

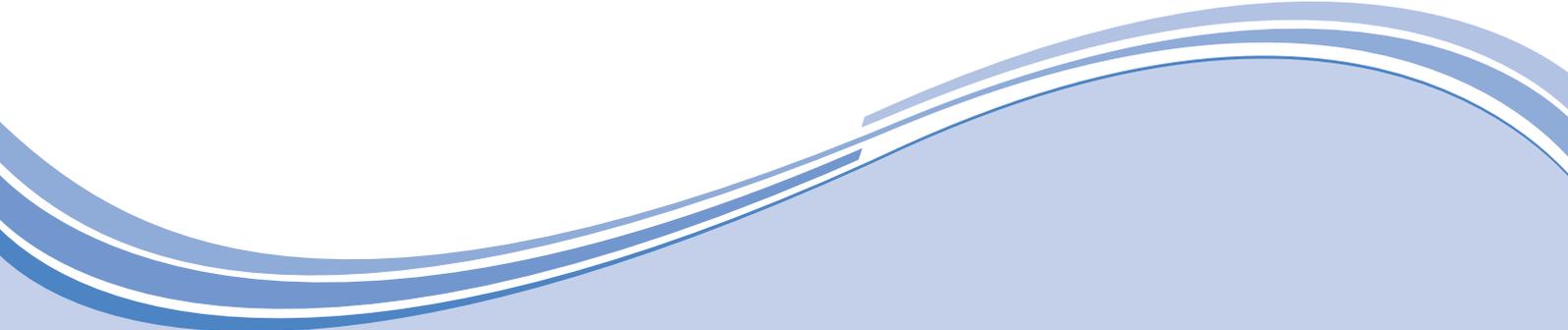


Australian Government



Proposed Basin Plan
Authority's views and consultation
on the matters raised by the
Murray–Darling Basin
Ministerial Council
— *Volume 2*

August 2012



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A report prepared under s. 43(11) of the *Water Act 2007* (Cwlth) — a document that outlines the views of the Murray–Darling Basin Authority on the matters raised by the Murray–Darling Basin Ministerial Council under s43A(4)(b), and which summarises submissions received in response to the consultations undertaken by the Murray–Darling Basin Authority in relation to the matters raised by the Murray–Darling Basin Ministerial Council, how those submissions were addressed by the Authority, and the extent to which consideration of those submissions has affected the version of the proposed Basin Plan and the views given to the members of the Murray–Darling Basin Ministerial Council.

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MATTERS SPECIFIED BY INDIVIDUAL MEMBERS OF THE MURRAY–DARLING BASIN MINISTERIAL COUNCIL

This volume considers the comments and matters of disagreement that have been specified by individual members of the Murray–Darling Basin Ministerial Council.

In many cases, Ministers have provided comprehensive supporting explanations for the matters raised by the Murray–Darling Basin Ministerial Council as a whole, or for their separate matters. To improve readability, not all of this information is repeated in this report.

ATTACHMENT B: AUSTRALIAN CAPITAL TERRITORY

This section considers the comments and matters specified by Mr Simon Corbell MLA, Minister for the Environment and Sustainable Development as the representative on the Murray–Darling Basin Ministerial Council for the Australian Capital Territory, which were set out in Attachment B of the notice from the Council.¹

MATTER

The proposed Basin Plan provided to the Ministerial Council for consideration and comment on 28 May 2012 set out significant steps to restore balance to the use of water within the Basin. That Plan however proposed real and damaging reductions in the ACT's rights to divert water for the National Capital and surrounding Queanbeyan region and its capacity to service the needs of a rapidly growing population. Those reductions would be supportable if:

- **the overall outcomes from the proposed plan are effective in returning water to environmental use and improving the environmental, social and economic sustainability of the Basin;**
- **the Plan takes appropriate notice of jurisdictions' actions to reduce their take from the system both directly and relative to the water raised within the jurisdiction; and**
- **the trading and administrative systems support efficient, transparent use of the market to facilitate consumptive water moving to its highest value allocation.**

AUTHORITY RESPONSE

The Basin Plan water trading rules will improve the ability of water to move to its highest value use.

MATTER

If the Authority changes the proposed Basin Plan in response to jurisdictions' comments then the ACT proposes the whole of the Plan needs to be transparently reviewed to ensure equity and effectiveness across jurisdictions in returning water to the environment, as well as maximising the environmental outcomes of the Basin Plan.

¹ Notice from the Australian Capital Territory: Attachment B available on the MDBA website at http://download.mdba.gov.au/revised-BP/AttachmentB_ACT_comments.pdf

AUTHORITY RESPONSE

The Authority notes that Council will have the opportunity to review any changes to the proposed Basin Plan and provide their views, if any, to the Minister (as in s43A(7) of the Water Act). In keeping with the adaptive management approach of the Basin Plan, the Authority may conduct research and investigations into aspects of the work underpinning SDLs or other aspects of the Basin Plan. This work may inform future reviews of the Basin Plan which may lead to changes in the SDLs; apportionment of the reduction target between Basin states or SDL resource units; or any other matter addressed in the Basin Plan. The Authority will also conduct a ten-yearly review of the Basin Plan and evaluate the effectiveness of the Plan against the objectives and outcomes set out in Chapters 5, 7 and 8 and by reference to the matters listed in Schedule 11, in accordance with section 12.05(1)(c) of the Plan.

MATTER

In circumstances where the Authority is going to revise:

- **Sustainable Diversion Limits (SDL);**
- **effective use of Commonwealth Environmental Water Holder entitlements to minimise SDL reductions and maximise environmental outcomes;**
- **operational practices;**
- **infrastructure upgrades; and**
- **revision of constraints;**

then the provision of water rights in the ACT as a jurisdiction driven by urban water use based on population and future population growth rather than an agricultural-based water using jurisdiction, needs to be revised. Central to this, is the history of the ACT reducing its water diversions by 50 per cent on a per capita basis since the mid-1990s and having a jurisdictional commitment to a 25 per cent efficiency factor to 2023 and beyond. This ongoing efficiency dividend has already been incorporated into the ACT's Cap on extractions. The reduced water diversions based on these demand reductions have flowed to jurisdictions downstream where it has been melded with the existing over-allocations, counter the environmental objectives now being sought.

AUTHORITY RESPONSE

This issue was raised by the ACT Government in the submission it made to the Authority during the public consultation period. The Authority considered this matter at the time and provided a response in its report *Proposed Basin Plan — consultation report (May 2012)* at issue 26.^[1]

Treatment to cater for anticipated population growth for the ACT would be inconsistent with the approach taken to set SDLs in all other water resource plan areas across the Basin. SDLs are set at a level that reflects an environmentally sustainable level of take and all urban water supplies from the Basin's water resources are covered by SDLs. Allowing for growth over time would undermine the

^[1] *Proposed Basin Plan — consultation report (May 2012)* available on the MDBA website at <http://www.mdba.gov.au/proposed-basin-plan/consultation-report>

Authority's assessments of environmental water requirements and the associated environmental outcomes.

As urban centres, including Canberra, grow they will need to consider a range of options to augment their supplies while recognising that SDLs constrain any future growth in the overall level of water use from the Basin's water resources.

MATTER

In regard to further work to be undertaken by the Authority, particularly with regard to the issue of apportionment, the ACT calls upon the Authority to work cooperatively with jurisdictions to resolve its advice to the Council for consideration of adoption by the Council Chair in the final Basin Plan in accordance with the requirements of the Water Act 2007.

AUTHORITY RESPONSE

The Authority agrees that working co-operatively and consulting with jurisdictions is important. As outlined in the response to the matters specified by Council as a whole at matter 10, the Authority will consult and collaborate with Basin states (and others) with the goal of achieving an agreed consensus position, but where this is not feasible the Authority is responsible for making a decision on priorities in the national interest. With regard to apportionment, this issue has been responded to in the matters specified by Council as a whole at matter 3.

ATTACHMENT C: COMMONWEALTH

This section considers the comments and matters specified by The Hon Tony Burke MP, Minister for Sustainability, Environment, Water, Population and Communities as the representative on the Murray–Darling Basin Ministerial Council for the Australian Government (the Commonwealth), which were set out in Attachment C of the notice from the Council.²

1. Water Resource Plan (WRP) requirements

MATTER

The Water Resource Plan (WRP) requirements in Chapter 9 of the proposed Basin Plan, together with section 6.15, should be clarified to ensure that the implementation of WRPs have the minimum possible impact on the reliability of an entitlement.

In particular Chapter 9 should require that WRPs must, to the extent possible, meet each requirement of the Chapter in a way that will not result in a change in reliability of water allocations in relation to the water resources of a WRP area, or, if that is not possible, to meet each requirement in a way that will result in the minimum feasible impact on reliability. Section 6.15 should be similarly clarified. This continues the existing approach to water planning.

AUTHORITY RESPONSE

The Authority has considered this proposal however it has not made any change to the Basin Plan in either Chapter 6 or Chapter 9.

The Authority has previously considered this matter during the development of the revised draft Basin Plan and set out its view in its report *Proposed Basin Plan — consultation report (May 2012)*³ at issue 56. Further, the Authority has received some feedback from Basin state governments that they did not support the inclusion of such a provision in Chapter 9.

It is the intention of the Authority that the provisions of Chapter 9 be such that they are able to be met by a Basin state without requiring a state to make changes to the reliability of entitlements. The Authority notes that any provision along the lines of that proposed by the Commonwealth would require additional information about the nature and extent of any such impacts in order for an informed consultation process to occur with affected entitlement holders.

² Notice from the Commonwealth: Attachment C available on the MDBA website at http://download.mdba.gov.au/revised-BP/AttachmentC_Commonwealth_comments.pdf

³ *Proposed Basin Plan — consultation report (May 2012)*, available on the MDBA website at <http://www.mdba.gov.au/proposed-basin-plan/consultation-report>

2. Trading rules

MATTER

In relation to the provisions relating to water trading in the proposed Basin Plan the Ministerial Council has suggested, as part of the consensus comments under s43A(4), that the water trading rules in Chapter 11 of the Basin Plan be clarified to ensure that they do not impose unintended restrictions on Commonwealth and Basin States trading activity, particularly those intended to deliver the Commonwealth's 'bridging the gap' commitment or trading of environmental water.

Clarification is required as to which types of trading activity are restricted under the insider trading provisions, the point in time at which the restriction applies and to specify that past trading activities are not covered by the provisions.

The Commonwealth also highlights two further matters of detail that require clarification in relation to the trade of environmental water; the inclusion of transfers of environmental water under the definition of trade, and the environmental water shepherding arrangements.

Transfers of environmental water

To avoid adverse effects on environmental water use where, typically, the Commonwealth Environmental Water Holder transfers water onto a state environmental manager's account for delivery, it should be made clear that these types of transfers are not captured by the insider trading provisions. This is because there is likely to be no impact on the market from this type of transfer.

