	To help better control the management of the resource, the SE NRM region is proposing the development of a South East Drainage and Wetlands Strategy, which will sit under the SE Regional NRM Plan in its planning hierarchy.	Continue technical work in preparation for the development of the proposed South East Drainage and Wetlands Strategy in 2014/15. Aim to release a draft Strategy in 2015/16.

Area (NRM region)	Work priority	Scale of work	Comments	Suggested treatment
River Murray (4th generation) (SA Murray-Darling Basin)	**Medium**	**Major**	A fourth generation River Murray WAP will need to be prepared for Basin Plan accreditation by 30 June 2019.	Review third generation WAP for Basin Plan compliance in 2015/16.
Eastern Mount Lofty Ranges (2nd generation) / Marne Saunders (SA Murray-Darling Basin)	**Medium**	**Medium**	The *Water Act 2007* (Cth) requires that the Eastern Mount Lofty Ranges water resource plan be accredited by 30 June 2019. This plan will cover the groundwater and surface water of the areas covered by the Eastern Mount Lofty Ranges WAP and the Marne Saunders WAP.	Review existing WAPs for Basin Plan compliance in 2016/17
Adelaide Plains (Adelaide & Mount Lofty Ranges)	**Medium**	**Major**	The AMLR NRM Board committed to the preparation of a new WAP in 2009 (combining the existing Northern Adelaide Plains WAP with a new WAP for Central Adelaide and Dry Creek).	Complete existing user process for Kangaroo Flat by June 2015. Complete existing user process for Central Adelaide in 2015/16. Prepare draft WAP to align with timing of existing user process. Commence reissue of Northern Adelaide licences in 2017/18.
Barossa (Adelaide & Mount Lofty Ranges)	**Medium**	**Medium**	In November 2014 the AMLR NRM Board resolved to amend the Barossa WAP based on the findings of the WAP review.	WAP development in 2015/16 and 2016/17, aiming for consultation in late 2016 and adoption of plan in 2017. Reissue of licences in 2017/18.
River Murray (3rd generation) (SA	**Medium**	**Major**	The new draft WAP is currently out for public consultation until 27 February 2015.	Finalise preparation of WAP for the Minister's consideration in 2015.

Area (NRM region)	Work priority	Scale of work	Comments	Suggested treatment
Murray-Darling Basin)				Commence reissue of licences in late 2015/early 2016.
Kangaroo Island Middle River (Kangaroo Island)	**Medium**	**Minor**	The KI NRM Board is currently in the process of updating its regional NRM plan, which will include the refinement of the Water Use Limits (WUL) based on new KI specific data.	Complete KI Regional NRM Plan in the period 2015–16.
Kangaroo Island Eastern, Northern & Western Rivers (Kangaroo Island)				
Far North (SA Arid Lands)	**Medium**	**Medium / Major** (depending on outcomes of WAP reviews)	In August 2012 the SAAL NRM Board agreed to a rewrite of the Far North WAP.	Commence review of Far North WAP in 2014/15. Undertake further implementation planning for current WAP, following reissue of licences in 2013 and bore audit. Undertake synthesis and translation of existing knowledge to date and scoping and planning of projects to support water allocation plan development. Commence substantive analysis and investigation work for a revised Far North WAP in 2015/16 (linking to the work by the Great Artesian Basin Coordinating Committee). Prepare draft WAP in 2016/17. Statutory consultation on draft plan early 2017/18 and planned to finalise and adopt WAP in the first half of 2018. Reissue of licences to occur in 2018/19.

Area (NRM region)	Work priority	Scale of work	Comments	Suggested treatment
Padthaway (South East)	**Medium**	**Medium / Major** (depending on outcomes of WAP reviews)	The Padthaway WAP (adopted in 2009) and Tatiara WAP (adopted in 2010) were written on the five-year WAP review timeframe and do not contain principles that would allow any adjustments to be made to water allocations after five years.	Commence preparation for the review of the Tatiara WAP in 2015/16. Review Padthaway WAP in 2017/18.
Tatiara (South East)				
Penong, Port Kenny, Warramboo, Kielpa (Eyre Peninsula)	**Medium**	**Minor**	The EP NRM region has indicated that it does not intend to develop any new treatments for these areas in the next 1-2 years.	Review need for any new treatments in one year as part of annual review of Five–Year Forward Work Plan
Tod River (Eyre Peninsula)				
Mallee / Peake, Roby & Sherlock / Noora (SA Murray-Darling Basin)	**Low**	**Medium**	These three existing WAPs will require review, and if necessary, amendment, as they will form part of the SA Murray Region Water Resource Plan to be prepared for Basin Plan accreditation by 30 June 2017.	Complete high level analysis of gaps and risks to inform fit for purpose negotiations with MDBA in 2014/15. Prepare amended WAPs to be able to send to MDBA in April 2016.
SA Murray Region (SA Murray-Darling Basin, South East, SA Arid Lands)	**Low**	**Medium**	Work on regional NRM Plan policies will form part of the SA Murray Region Water Resource Plan to be prepared for Basin Plan accreditation by 30 June 2017.	Continue review (and potential amendment) of water affecting activities in the South East and SA Murray-Darling Basin regions in 2014/15 and beyond.

Government of South Australia
Department of Environment,
Water and Natural Resources