Environmental water shepherding arrangements

New South Wales is working with the Commonwealth to establish environmental water shepherding arrangements. The water shepherding arrangements will be a necessary tool for the Commonwealth to achieve Basin-wide environmental watering outcomes. The water trading rules will need to be compatible with these arrangements.

In particular, the water trade provisions should not compromise the Commonwealth's capacity to negotiate water shepherding arrangements with New South Wales.

AUTHORITY RESPONSE

The Authority agrees that further clarity would assist in ensuring that unintended restrictions on trade are not imposed in the matters specified by Council as a whole at matter6.

Clarification of sections 11.07 and 11.08 to ensure the provisions are clear that the trade of water access rights should be free of restrictions. This clarification should assist future arrangements for environmental water shepherding.

ATTACHMENT D: NEW SOUTH WALES

This section considers the comments and matters specified by The Hon Katrina Hodgkinson MP, Minister for Primary Industries and Minister for Small Business as the representative on the Murray–Darling Basin Ministerial Council for New South Wales (NSW), which were set out in Attachment D of the notice from the Council.⁴

1. Water recovery volume

MATTER

NSW still has serious concerns regarding the scientific basis of the SDLs in the revised draft Plan. NSW requires that the MDBA provide a detailed public report to accompany the Basin Plan to validate the methodology and the outcomes of the proposed SDLs.

NSW notes that the use of the 2009 baseline masks the water recovery efforts that have been undertaken in the past decade. The current proposed SDL reduction of 2750 GL, plus water recovered prior to 2009 through State planning and water recovery programs, takes the environmental water recovery closer to 4000 GL and this has not been properly communicated.

AUTHORITY RESPONSE

The Authority considers it has struck the appropriate balance with regard to optimising the environmental, social and economic outcomes, and that the current science base is robust. A CSIRO–led science review⁵ concluded that the Authority's methods are sufficiently robust, and that the current knowledge base and application of that knowledge by the Authority in developing the proposed Basin Plan, is sufficient to provide a suitable starting point for an adaptive management process.

The Authority accepts that, by definition, any water recovery prior to 2009 is represented in the 2009 baseline. This has been communicated in the explanatory material published by the Authority, and is not an issue requiring amendment to the Plan.

The methodology and the outcomes of the proposed SDLs are set out in the following reports: *The proposed 'environmentally sustainable level of take' for surface water of the Murray–Darling Basin: Methods and outcomes*⁶; and *Hydrologic modelling to inform the proposed Basin Plan - methods and results*⁷. In addition, there are a number of reports that detail the Authority's assessments of

⁴ Notice from New South Wales: Attachment D available on the MDBA website at http://download.mdba.gov.au/revised-BP/AttachmentD_NSW_comments.pdf

⁵ *Science Review of the estimation of an Environmentally Sustainable Level of Take for the Murray–Darling Basin* available on the MDBA website at http://download.mdba.gov.au/proposed/CSIRO_ESLT_Science_Review.pdf

⁶ *The proposed "environmentally sustainable level of take" for surface water of the Murray–Darling Basin: Method and Outcomes* available on the MDBA website at http://download.mdba.gov.au/proposed/ESLT_MDBA_report.pdf

⁷ *Hydrologic modelling to inform the proposed Basin Plan: Methods and results* available on the MDBA website at http://download.mdba.gov.au/proposed/Hydro_Modelling_Report.pdf

environmental water requirements at sites throughout the Basin. All of this information is available on the Authority's website.

The Authority believes that existing environmental reforms have been taken into account and built upon in the Basin Plan. The Authority has recognised the past efforts by Basin governments and communities to restore the health of rivers, limit water use and improve water recovery. Those efforts include 823 GL/y on a long-term average basis that was returned to the Basin's environment before 2009, which are included in the 2009 baseline. The acknowledgement of this effort is further captured under issue 21 of the *Proposed Basin Plan — consultation report (May 2012)*.⁸

However, the Authority will continue to explore matters such as new knowledge or science that may lead to a change to SDLs. The Water Act has provisions that allow for revision and amendments of the Basin Plan.

Further discussion on the baseline model scenario can be found under issue 126 of the *Proposed Basin Plan — consultation report (May 2012)*.⁹ The science related to the SDL is outlined in issue 20 and 118 of the same report.

2. *SDL adjustment mechanism*

MATTER

NSW strongly supports the investigation of an SDL adjustment mechanism to allow for the outcomes of environmental works and measures and rules review to offset the SDL reductions.

NSW further supports an SDL adjustment range that provides for limit of a maximum of 2100 GL in held environmental water by the Commonwealth pending the outcome of future SDL adjustments and other proposed work program reviews in 2016.

NSW requires that The Living Murray environmental works and measures should be incorporated into the SDL adjustment mechanism to potentially contribute to an offset reduction.

The benchmark modelling run for the SDL adjustment mechanism should be as documented in the MDBA's February 2012 report "Hydrologic modelling to inform the Proposed Basin Plan." Where any proposed modelling changes have the potential to affect the benchmark modelling run, these should be overseen by a multi-jurisdictional working group established under the auspices of the Basin Officials Committee.

The baseline for environmental and socio-economic factors is critical to the successful application of the SDL adjustment mechanism and needs to be agreed with States.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 1, insofar as NSW has expressed support for the consensus view. The response to matter 1 also provides the Authority's views in relation to baseline and benchmark modelling and the treatment of works

⁸ *Proposed Basin Plan — A revised draft (May 2012)* available on the MDBA website at <http://www.mdba.gov.au/proposed-basin-plan/consultation-report>

⁹ *Proposed Basin Plan — A revised draft (May 2012)* available on the MDBA website at <http://www.mdba.gov.au/proposed-basin-plan/consultation-report>

completed under The Living Murray program. Changes made to the proposed Basin Plan in chapter 6 regarding the SDL adjustment provide the main elements of the mechanism.

The Authority agrees that discussions regarding the benchmark model scenario for the SDL Adjustment Mechanism should be done in association with the Basin Officials Committee .

3. Apportionment

MATTER

NSW requires apportionment for the Southern Basin shared downstream reduction to be included in the Basin Plan and at a minimum a process to review the shared northern reduction and its apportionment for the northern Basin by 2015/16.

The principles for apportionment of the downstream shared reduction components in the northern and southern basin must be consistent to enable equitable apportionment between States across the Basin. NSW requires that the principles for water apportionment between states be included in the Basin Plan, and that apportionment be based on State water shares.

This is necessary irrespective of the Commonwealth's intent to focus its water recovery program in the time period prior to 2016 on meeting in-valley requirements in the northern basin and for maximum held environmental water of 2,100 GLs by 2016.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 2, insofar as NSW has expressed support for the consensus view.

In addition, the Authority notes that NSW expresses support for the apportionment of the Southern Basin shared downstream reduction, while also supporting apportionment based on state water shares.

4. NSW groundwater SDLs

MATTER

The SDLs for some aquifers in NSW have been set by the MDBA in the revised draft Plan without reference to the information, modelling and scientific expertise held by NSW Office of Water's hydrogeologists and without recognising the precautionary and conservative methods already adopted by NSW in managing these aquifers.

The NSW approach to setting extraction limits uses best available data and science to determine recharge, a conservative allocation of a proportion of the recharge only and an application of a reduction factor to further apply the precautionary principle.

The SDL reductions in the revised draft plan in six aquifers will not only restrict use of an already very limited portion of brackish or saline water with nil or limited connection to surface water, in one aquifer it will potentially limit the operation of the jointly funded Salt Interception Scheme on the upper Darling River near Louth which is intended to remove saline groundwater entering the Darling River and achieve an estimated Basin surface water salinity benefit of 3.5 EC at Morgan.

NSW requires that the Plan be amended to include the following recommended Groundwater SDLs:

| Groundwater source name | Basin Plan SDL area ID | Current Draft Basin Plan SDLs (May 2012) GL/y | Recommended SDLs GL/y |
|--|------------------------|---|--|
| Western Porous Rock | 22 | 116.6 | 225.9 |
| Lachlan Fold Belt (all catchments) | 30, 31, 32, 33 and 34 | 259.0 | 608.75 |
| Eastern Porous Rock (all areas) | 62,63, 64 | 127.68 | 260.33 + 164.60 (one-off access to storage consistent with NSW buried aquifer policy) |
| New England Fold Belt (all catchments) | 50, 52 | 54 | 138 |
| Adelaide Fold Belt | 19 | 4.43 | 15.15 |
| Upper Darling Alluvium | 55 | 6.59 | 9.6 |

AUTHORITY RESPONSE

After considering the additional information and comments provided by NSW to support their requests, at the 20 July 2012 groundwater workshop, the Authority is not proposing at this time, to revise the groundwater SDLs as requested by NSW. This decision was taken after considering the following:

- the uncertainty regarding the scientific evidence presented on groundwater recharge in the areas proposed;
- the potential risk of increased groundwater extraction on surface water resources; and
- the information provided by NSW and information previously used by the Authority.

Both the Authority and NSW State Government recognise that there are additional groundwater resources (unassigned groundwater) that can be used in NSW for productive purposes without impacting on other water users, surface water resources or the environment. The Authority is prepared to continue working with NSW and other Basin states to consider ways of revising groundwater SDLs in future if there is a case to do so, including:

- the potential incorporation of a groundwater SDL adjustment mechanism in the Basin Plan. This would be similar in concept to the surface water adjustment mechanism;
- the introduction of a trigger in areas with substantial unassigned groundwater that activates further investigations and studies of the area in question to improve the understanding of the SDL e.g. The investigations and studies could be commenced when 50% of the Basin Plan unassigned water allocation entitlement is released;

- how deep groundwater resources, such as the Gunnedah-Oxley Basin, are treated within the Basin Plan;
- developing a joint groundwater work program with experts from the Authority, each jurisdiction and the scientific community to address the priority areas identified in the s43A notice from Ministerial Council. The work program would also seek to address a number of other groundwater priorities:
 - improving the understanding and estimation of groundwater recharge across the Basin;
 - developing new and reviewing and improving existing, numerical groundwater models and their conceptualisation;
 - working with the Basin states to improve current or develop appropriate water resource planning rules and groundwater management arrangements;
 - consideration of steps to improve the management of saline groundwater resources; and
 - reviewing and potentially further developing the groundwater SDL risk assessment method.

Detailed response to NSW request

Western Porous Rock SDL resource unit

Although additional information regarding this area was received, the proposed change in the SDL was not supported. There is a high level of uncertainty in the recharge estimate for this aquifer. Until the level of uncertainty is reduced the Authority proposes not to make the change outlined by NSW above. The Authority is proposing an SDL of 116.6 GL/y for this system and has determined that the current level of use in this system is approximately 40 GL/y.

Lachlan Fold Belt SDL resource units

There was no additional information regarding this area received at the workshop on 20 July 2012. The proposed change in SDL was not supported, as the increase in groundwater extraction would result in an increase in the potential surface water impacts of up to 150 GL/y. This could be offset if there was a commensurate reduction in the surface water SDLs associated with the Lachlan Fold Belt: Murray, Murrumbidgee, Lachlan and Macquarie Rivers. The Authority is proposing an SDL of 259 GL/y for this system and has determined that the current level of use in this system is approximately 113 GL/y. The proposed merging of the 5 Lachlan Fold Belt SDL resource units into a single SDL resource unit was not supported as the proposed merger could result in an increase in the potential surface water impacts.

Eastern Porous Rock and Gunnedah-Oxley Basin

There was no additional information regarding this area received during the groundwater workshop in July 2012, although it is expected additional information will become available over the next 2 to 3 years. At the current time, the proposed change in SDL was not supported, as the increase in groundwater extraction would result in an increase in the potential surface water. The Authority is proposing an SDL of 132 GL/y for this system and has determined that the current of use in this system has been determined by the Authority to be 15 GL/y. The proposed merging of the two

Eastern Porous Rock SDL resource units with the Gunnedah Oxley Basin SDL resource unit and the creation of a separate SDL resource unit for the Sydney Basin part of the Basin has been revised and is included in Chapter 3 and Schedule 4 the proposed Basin Plan.

New England Fold Belt SDL resource units

There was no additional information regarding this area received at the workshop on 20 July 2012. The proposed change in SDL was not supported as the increase in groundwater extraction would result in an increase in the potential surface water impacts of up to 70 GL/y. This could be offset if potential groundwater users purchased an equivalent volume of surface water entitlement. The Authority is proposing an SDL of 55 GL/ y for this system and has determined that the current level of use in this system is approximately 25 GL/y. The proposed merging of the three New England Fold Belt SDL resource units: Border Rivers; Gwydir; and Namoi, into a single SDL resource unit has been revised and is included in Schedule 4 the proposed Basin Plan.

Adelaide Fold Belt SDL resource unit

There was no additional information regarding this area received during the groundwater workshop in July 2012. The proposed change in SDL was not supported, as technical advice suggested that the outcome of the requested revisions for the Adelaide Fold Belt and Western Porous Rock should be the same. Additionally, the requested SDL was a greater volume than the initial risk assessment of the total volume of groundwater available for productive purposes, referred to in the report titled *The proposed Groundwater Baseline and Sustainable Diversion Limits: Methods report*¹⁰. The Authority is proposing an SDL of 4 GL/ y for this system and has determined that the current level of use in this system is approximately 3 GL/y.

Upper Darling Alluvium SDL resource unit

NSW stated at the bi-lateral workshop that the current entitlement was not adequate for the potential future operation of the planned Salt Interception Scheme, to be built within the resource unit. NSW considers that the SDL should provide for the Salt Interception Scheme to use 6.5 GL/y, equivalent to its maximum pump capacity. The Authority's position is that there is no need to change the SDL as:

- the BDL, and SDL, include provision of around 3 GL for the Salt Interception Scheme reflecting the entitlement identified for the scheme;
- the SDL is specified as a long term average;
- groundwater use can, and is expected to, move above and below the specified SDL over time; and
- therefore, as long as the long term average groundwater use in an SDL resource unit does not exceed the SDL, there will be compliance with groundwater SDLs.

The Authority is proposing an SDL of 7 GL/ y for this system and has determined that the current level of use in this system is approximately 2 GL/y.

¹⁰ *The proposed Groundwater Baseline and Sustainable Diversion Limits: Methods report* available on the MDBA website at <http://download.mdba.gov.au/proposed/Proposed-BP-GW-BDL-SDL.pdf>

5. Requirements for determining actual take

MATTER

NSW requires that the determination of take provisions include estimations and the use of most appropriate and cost effective methodology.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 7, insofar as NSW has expressed support for the consensus view.

6. Consideration of interception

MATTER

NSW is concerned that the interception estimates are not well founded and in some localities make up a significant proportion of the Baseline Diversion Limits (BDLs).

The MDBA should commence a program of work to refine the estimation of BDLs, in particular interception estimates, in agreement with States. The work program can be timed for delivery to Council in 2016 with the SDL adjustment review and the work program report on the northern Basin.

AUTHORITY RESPONSE

The Authority intends to work closely with all Basin states to develop a work program that ensures BDLs represent best available estimates, and identify how these can be improved in future.

7. Commencement of SDLs

MATTER

NSW acknowledges that the Council prefers to set a timeframe of 2019 to commence enforcement of SDLs in order to provide some certainty for communities and ensure continuing progress towards meeting environmental needs. NSW also acknowledges that projects under contract but not necessarily completed will be allowed for to contribute to the SDLs.

However the NSW position remains that the water recovery to meet the SDLs should be allowed to operate over a longer time frame than 2019, particularly if, after the SDL adjustment process is finalised in 2016, there is still a substantial gap remaining that can only be bridged by water purchase. NSW position remains that water purchase to bridge the gap should be limited to 3 percent of BDL per water source per 10 year period.

NSW Water Resource Plans cannot be finalised for any given area until the gap has been bridged in that area. NSW will require adequate time after the gap has been bridged to finalise and accredit a plan. This needs to be provided for in the Basin Plan.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 5, insofar as NSW has expressed support for the consensus view.

With regard to a longer timeframe than 2019 for the commencement of SDLs, the proposed Basin Plan has provided a reasonable amount of time for Basin governments and communities to transition to the implementation of SDL in mid 2019. The water recovery strategy is managed and funded through the Australian Government Department of Sustainability Environment Water Population and Communities, who is preparing the strategy in consultation with Basin state governments.

8. *No compulsory acquisition*

MATTER

NSW requires the Plan to include a specific statement that nothing in the Plan will require the compulsory acquisition of land, water licences or easements, regardless of the Commonwealth's responsibility to compensate water users.

AUTHORITY RESPONSE

In relation to water access rights, the Authority does not consider it necessary to include a specific statement regarding compulsory acquisition in the proposed Basin Plan. The Authority refers to section 255 of the Water Act 2007, which states that:

"To avoid doubt, nothing in: this Act; or the regulations; or any other instrument made under this Act; authorises or allows the Commonwealth, the Authority, the Commonwealth Environmental Water Holder or any other agency of the Commonwealth to compulsorily acquire a water access right or an interest in a water access right."

The Authority notes NSW's view on wider compulsory acquisition, however the Water Act only refers to water access rights. Prohibitions on compulsory acquisition of other forms of property, such as land or easements, are matters for Basin state governments.

9. *Enforcement of SDLS*

MATTER

NSW requires a provision ensuring that the States will not be required to enforce compliance with the Basin Plan if the Commonwealth has failed to bridge the gap by 2019.

AUTHORITY RESPONSE

The Authority noted this view and has amended a provision in Chapter 6 of the proposed Basin Plan (see section 6.26) to state that a Basin state is taken to have a reasonable excuse for non-compliance in circumstances beyond the state's control.

10. *Water Recovery Strategy principles*

MATTER

NSW acknowledges the work being undertaken by the Commonwealth to develop a water recovery strategy which is currently in draft form. NSW supports that the Water Recovery Strategy should be in the form of a flexible policy document. However NSW requires the water recovery principles outlined below to be included in the Basin Plan to provide clarity and transparency to all key stakeholders:

- a. **Consultation - The Commonwealth must consult with and gain approval of States in the development, implementation and periodic review of its water recovery strategy.**
- b. **Recovery through diverse mechanisms – The Water Recovery Strategy must include the full spectrum of water recovery mechanisms, with priority on mechanisms which meet environmental outcomes while having a neutral or positive social and economic impact, at regional and local scale and in both short to long term.**
- c. **Strategic purchase - Water recovered by licence purchase must be strategic. Strategic purchase is to be defined in the Plan as purchase programs agreed in consultation with each State.**
- d. **Measured recovery through purchase – Water recovery through entitlement licence purchase should be limited to no more than 3% BDL per valley per decade except where agreed by the relevant state.**
- e. **Progress - The Recovery Strategy must include regularly updated outline of water recovery achieved and anticipated which identified:**
 - i. **volume of water recovery for each area**
 - ii. **types of entitlement or recovery method for each area**
 - iii. **timeframe for recovery for each area, by recovery type**
- f. **Recover local gap first – Where a catchment area has a local and downstream recovery gap, any water recovered should first be attributed to local reductions until the SDL adjustment mechanism has been completed in 2016.**
- g. **Agreed timeframes – The Commonwealth must plan its water recovery, with input from Basin States, to take place over a practical timeframe that ensures the full range of measures for water recovery can be explored and for those communities with larger reductions time to adjust. This may require a longer time frame to bridge the gap than the Commonwealth’s preferred date of 30 June 2019 in some locations where there is a large gap to bridge or the water recovery program may take longer to realise savings.**
- h. **Social and economic impacts - The Commonwealth must link its water recovery strategy to a Commonwealth funded socio-economic adjustment package, which must outline its actions to provide structural adjustment assistance for Basin communities**

AUTHORITY RESPONSE

The Australian Government has committed to bridging the gap by 2019 through water-saving infrastructure and water purchases from willing sellers. The proposed Basin Plan was prepared based on this commitment. The Australian Government Department of Sustainability, Environment, Water, Population and Communities is preparing a water recovery strategy in consultation with Basin state governments.

As outlined in the response to the matters specified by Council as a whole at matter 5, the Authority has included a provision in Chapter 6 allowing states a ‘reasonable excuse’ for non-compliance with SDLs if the Commonwealth has not ‘bridged the gap’.

11. Delivery mechanisms

MATTER

NSW is aware that recent delivery of environmental water has had unintended third party impacts due to the flooding of private land and access to land. Regardless of responsibility to compensate for third party impacts, NSW seeks the Basin Plan to set in place mechanisms whereby third party impacts will be avoided from occurring to the greatest extent possible.

NSW requires that the Basin Plan include the requirement for the Basin Environmental Watering Plan to incorporate a delivery plan which specifically considers planning to avoid third party impacts.

AUTHORITY RESPONSE

The Authority acknowledges the importance of managing risks involved in environmental watering and has agreed to Council's recommendation to develop a constraints management strategy within 12 months of making the Basin Plan. The Strategy will include an assessment of environmental water delivery and potential impacts on third parties. This issue was also raised by Victoria, and the Authority intends taking it up in the context of the proposed constraints management strategy discussed in more detail in the matters specified by Council as a whole at matter 2.

12. Trading rules

MATTER

NSW is concerned that the proposed Basin Plan trading rules will not permit the implementation of water shepherding. Under the current Water Shepherding Memorandum of Understanding (MOU) between the Commonwealth and NSW governments, a framework is being developed to enable shepherding of Commonwealth's held environmental water to occur and this is being developed through water dealing rules. The draft Plan trading rules appear to prevent water shepherding.

To resolve these concerns NSW requires that the Basin Plan be amended so that the trading rules do not apply to water shepherding. This could be achieved through one or more of the following amendments:

- a. Amend definitions of trade and/or restrict - Amend definition of 'trade' and/or 'restrict' in cl 1.07 to specifically exclude water shepherding as defined in the MOU.**
- b. Amend chapter 11 – Amend chapter 11 to specifically provide that it does not apply to water shepherding as defined in the MOU. This could be achieved in a number of ways for example by having a general clause that stated that the chapter did not apply to water shepherding or including water shepherding as a permitted restriction under clause 11.18.**

AUTHORITY RESPONSE

The Authority has amended sections 11.07 and 11.08 of the proposed Basin Plan to ensure the provisions are clear that the trade of water access rights should be free of restrictions, not that water access rights themselves should be free of restrictions. This should assist future arrangements for environmental water shepherding. However, the Authority considers that a fundamental non-discrimination principle that prevents trade restrictions on the basis of the purpose for which the water will be used is an essential element of an efficient and effective water market. Therefore, the Authority does not agree that trading rules should not apply to water shepherding. Any future water shepherding arrangements will need to be consistent with the trading rules of Chapter 11.

13. Jurisdictional implementation obligations

MATTER

NSW has limited capacity to deliver on the wide range of implementation obligations placed on Basin States by the revised draft Plan. NSW notes that the proposed Basin Plan has yet to be supported by agreements between the Commonwealth and Basin States that set out the implementation activities for States, commencement dates for each activity, and a Commonwealth commitment to fund the activities.

NSW also considers that a wide range of the implementation obligations on Basin States in the revised draft Plan have been worded unclearly or may have adverse outcomes as currently drafted. NSW supports the development of an agreement between the MDBA and each Basin State regarding implementation obligations for those obligations which give rise to additional costs to States.

In addition, it is critical that the MDBA clarifies the implementation requirements for States before it finalises the Plan for return to the Ministerial Council for further consideration and comment. This review should ensure that all water management requirements in the Plan are appropriate to achieve defined, improved water management outcomes. Appendix E of the NSW Submission on the draft Murray Darling Basin Plan 13 April 2012 outlined numerous specific clauses for which the intent was unclear or which may have unintended or adverse outcomes if implemented as currently drafted.

To resolve these concerns NSW requires that:

- a. The Commonwealth must have in place before the commencement of the Basin Plan, an agreement with NSW for upfront funding of new or extended activities for NSW for the life of the Plan.
- b. The MDBA must review the detailed concerns raised by NSW regarding the meaning and application of specific implementation requirements before the Basin Plan is returned to Ministerial Council, and
- c. The Plan must require that the MDBA prepare guidelines for key implementation requirements in consultation with Basin States before those implementation requirements commence. Note that consultation with States should be meaningful and allow adequate timeframes for input and due consideration of State input. States must also have adequate opportunity to consider and negotiate the details of related funding agreements with the Commonwealth prior to commencement of implementation requirements.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 8, insofar as NSW has expressed support for the consensus view.

With respect to the additional matters raised by NSW, implementation obligations for Basin states in relation to Chapter 12 will be addressed through the Basin Plan Implementation Strategy and Chapter 12 guideline. These documents have been provided to Basin states as drafts for consultation.

Matters relating to Commonwealth funding to Basin states to support the implementation of the Basin Plan are outside of the scope of the Plan itself.

14. Water quality and salinity

MATTER

NSW requires that the Basin Plan make clear that the water quality targets are not mandatory and do not limit State water shares and water availability and reliability to water users. The Plan needs to fully define the 'have regard to' clauses, particularly with respect to water operational decisions.

NSW requests that the zone-based water quality targets in Schedule 9 for lakes and wetlands be removed. The variable nature of these water bodies and the impact of land management practices makes such blanket targets meaningless in terms of ecological processes. The targets for streams and rivers will contribute to the protection of the lakes and wetlands that are connected to those watercourses.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 9, insofar as NSW expressed support for the consensus view.

The Authority considers there is sufficient scope provided in the development of the water resource plans for states to use local scientific knowledge to set specific water quality targets for wetlands and lakes. The Authority will not further revise water quality targets as proposed by NSW before the first review of the water quality and salinity management plan, required under section 12.08 of the proposed Basin Plan.

15. Environmental Watering Plan

MATTER

NSW requires that the Environmental Watering Plan is prepared in a consultative manner with jurisdictions and communities and similarly that the Basin wide environmental Water strategy is consistent with valley based plans. The strategy will also need to be updated to reflect the operation of the SDL adjustment mechanism in 2015/16.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 10, insofar as NSW has expressed support for the consensus view.

16. Range of environmental assets

MATTER

NSW is concerned at the lack of consideration given to native fish, in particular threatened native fish species, populations and communities as assets with environmental water requirements. Much of the focus on environmental watering in reports released to date by the MDBA has been on floodplain and wetland assets with little or no consideration for recovery of threatened native fish. The 2008 SRA confirmed the poor condition of fish populations across the basin.

The annual and long-term Environmental Watering Plans developed under the Basin Plan should include a requirement for decisions on the delivery of environmental water to adequately consider the recovery of native fish.

The guidelines would require consideration on the use of held environmental water for maintenance of drought refugia, base and low flow management and restoration of natural spawning and movement cues to maintain aquatic ecosystem health.

AUTHORITY RESPONSE

The Authority considers that the requirements of native fish are appropriately addressed in the environmental watering plan. For example, the provisions for long-term watering plans and annual priorities will allow for the water requirements for native fish to be determined. Native fish are also recognised in the targets set out in Schedule 5. The management outcomes set out in the *Guidelines for the method to determine priorities for applying environmental water* are consistent with and facilitate the maintenance of drought refugia, base and low flow management and restoration of natural spawning and movement cues to maintain aquatic ecosystem health.

ATTACHMENT E: QUEENSLAND

This section considers the comments and matters specified by The Hon Andrew Cripps MP, Minister Natural Resources and Mines as the representative on the Murray–Darling Basin Ministerial Council for Queensland, which were set out in Attachment E of the notice from the Council.¹¹

Overall comments

The Honourable Andrew Cripps MP (Queensland) makes the following comments on disagreements with the revised draft Basin Plan and related issues, as an individual member of the Ministerial Council.

Queensland thanks the Murray–Darling Basin Authority (Authority) for allowing this further opportunity to provide comments on the revised draft of the Proposed Basin Plan.

However, the Queensland Government still has outstanding issues and is disappointed with this revised draft Basin Plan as it is not materially different from the original draft. The Basin Plan is not supported by the Queensland Government in its current form.

Even after participating in numerous lengthy discussions with the Commonwealth and the Authority over the past six weeks Queensland still feels that many of the Queensland Government's legitimate concerns have failed to be addressed and a number of the Queensland Government's questions remain unanswered.

Without confidence in the work produced by the Authority and the funding commitment of the Commonwealth Government, Queensland will find it very difficult to continue to support this process and must consider all options, including withdrawal of the 2008 referral of power to the Commonwealth.

Specific comments on the following aspects of the revised draft of the Proposed Basin Plan are given in more detail in the pro forma attached:

- 1. Surface water sustainable diversion limits (SDLs) for Queensland Murray–Darling Basin catchments**
- 2. Groundwater**
- 3. Review of SDLs in 2015 or its replacement with an SDL adjustment mechanism and a Commonwealth funded scientific work program to 2015, resulting in a report to Council**
- 4. Apportionment of the reduction target for the northern Basin zone of 143 gigalitres per year (GL)**
- 5. Liability for meeting SDLs**
- 6. Monitoring and metering.**

¹¹Notice from Queensland: Attachment E available on the MDBA website at http://download.mdba.gov.au/revised-BP/AttachmentE_QLD_comments.pdf

Queensland also has a number of comments and concerns with other issues that are related to the Basin Plan, which are discussed below:

MATTER

Water recovery and the water recovery strategy

Under no circumstance will Queensland support the compulsory acquisition of water entitlements. Water purchase must only occur with willing participants.

In regards to the northern Basin shared reduction amount of 143 gigalitres, the Water Recovery Strategy must recognise the effect of the proposed scientific work program to 2015, and be tailored so that it acknowledges the context and requirements of the northern Basin. It is essential that the Strategy frames an approach which minimises the social and economic impacts on vulnerable communities.

The Commonwealth has been slow to undertake its water recovery program in the Queensland section of the Basin. Queensland urges the Commonwealth to get on with the water recovery in the Queensland section of the Basin, including starting to 'bridge the gap' for groundwater in the Upper Condamine Alluvium and to consider overland flow entitlements in the Lower Balonne.

AUTHORITY RESPONSE

The Authority does not consider it necessary to include a specific statement regarding compulsory acquisition of water access rights in the proposed Basin Plan. The Authority refers to section 255 of the Water Act 2007, which states that:

"To avoid doubt, nothing in: this Act; or the regulations; or any other instrument made under this Act; authorises or allows the Commonwealth, the Authority, the Commonwealth Environmental Water Holder or any other agency of the Commonwealth to compulsorily acquire a water access right or an interest in a water access right."

The Australian Government has committed to 'bridging the gap' between current diversion limits and the new sustainable diversion limits to be set in the Basin Plan. Consequently, matters relating to the progress of water recovery in the Queensland section of the Basin are matters for the Department of Sustainability, Environment, Water, Population and Communities.

MATTER

Community structural adjustment

Water reductions in Queensland's Lower Balonne and Lower Border Rivers areas for local environmental water needs and water reductions in the northern Basin zone for downstream environmental water needs will have significant socioeconomic impacts on communities.

The Basin Plan does not contain any commitment to funding structural adjustment programs to support those communities impacted by the Basin Plan. Queensland considers it is necessary to have community adjustment measures in place to reduce the flow-on socioeconomic impacts to communities impacted by the Basin Plan.

Whilst the Commonwealth Water for the Future initiative provides investment in water recovery activities, broader socioeconomic impacts are likely to arise in vulnerable communities. Queensland insists that the Commonwealth Government commit to funding structural adjustment programs to support those communities impacted by the Basin Plan.

AUTHORITY RESPONSE

The Authority recognises that reductions in water availability as a result of the Basin Plan could have social and economic impacts in the Lower Balonne and Lower Border Rivers areas as well as other parts of the Northern Basin.

These impacts have been described in a number of studies commissioned by the Authority, including economic modelling by ABARES (2011)¹²; a study by Arche Consulting (2011¹³) on the local impacts of the Basin Plan; a report by Environmental Behaviour Consultants and others on the community impacts of the Basin Plan (EBC et al 2011a, 2011b)¹⁴; and assessments by ABARES of community vulnerability (ABARE-BRS 2010; ABARES unpub.)¹⁵.

Recognising the impacts of the Basin Plan, the Authority is proposing a transition period between 2012 and 2019 to implement the sustainable diversion limits proposed in the Plan. This will provide opportunities for further improvements in scientific knowledge to inform possible refinements to the Basin Plan and SDLs; for governments to take actions and examine potential policy opportunities that could mitigate the social and economic impacts of the Basin Plan; and for communities to plan for their own futures, and to successfully adjust to less water.

It is beyond the scope of the Basin Plan, or the remit of the Authority, to propose structural adjustment programs to support communities that might be affected by the Basin Plan. However, the Authority's view is that the Australian Government and Basin states support communities as the Basin Plan is implemented in a way that acknowledges the social and economic effects of water reforms and expands future economic development opportunities.

¹² ABARES (Australian Bureau of Agricultural and Resource Economics and Sciences), 2011. *Modelling the economic effects of the Murray-Darling Basin Plan*. Report prepared for the Murray-Darling Basin Authority. ABARES project: 4311 (November).

¹³ Arche Consulting, 2011. *Basin case studies: the socio-economic impacts of sustainable diversion limits and Water for the Future investments. An assessment at a local scale*. Reports for the Department of Sustainability, Environment, Water, Population and Communities and the Murray-Darling Basin Authority.

¹⁴ EBC, RMCG, MJA, EconSearch, Geoff McLeod, Tim Cummins, Guy Roth and David Cornish, 2011a. *Community impacts of the Guide to the proposed Murray-Darling Basin Plan*. Report for the Murray-Darling Basin Authority, Canberra.

EBC, RMCG, MJA, EconSearch, Geoff McLeod, Tim Cummins, Guy Roth and David Cornish, 2011b. *Community impacts of the Guide to the proposed Murray-Darling Basin Plan: Volume 8. Regional Analysis - Victoria*. Report for the Murray-Darling Basin Authority, Canberra.

¹⁵ ABARE-BRS (Australian Bureau of Agricultural and Resource Economics - Bureau of Rural Sciences), 2010. *Indicators of community vulnerability and adaptive capacity across the Murray–Darling Basin—a focus on irrigation in agriculture*. Report for the Murray-Darling Basin Authority, Canberra.

ABARES (Australian Bureau of Agricultural and Resource Economics and Sciences), unpublished. *Refining the indicators of community vulnerability and adaptive capacity across the Murray-Darling Basin - a focus on irrigation in agriculture*. Unpublished work for the Murray-Darling Basin Authority, Canberra.

MATTER

State implementation costs

State costs to implement the Basin Plan in Queensland must be reimbursed by the Commonwealth Government.

Queensland has provided an initial estimate of about \$3 million per year to be sought from the Commonwealth Government to cover the additional costs associated with implementing the Basin Plan in Queensland, although a final figure will need to be negotiated once the Basin Plan is finalised, associated guidelines are produced and the level of detail required of states to meet implementation requirements is clarified.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 8 insofar as Queensland has expressed support for the consensus view.

The proposed Basin Plan has been amended to require the Authority, within two years of the commencement of the Basin Plan, to use its best endeavours to enter into an agreement with each Basin state in relation to meeting the water resource plan requirements in Chapter 9.

MATTER

Transitional pathway to 2019

Queensland requires its water resource plans to be afforded the same status as Victorian plans, which are transitional until 2019, to ensure all water entitlement holders are eligible for compensation payments by the Commonwealth if their allocation or reliability is reduced by the Basin Plan.

Queensland requires transitional regulations to be made to provide necessary arrangements covered by both sections 241 and 250E of the Commonwealth Water Act.

Unless a regulation is also made to provide necessary arrangements covered by section 241, there is an unacceptable gap between 2014 and 2019 where Queensland entitlement holders are exposed to financial risk of Commonwealth failing to bridge the gap.

AUTHORITY RESPONSE

The Authority notes the concerns raised by Queensland and supports having appropriate flexibility in the arrangements for implementing the Basin Plan, particularly regarding the timing for developing water resource plans. However, the timing of when those water resource plans recognised as transitional or interim water resource plans expire is a matter for the Department of Sustainability, Environment, Water, Population and Communities to resolve as it may require new regulations as noted by Queensland, and it will be the Department's role to prepare these for consideration.

The Authority is committed to working co-operatively with the Department and all Basin states to ensure a smooth transition to 2019.

1. Surface water sustainable diversion limits(SDLs) for Queensland Murray–Darling Basin catchments

MATTER

Nature of the disagreement

Queensland disagrees with the proposed local reduction amounts specified in schedule 2 of the revised draft Basin Plan of:

100 gigalitres per annum (GL) for the Condamine–Balonne catchment, anticipated primarily from the Lower Balonne region and constituting a 23 per cent reduction in current authorised diversions in that region, for the local environmental water needs within the catchment.

There is also disagreement with the proposed shared reduction amount in section 6.05(3)(a) of the revised draft Basin Plan of:

143 GL per annum for the northern Basin zone, for the downstream environmental water needs in the Barwon-Darling.

Legal basis for comment

Under s 43A (4) a member of the Ministerial Council may disagree with the long term average sustainable diversion limits proposed in the proposed Basin Plan.

Issue and rationale

Queensland has strong concerns about methodological weaknesses in the underlying science which influences the proposed SDLs i.e. the environmental water requirements for Narran Lakes and the Lower Balonne floodplain and the method for determining key environmental functions (KEF). These uncertainties raise doubts about the size of and need for the shared reduction amount proposed for the northern Basin zone. This concern is supported by the CSIRO science review (2012) which notes that the method for determining KEFs is not fully defensible.

Proposed resolution

Queensland recommends that these water reductions should be examined by 2015 in the Murray-Darling Basin Authority's proposed scientific work program (as discussed below) to determine if the volumes proposed are scientifically justified or alternatively determine that the SDLs need revision.

AUTHORITY RESPONSE

The Authority supports the undertaking of a work program that will report on the basis of the northern shared SDL and its apportionment by the end of 2015. The Condamine-Balonne will form part of that assessment. Northern Basin states are encouraged to participate in the development and undertaking of the work program.

2. Groundwater

MATTER

Nature of the disagreement

The Queensland Government considers the proposed SDLs for a number of groundwater management units undermine the State's precautionary and highly sustainable approach to groundwater management. This is a particular concern for the 'western' groundwater resource units, but does not apply to the Upper Condamine Alluvium in which the proposed water reductions are in line with the Queensland Government's assessments.

With regard to the Bowen Basin groundwater resource unit (deep groundwater) below the Great Artesian Basin in Queensland, Queensland's position is that it should not be a Murray–Darling Basin water resource. In the absence of a regulation to clarify this, Queensland requests that the Authority sets a conservative SDL for this unit of 400GL.

Legal basis for comment

Under section 43A a member of the Ministerial Council may disagree with the long term average sustainable diversion limits proposed in the proposed Basin Plan and/or any aspect of the proposed Basin Plan on which the Commonwealth Minister may direct.

Issue and rationale

Queensland supports the establishment of groundwater extraction limits based on best available science. Queensland is concerned that the SDLs for some aquifers in Queensland have been set without adequate justification and without all available scientific knowledge. The revisions to the draft Basin Plan appear to have been made in an inconsistent manner without adequate reference to the information, modelling and scientific expertise within the states and the precautionary and conservative methods already adopted by the states in managing these aquifers.

Consequently, the Queensland Government is concerned that the Authority's identification of some unassigned groundwater volumes in the revised draft Basin Plan may still be set too high. This may give the incorrect impression that there is potential for increases in groundwater diversions. The Queensland Government does not consider it practical or suitable to make these quantities of groundwater available. Queensland also does not accept the proposed availability of additional groundwater (including coal seam gas production water) as offsetting the need for significant adjustment and support in communities affected by reductions in surface water allocations in Queensland.

In relation to the Bowen Basin groundwater SDL resource unit in Queensland, Queensland's position is that it is not a Murray-Darling Basin water resource as it is a deep aquifer underlying the Great Artesian Basin, which is also not a Murray-Darling Basin water resource under the provisions of the Water Act 2007 (Cth). While Queensland would prefer that a regulation be made to clarify this, Queensland understands this is unlikely to occur before the Basin Plan is finalised. As no SDL has been set for the Bowen Basin groundwater SDL resource unit in Queensland in the revised draft Basin Plan, Queensland understands the default SDL is zero GL. This is unacceptable to Queensland. In the absence of a regulation, Queensland requests the Authority to set a conservative SDL for this unit of 400GL.

Proposed resolution

Further work is needed to confirm or amend the 'western' groundwater SDLs following new science and knowledge gathering. The Queensland Government seeks to be involved in a proposed work program with experts from the Authority and each jurisdiction, taking an agreed collective approach, that invests in improving knowledge of all groundwater systems.

Queensland requests the Authority to set a conservative SDL for the Bowen Basin groundwater SDL of 400GL, until such time as the Commonwealth is able to make a regulation to exclude it from the Basin water resources.

AUTHORITY RESPONSE

The volumes of unassigned water that are proposed for Queensland are consistent with the Basin-wide risk assessment methodology used to determine the SDL for those areas with relatively low levels of information. The Authority acknowledges that the ability to use additional groundwater in areas with unassigned water may be limited by accessibility to the resource and by the quality of the groundwater.

The SDLs for deep groundwater in Queensland have been informed by a qualitative assessment of the risks associated with taking deep groundwater from the MDB in Queensland. At the bilateral groundwater workshop, there was agreement that there is limited scientific information available to set the SDLs for deep groundwater in Queensland. It was also discussed that there are four groundwater Basins within the Queensland Murray–Darling Basin and below the Great Artesian Basin:

1. Bowen
2. Galilee
3. Adavale
4. Drummond

While it is Queensland's preferred approach to have the four deep groundwater Basins excluded from MDB water resources by regulation, this has not yet occurred. Hence it is the Authority's view that the proposed SDL for deep groundwater in Queensland should cover the Queensland Murray–Darling Basin below the Great Artesian Basin (and thus cover the Bowen, Galilee, Adavale and Drummond Basins) and be set at 100 GL/y. This change is included in Chapter 3 and Schedule 4 the proposed Basin Plan.

In the absence of such a regulation, it is the Authority's view that the proposed SDL for deep groundwater in Queensland should cover the Bowen, Galilee, Adavale and Drummond Basins and be set at 100 GL/y. This change is included in Chapter 3 and Schedule 4 the proposed Basin Plan.

The Authority agrees with Queensland's comments regarding improving knowledge of all groundwater systems. It looks forward to developing a joint work program with experts from the Authority, each jurisdiction and the scientific community.

3. Review of SDLs in 2015 or its replacement with an SDL adjustment mechanism

MATTER

Nature of the disagreement

Queensland prefers the retention of the review of the SDLs in 2015 in the Basin Plan (section 6.07). However, if the review is removed from the Basin Plan, Queensland would support an alternative proposal of a Commonwealth funded scientific work program to 2015 in the northern Basin resulting in a report to Council, as well as a Basin-wide SDL adjustment mechanism.

Legal basis for comment

Under section 43A a member of the Ministerial Council may disagree on any aspect of the proposed Basin Plan on which the Commonwealth Minister may direct.

Issue and rationale

Queensland would support that the Basin Plan specifies a Commonwealth funded northern Basin work program, to 2015, examining the science underlying the SDLs. Queensland believes that this work program could be completed by 2015 provided there is adequate provision by the Commonwealth Government of funding and support for the process. The work program would result in a report to Council which may lead to a review of the SDLs and subsequent amendment to the Basin Plan.

In addition, Queensland supports a proposal to include a mechanism in the Basin Plan that adjusts SDLs on the basis of initiatives such as the removal of constraints on the use of environmental water, implementation of environmental works and measures that achieve given environmental outcomes with less water, improvements in the efficiency of river operations by changes to rules and procedures, and works that enable growth in water availability for environmental purposes without further adverse socio-economic impacts.

However, the Queensland Government considers that the acquisition of new science and knowledge provides the greatest opportunity for achieving better environmental outcomes in the northern Basin.

Proposed resolution

Queensland requests that the Commonwealth funded scientific work program and report thereon to Council should consist of scientific and hydrological studies to be undertaken of the northern Basin's largely unregulated streams to indicate the watering regimes and hence the sustainable diversion limits required for the local environmental water needs within the Queensland catchments and the Barwon-Darling. The study would also include options for apportionment of the shared reduction amount for the northern Basin zone.

Recovery of any additional amount, should it be required, must be implemented in a way that minimises social and economic impacts on regional communities and preferably not via buyback.

The Commonwealth Government must also action its long espoused intent to invest in localism, new knowledge generation and improved monitoring as a part of a scientific work program to 2015, and to increase community understanding of the Basin Plan.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 1, insofar as Queensland has expressed support for the consensus view.

In addition, the Authority notes that Queensland has expressed a preference for retaining the 2015 review. The Authority supports the undertaking of a work program that includes examining the basis of the northern Basin shared SDL reduction amount and its equitable apportionment, as proposed by Council. Such a body of work was anticipated under the intent of the 2015 Review. Northern Basin states are encouraged to participate in the development and undertaking of such a work program. To support this, the proposed Basin Plan includes provisions, consistent with an adaptive management approach, to allow new work to inform future reviews of the Basin Plan that may lead to changes in the SDLs, apportionment of the reduction target between Basin States or SDL resource units, or any other matter addressed in the Basin Plan.

The Australian Government has committed to including water-saving infrastructure in its water recovery efforts, as well as water purchases from voluntary sellers. The Authority understands that the Australian Government is preparing a water recovery strategy in consultation with Basin state governments.

4. Apportionment of the reduction target for the northern Basin

MATTER

Nature of the disagreement

In the case of the shared reduction amount for surface water in the northern Basin zone, Queensland considers this should be apportioned to the State and catchment level at an appropriate time after the Basin Plan is made and once the SDLs have been examined in the northern Basin work program.

Legal basis for comment

Under section 43A a member of the Ministerial Council may disagree on any aspect of the proposed Basin Plan on which the Commonwealth Minister may direct.

Issue and rationale

Queensland considers that in the case of the shared reduction amount for surface water in the northern Basin zone, this should be apportioned to the State and catchment level at an appropriate time in the future. Due to the zone being largely unregulated and consequent uncertainty about the watering regimes required to achieve desired environmental outcomes in the zone, Queensland considers that apportionment should not be included in the Plan when it is first made, because there is no adequate nor acceptable basis to apportion and further work is required as discussed in section 3 above.

While the Condamine-Balonne is included in the northern Basin zone in the draft Basin Plan, Queensland notes that the Authority's supporting document 'The Draft Basin Plan: Catchment by Catchment' states:

'Given that the flow from the Condamine–Balonne to the Barwon–Darling is affected by terminal lakes and large end-of-system wetlands (such as Narran Lakes), there are likely to be only limited

circumstances in which additional environmental water could be recovered to contribute to the shared downstream environmental water needs of the Barwon–Darling.’

This statement supports the need for further science to determine an acceptable basis to apportion the shared reduction amount in the northern Basin zone.

Proposed resolution

Queensland recommends an active program of work to be completed by the end of 2015, to establish the basis for the northern shared SDL and recommend options for its apportionment between New South Wales and Queensland. The work program should be funded by the Commonwealth Government and take into account hydrological, scientific, equity and community considerations. The work program should be undertaken by the MDBA, in consultation with the Commonwealth, New South Wales and Queensland and stakeholders including the Northern Basin Advisory Committee, resulting in a report to Council. If Council finds that this program of work reveals significant new knowledge about the scientific and hydrological basis for the northern shared SDL, the MDBA should undertake a review of the SDLs and recommended apportionment options, based on the issues that are raised. Pending the outcome of this review, Queensland understands the Commonwealth intends to arrange its water recovery in the northern zone so as to focus largely on ‘in-catchment’ requirements.

Following the provision of the report envisaged in the above paragraph, irrespective of whether Council calls for a review of the SDL, Council may advise the final apportionment between New South Wales and Queensland, and New South Wales and Queensland would then advise final within-catchment apportionments for the purposes of preparation of Water Resource Plans according to the requirements of the Basin Plan, which would incorporate these apportionments. The Water Recovery Strategy would then be revised accordingly.

AUTHORITY RESPONSE

The Authority supports the recommendation that the Authority provide a report on the basis of the northern shared SDL and its apportionment by the end of 2015. If required, a review of the northern shared SDL may follow, which in turn may lead to an amendment of the Plan to reflect any changes to SDLs. The Basin Plan will retain a northern zone target.

5. Liability for meeting SDLs

MATTER

Nature of the disagreement

Queensland seeks an insertion of a provision in the Basin Plan to confirm that Basin State compliance with the SDLs will not be required until the Commonwealth's water recovery program is completed. It is unacceptable that Basin states would be in breach of the Basin Plan if the Commonwealth had failed in its commitment to 'bridge the gap'.

Legal basis for comment

Under section 43A a member of the Ministerial Council may disagree on any aspect of the proposed Basin Plan on which the Commonwealth Minister may direct.

Issue and rationale

The Commonwealth Government has made a commitment to 'bridge the gap' by 2019 through its water recovery program but the Basin Plan is silent on what may happen if this does not occur.

Proposed resolution

Insertion of a provision in the Basin Plan that Basin States water resource plans will not be in breach of and/or overridden by the Basin Plan to the extent of any inconsistency, in the interim before the gap is bridged by the Commonwealth.

AUTHORITY RESPONSE

This issue has been responded to in the matter specified by Council as a whole at matter 5, insofar as Queensland has expressed support for the consensus views.

The Authority notes Queensland's view and a provision in Chapter 6 (see Section 6.26(4)) has been inserted into the Basin Plan to address it. The effect of the amendment is that a Basin state will have a reasonable excuse for exceeding the cumulative balance for an SDL resource unit by 20% or more (and therefore will be compliant) if the excess arises as a result of circumstances beyond the Basin state's control. The specific example provided in the text is 'where, for reasons beyond the Basin state's control, the Commonwealth has failed to achieve the target that it has published as the water recovery target for the SDL resource unit'.

6. Monitoring and metering

MATTER

Nature of the disagreement

The Queensland Government's understanding is that compliance will rely on best available methodologies to estimate permitted and actual diversions for basic rights, runoff dams and commercial plantations. Queensland is concerned that the level of metering and monitoring required in the revised draft Basin Plan is unclear and may result in unnecessary costs. Queensland does not support nor see the need for compulsory metering of individual takes of water for stock and domestic purposes.

Legal basis for comment

Under section 43A a member of the Ministerial Council may disagree on any aspect of the proposed Basin Plan on which the Commonwealth Minister may direct

Issue and rationale

Those best available methodologies need to be situationally and cost effectively applied. A flexible approach for determining growth in various types of diversions is desirable. Gauging stations can be sparsely distributed in parts of Queensland and using only hydrologic modelling of diversions of water from watercourses under water entitlements can lead to relatively higher levels of uncertainty in Queensland's ephemeral river systems. Queensland considers that modelling with local knowledge input can provide credible results and that some components of diversions are better managed through infrastructure constraints (e.g. monitoring for changes in farm infrastructure). The Basin Plan should allow for these arrangements.

Proposed resolution

Queensland requests that the Basin Plan specify that the determination of 'actual take' be made by using cost-effective, fit-for-purpose methods, for water resource planning, accounting, monitoring and enforcement purposes. These methods may include an actual measurement or an informed estimation.

Queensland requests that this requirement be clarified through amendments to section 9.15, so it allows for the use of a combination of approaches as appropriate to the resources of the water resource plan area and by specifying what kind of information is required in different data availability circumstances, having regard to cost effectiveness and risk management.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 7, insofar as Queensland has expressed support for the consensus view.

ATTACHMENT F: SOUTH AUSTRALIA

This section considers the comments and matters specified by The Hon Paul Caica MP, Minister for the River Murray, Minister for Environment and Conservation and Minister for Water as the representative on the Murray–Darling Basin Ministerial Council for South Australia, which were set out in Attachment F of the notice from the Council.¹⁶

1. Adoption of the South Australian Government's recommendations

MATTER

Nature of the disagreement

The Murray-Darling Basin Authority (MDBA) has yet to fully address the 71 recommendations provided by the South Australian Government in its submission to the MDBA on the draft Basin Plan.

Issue and rationale

There has been little change from the draft Basin Plan (28 November 2011 version) on most of the matters outlined in the South Australian submission (available at <http://www.waterforgood.sa.gov.au>). The South Australian Government remains highly concerned that most of the recommendations and critical issues raised in our submission of 16 April 2012 have yet to be addressed in the revised draft Basin Plan, as issued to the Murray-Darling Basin Ministerial Council on 28 May 2012. A list of the recommendations made by the South Australian Government in its submission are provided at Attachment 1.

Rather than repeating significant sections of the South Australian Government submission on the draft Basin Plan in this notice, South Australia requires the issues raised and the recommendations to be addressed in the next version of the Basin Plan.

Proposed resolution

The Murray-Darling Basin Authority must consider and address the remaining South Australian Government recommendations as submitted to the Murray-Darling Basin Authority on 16 April 2012 and provide a written response to South Australia on how each has been addressed in the next version of the Basin Plan.

AUTHORITY RESPONSE

The Authority's response to issues raised by South Australia in its submission to the proposed Basin Plan is included in the *Proposed Basin Plan — consultation report (May 2012)*¹⁷.

¹⁶ Notice from South Australia: Attachment F available on the MDBA website at http://download.mdba.gov.au/revised-BP/AttachmentE_QLD_comments.pdf

¹⁷ *Proposed Basin Plan — consultation report (May 2012)* available on the MDBA website at <http://www.mdba.gov.au/proposed-basin-plan/consultation-report>

2. A water recovery volume that meets key environmental outcomes

MATTER

The Basin Plan sustainable diversion limits which deliver a proposed water recovery target of 2750 GL fail to meet key environmental outcomes.

Nature of the disagreement

The MDBA has failed to adequately consider the best available science. As a result the proposed environmental water recovery target of 2750 GL fails to achieve an environmentally sustainable level of take and meet the requirements of the Water Act 2007 (Cwlth) (the Water Act). Further modelling is necessary to properly define the required environmental water recovery target and any associated actions needed to achieve the requirements of the Water Act.

Further, the MDBA has inappropriately taken into account social and economic interests and physical and operational constraints in determining the environmentally sustainable level of take (ESLT). This is not consistent with the Water Act and obscures the scientific process required to derive a robust and defensible sustainable diversion limit (SDL).

Issue and rationale

The Water Act requires that water is used in a way that achieves sustainability in the use of water resources to give effect to certain international agreements, including the Convention on Biological Diversity and the Ramsar Convention. In simple terms this means that a minimum environmental outcome must be achieved and, provided this outcome can be achieved, the Basin Plan must subsequently develop and implement provisions to optimise social, economic and environmental outcomes.

Scientific analysis demonstrates that the proposed 2750 GL water recovery scenario will not protect and restore the key ecosystems, habitats and species reliant on Basin water resources; conserve declared Ramsar wetlands; or prevent long term decline in biodiversity in South Australia.

Not only does scientific analysis demonstrate that 2750 GL fails to meet key environmental water requirements for South Australian assets, but also for floodplain communities and wetlands across the Basin including in the Murray catchment (e.g. Barmah-Millewa Forest, Hattah Lakes, Riverland-Chowilla floodplain), Goulburn and Mid-Murrumbidgee catchments (MDBA, 2012).

The issues have been clearly documented in the South Australian Government submission on the draft Basin Plan (available at <http://www.waterforgood.sa.gov.au>) and in a range of scientific reports, including reports commissioned by the South Australian Government (available at <http://www.waterforgood.sa.gov.au>) and reports prepared by the CSIRO and MDBA (available at <http://www.mdba.gov.au>).

The MDBA has also indicated that the ability to meet many of these requirements may be limited by physical, policy and operating constraints (system constraints) on environmental water delivery (MDBA, 2011; MDBA, 2012). Young et al, (2011) (the CSIRO report) indicated that while some shortfalls could be attributed to constraints on delivery, other shortfalls appear to be the result of insufficient water.

Constraints alone are not a valid reason for failing to recover the volume of water that is required to achieve a healthy sustainable Basin or for reducing the proposed water recovery volume when not all the environmental water requirements are being met. System constraints limiting the

delivery of environmental water must be identified and addressed as a matter of the highest priority in order to achieve the requirements of the Water Act.

In addition, in determining that 2750 GL would provide an environmentally sustainable level of take, the MDBA has not considered the impacts of climate change. The CSIRO noted that this represents a significant risk to the environment during future extended dry periods (Young et al, 2011).

The Murray-Darling Ministerial Council has recently requested that the MDBA undertake modelling of a 3200 GL SDL reduction with key constraints removed. This modelling must be used by the MDBA to revise its water recovery volume in the final Basin plan.

The South Australian Government recognises that the River Murray is a regulated river managed for multiple uses. While, based on MDBA advice, there may be limited opportunity to increase flow events above 80,000 ML/day in the Lower Murray floodplain through active river management and operations, there should not be a decrease in the frequency of these higher flood events compared with the current baseline. The future management of environmental water under the Basin Plan must consider the delivery of all flow events (low to high), managed and natural. In achieving environmental outcomes through management of high flow events the MDBA must work with the South Australian Government to identify and address any community impacts and constraints.

Proposed resolution

The proposed Basin water recovery volume of 2750 GL resulted from a process of determining the ESLT that took into account social and economic interests and physical and operational constraints. This is inconsistent with the Water Act. The process of determining the ESLT should be undertaken again, using only the scientific data and modelling to:

- determine which ecosystem functions, and which environmental assets and environmental outcomes in the Murray-Darling system water resources, are key to implementing the obligations of the relevant international agreements; in particular, the prevention of long term decline in biological diversity required by the Convention on Biological Diversity and the protection of wetlands required by the RAMSAR Convention; and
- determine the maximum level of take, above which those assets, outcomes and ecosystem services would be compromised.

The South Australian Government's submission on the draft Basin Plan made a number of recommendations (recommendations 3 to 20) on this matter which, if adopted, would resolve significant issues with the draft Basin Plan SDLs. These include that:

- the MDBA must undertake, as a priority, further modelling (including 3200GL, 3500 GL and 4000 GL) where system constraints are relaxed or removed to determine a water recovery volume that meets key environmental outcomes including conserving biodiversity and declared Ramsar wetlands, protecting and restoring key ecosystems, and meeting key salinity and water level outcomes;
- the Basin Plan must be amended to include sustainable diversion limits that reflect an environmental water recovery volume and an ESLT that meets key environmental outcomes. Based on available information and scientific analysis to date, a volume greater than 2750 GL would be needed. The South Australian Government therefore requires the MDBA to adopt an environmental water recovery target greater than 2750 GL that meets key environmental outcomes; and

- as outlined in the Government's submission, key environmental outcomes for key environmental assets and functions located in South Australia which must be met by any proposed environmental water recovery volume include:
 - exporting salt loads of 2 million tonnes per year over a rolling 3 year average;
 - keeping the Murray Mouth open without the need for dredging in at least 95% of years, with flows through the barrages out to sea every year;
 - maintaining average daily water levels in the Lower Lakes above 0.4 metres average height datum (AHD) for 95% of the time and above 0.0 metres AHD at any time;
 - maintaining average daily Coorong south lagoon salinity levels below lethal thresholds for key species (less than 100g/L);
 - avoiding adverse salinity impacts on the ecology by maintaining average daily salinity in Lake Alexandrina below 600 mg/L (1000 EC) for 95% of the time and below 900 mg/L (1500 EC) for 100% of the time;
 - maintaining a mosaic of healthy floodplain habitats;
 - securing delivery of flow regimes up to 40,000 ML/day to meet in-channel environmental water requirements and support low-lying temporary wetlands and associated fish and bird habitats;
 - securing delivery of flow regimes between 40,000 and 80,000 ML/day for floodplains (exceedence of maximum intervals between watering events should be avoided) to support lateral connectivity, higher elevation wetlands, recruitment and maintenance of key vegetation communities, and important bird habitat and bird breeding events; and
 - maintaining the current frequency of unregulated flow events.

The Murray-Darling Ministerial Council has recently requested that the MDBA undertake modelling of a 3200 GL SDL reduction with key constraints removed. This modelling must be undertaken promptly and used by the MDBA to revise its water recovery volume in the final basin plan.

AUTHORITY RESPONSE

The Authority is satisfied that the proposed Basin Plan complies with the Water Act. We consider that a water recovery target of 2750 GL/y on a long-term average is the right starting point to return enough environmental water to the Basin to achieve environmental objectives, while also ensuring that social and economic effects are best managed. Some higher flows cannot be achieved due to the current constraints in the system.

The Murray–Darling Basin River Management review, the operation of the proposed SDL adjustment mechanism, and the constraints management strategy will provide opportunities to take into account new information in any future reviews of the Basin Plan. This includes any efficiencies gained through environmental works and measures, as well as new science that complements the current best available science. This means that our numbers represent a 'starting point' for an adaptive process that will allow further adjustments to be made in the future.

In relation to South Australia's concern that in determining the SDL, the Authority has not taken into consideration the impacts of climate change, the Authority considers that the proposed Basin Plan's adaptive management framework does include consideration of climate change issues. The Basin Plan framework provides an opportunity for improvements in knowledge related to climate change to be taken into account. The Authority will undertake a thorough analysis of the implications of future climate change for the environmental outcomes being sought under the Basin Plan and the future availability of water for consumptive use. Further information on the Authority's approach to addressing the risk of climate change is provided in the *Proposed Basin Plan — consultation report (May 2012)* at issue 143¹⁸.

MATTER

Addressing physical, operational and policy constraints

Nature of the disagreement

The revised draft Basin Plan fails to address the key issue of constraints that affect achievement of key environmental outcomes.

Issue and rationale

System constraints limit the effective delivery of environmental water by preventing the delivery of the volumes necessary to achieve the required water levels, at times, frequencies and/or durations needed to support the environment and meet the objectives of the Water Act. System constraints include physical, operational and policy constraints, a number of which have been documented and described (MDBA, 2011b; MDBA, 2011; Heneker and Higham, 2012).

The South Australian Government submission contains an extensive discussion and list of recommendations regarding the rationale and importance of addressing system constraints. This need to address constraints is also supported by the MDBA's own work.

Proposed resolution

The Basin Plan must require the preparation of a Constraints Management Strategy to identify, assess and address system constraints (details of the proposed Constraints Management Strategy are outlined under section 4 below). Such a strategy may complement, but is not contingent on any agreement by jurisdictions on a sustainable diversion limit adjustment mechanism.

An initial Constraints Management Strategy should be prepared within 12 months of the Basin Plan being made and would:

- **identify and describe the physical, operational and management constraints that are affecting, or have the potential to affect, environmental water delivery;**
- **evaluate options, opportunities and risks associated with relaxing or removing key constraints and improving the effective and efficient delivery of environmental water; and**
- **assess the impacts on environmental water delivery and third parties as well as downstream impacts and assess options to address the impacts.**

¹⁸ *Proposed Basin Plan — consultation report (May 2012)* available on the MDBA website at <http://www.mdba.gov.au/proposed-basin-plan/consultation-report>

The Constraints Management Strategy and any updates must be prepared by the MDBA in consultation with the Basin governments and the MDBA must report to the Murray–Darling Basin Ministerial Council annually on progress with the strategy.

The Basin Plan Constraints Management Strategy should be supported by a program of works and investment, including Commonwealth investment, as outlined in the South Australian Government's submission on the draft Basin Plan. The Commonwealth Government must invest in addressing key system constraints, including purchasing flood easements, as an important step to improve environmental water delivery.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 2, insofar as South Australia has expressed support for the consensus view.

The Authority notes South Australia's recommendation that the Australian Government provide funding to address the removal of key system constraints. This matter is not within the remit of the Authority or the Basin Plan.

MATTER

Securing the health of the Coorong, Lower Lakes and Murray Mouth

Nature of the disagreement

The South Australian Government's scientific analysis highlights that how and when environmental water is delivered will have a significant impact on achieving environmental outcomes. Based on this analysis the Coorong, Lower Lakes and Murray Mouth Ramsar site is not adequately protected during dry periods under the proposed 2750 GL water recovery scenario.

Issue and rationale

The analysis of the MDBA's 2750 GL water recovery scenario and the sensitivity analyses of 2400 GL and 3200 GL scenarios highlight that the Coorong, Lower Lakes and Murray Mouth remains at risk of acidification, low water levels and high salinity levels that threaten the survival of key plants and animals during dry periods (Heneker and Higham, 2012; Higham, 2012). This risk is reduced when additional environmental water is recovered and provided to the site as demonstrated by assessment of the MDBA's 3200 GL sensitivity analysis.

The timing of flows being delivered to the Coorong further alters the effects of the proposed recovery volume on the environmental outcomes realised (Webster et al, 2009, Lester et al 2011) with minor changes in the delivery timing and average volume also affecting peak salinities (Higham, 2012). The Basin Plan's environmental watering plan must provide for the delivery of flows to the Coorong at the volumes and timing necessary to deliver environmental outcomes for this site.

To maintain water levels in the Lower Lakes, prevent salinity levels from exceeding thresholds that are lethal to plants and animals and deliver environmental water to the Coorong to avoid environmental damage, the Basin Plan must provide for:

- establishing a secure minimum reserve or annual allocation for the site, and
- for the delivery of water to this site to be prioritised during dry periods.

The Basin Plan provisions should also ensure that operational water levels in the Lower Lakes are maintained above 0.4 metres AHD for 95% of the time and that water levels do not fall below 0.0 metres AHD to avoid the risk of broad scale acidification, high salinity and significant environmental degradation.

Proposed resolution

The Basin Plan through the environmental watering plan (and any other relevant sections) must:

- provide for a minimum reserve or allocation of environmental water for the Coorong, Lower Lakes and Murray Mouth to be delivered annually including during dry periods;
- provide for the delivery of flows to the Coorong at the volumes and times necessary to secure the health of this site; and
- prioritise delivery of environmental water to the Coorong in times of drought to sustain key vegetation communities, species and ecosystem functions.

The Basin Plan's environmental watering plan should include a requirement to provide for the use of Commonwealth held water and other relevant held environmental water to maintain water levels in the Lower Lakes above a minimum operational water level target of 0.4 metres AHD for 95% of the time and above an absolute minimum of 0.0 metres AHD for 100% of the time (measured as a daily average across Lake Alexandrina).

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 10, insofar as South Australia has expressed support for the consensus view.

A provision has been added at 7.06(3)(e) to the effect that:

"[a]n objective is to protect and restore connectivity within and between water-dependent ecosystems, including by ensuring that... (e) as far as practicable, water levels in the Lower Lakes are maintained above 0.0 metres Australian Height Datum".

MATTER

Restoring and maintaining high priority environmental assets

Nature of the disagreement

The draft Basin Plan does not address the current condition of key environmental assets and the need to facilitate recovery from the recent drought.

Issue and rationale

Key Basin environmental assets were adversely impacted by the recent extreme drought compounding the effects of over-allocation. This included sites on the River Murray floodplain and at the Coorong, Lower Lakes and Murray Mouth which were pushed to the brink of environmental disaster during the drought.

While there have been some recent signs of environmental recovery, expert scientists have advised that it is critical that these sites be managed now to facilitate full recovery from drought (Goyder Institute, 2012) in order to facilitate successful implementation of the Basin Plan. A remediation program and complementary environmental watering program must be developed to

arrest further decline and enable restoration of these sites to a healthy state in the period between adoption of the Basin Plan and when water recovery will be complete.

In addition, the environmental watering plan must ensure water delivery, during dry periods, to sites that are particularly sensitive to the impacts of drought and to maintain key refugia.

Proposed resolution

The Basin Plan must provide for a remediation program and complementary environmental watering program for the restoration of priority degraded and drought affected environmental assets, focussed upon the Ramsar sites of the Riverland-Chowilla floodplain and Coorong, Lower Lakes and Murray Mouth, to commence in 2013.

The Basin Plan must prioritise water delivery during drought to protect refugia and prevent exceedence of thresholds for irreversible changes to key environmental assets.

AUTHORITY RESPONSE

The Authority considers that the Environmental Watering Plan (EWP) provides for appropriate prioritisation of environmental water to protect refugia during drought. For example, the 'Overall environmental objectives for [the] water-dependent ecosystems [of the Basin]' (Part 2 of Chapter 7) provides specific guidance on protecting refugia during drought, including by ensuring that wetting and drying cycles do not exceed ecosystem tolerances and providing for resilience to climate variability. These objectives are supported by the 'Principles and method to determine priorities for applying environmental water' (Part 6 of Chapter 7) and the 'Guidelines for the method to determine priorities for applying environmental water'. In particular, the guidelines set out management outcomes for refugia during very dry periods.

The Authority acknowledges the need to take a holistic approach to natural resource management in order to achieve good outcomes for water-dependent ecosystems. This is why the Authority recommended in the *Proposed Basin Plan — consultation report (May 2012)*¹⁹ that the Australian Government and Basin states work together to ensure that the planning and management of environmental water is closely integrated with broader natural resource management activities. While water volume is an important element in achieving environmental objectives, the EWP recognises the other factors that also influence water-dependent ecosystems.

Environmental watering under the EWP will be carried out in the context of broader natural resource management planning. This is reflected in the 'Principles to be applied to determine priorities for applying environmental water' at 7.56(f) and 7.57(e), which specify that other related natural resource management plans must be considered when prioritising and assessing the effectiveness of environmental watering.

¹⁹ *Proposed Basin Plan — consultation report (May 2012)* available on the MDBA website at <http://www.mdba.gov.au/proposed-basin-plan/consultation-report>

3. Management objectives and outcomes

MATTER

Nature of the disagreement

The management objectives and outcomes, as articulated in chapter 5 of the draft Basin Plan, fail to correctly reflect the purposes and objects of the Water Act 2007 (Cth) (Water Act).

Issue and rationale

The Water Act requires that water is used in a way that achieves sustainability in the use of water resources to give effect to certain international agreements, including the Convention on Biological Diversity and the Ramsar Convention.

In simple terms this means that the MDBA must demonstrate that a minimum environmental outcome will be achieved. Provided this outcome can be achieved, the Basin Plan must then develop and implement provisions to optimise social, economic and environmental outcomes. The environmentally sustainable level of take must be the level of take which does not compromise key environmental outcomes. However in the draft Basin Plan the MDBA appears to have incorrectly placed social and economic outcomes on the same level as environmental outcomes and implementing relevant international agreements in outlining its overall objectives (section 5.02) and in defining objectives for long term sustainable diversion limits (section 5.05).

The objectives and outcomes of the revised draft Basin Plan should be amended to correctly reflect this hierarchy of outcomes and the objects of the Water Act.

Chapter 5 should also state in broad terms the management objectives and outcomes in relation to management of the risks to the condition or continued availability of Basin water resources identified in chapter 4. Currently this clear link is missing.

Proposed resolution

The objectives and outcomes to be achieved by the Basin Plan must be amended to: correctly reflect the Water Act requirements to give priority consideration to key environmental concerns before optimising social, economic and environmental outcomes; and include objectives and outcomes which address the risks to Basin water resources identified in chapter 4.

AUTHORITY RESPONSE

This issue was raised by the South Australian Government in the submission it made to the Authority during the public consultation period. The Authority considered this matter at the time and provided a response in *Proposed Basin Plan — consultation report (May 2012)* at issue 11.²⁰ The Authority has considered this matter again, as raised by the South Australian Government, but in light of the fact that no additional material has been submitted to further support the position, the Authority considers that the proposed Basin Plan does optimise social, economic and environmental outcomes in a way that is consistent with the Act.

The objectives in section 5.03 include a reference to risks and threats, and risk management is also supported through requirements for water resource plans to be prepared having regard to risks to the condition and availability of water (see Chapter 9).

²⁰ *Proposed Basin Plan — consultation report (May 2012)* available on the MDBA website at <http://www.mdba.gov.au/proposed-basin-plan/consultation-report>

4. Risk management strategies

MATTER

Nature of the disagreement

The Basin Plan must be amended to include more comprehensive identification of risks that are clearly linked to specific risk management strategies. There is no clear 'line of sight' between the identified risks to water resources and environmental outcomes, which are only expressed in high level and broad terms and the risk management strategies. In addition, key risk management strategies required to address matters contributing to the risks identified are missing.

Issue and rationale

The Water Act requires the Basin Plan to identify the risks to the condition or continued availability of Basin water resources and strategies to manage or address these risks. The risks outlined in the revised draft Basin Plan are not comprehensive and are expressed in such broad terms that they fail to reflect the previous work undertaken by the MDBA in understanding key risks to water resources. The risks must be properly identified so that strategies to manage them can be developed and the objects of the Water Act furthered.

As a result the risk management strategies presented also fail to comprehensively address key risks. The efficacy and clarity of the plan would benefit from the inclusion of a more specific set of risk management strategies and a clearer 'line of sight' between the risk management strategy and the identified risks. Critically, a number of key risk management strategies are missing or require better definition.

In particular, constraints that impede the function and delivery of environmental water pose a significant risk, if not one of the greatest risks, to the effective management of Basin water resources in achieving the outcomes required to meet the requirements of the Water Act, specifically the minimum environmental outcomes. This risk acts to contribute to the potential that insufficient water volume will be available for and delivered to the environment. It is vital that constraints are investigated and where appropriate or possible addressed to maximise the environmental outcomes that can be achieved. If not, this would significantly undermine the effectiveness of efforts to deliver on the stated objectives of the Basin Plan.

The MDBA's report, River Management - challenges and opportunities outlines opportunities where focused effort could overcome major constraints to the delivery of environmental water and further work is underway.

A strategy to address constraints should be embedded in the Basin Plan legal instrument. Only by doing so will the MDBA ensure that successive governments, State and Federal, will be required to act in the best interest of the Plan and the Basin on this matter. Such a strategy may complement, but is not contingent on any agreement by jurisdictions on a sustainable diversion limit adjustment mechanism.

Other risk management strategies should include enabling recovery of drought-affected key environmental assets and functions, addressing more equitable access to storages to address water security issues, improving modelling and decision support systems to inform river management and environmental water delivery, and coordinating the effective delivery of environmental water.

Strategies relating to the risks of climate change and groundwater over-extraction affecting the achievement of environmental outcomes and objective of the Water Act must be more clearly defined.

Proposed resolution

Section 4.02 of the Basin Plan must include comprehensive identification of risks that are clearly linked to the objects and requirements of the Act and to specific risk management strategies.

Section 4.03 must be amended to specify risk management strategies in more specific terms and include a number of additional risk management strategies, including:

- assess climate change risks to water availability and incorporate into reviews of sustainable diversion limits (SDLs) and the Basin Plan;
- improve the understanding of groundwater connections to surface water and the impact of groundwater use on meeting environmental water requirements;
- address storage access issues relating to water supply security and environmental watering;
- improve modelling and decision support systems to inform river management and environmental water delivery that will affect risks associated with achieving environmental outcomes;
- assist drought-affected key environmental assets and functions to recover to address the risk that environmental outcomes will not be achieved; and
- effectively coordinate the delivery of environmental water to address the risk associated with not achieving environmental outcomes.

Chapter 4 should also include a Constraints Management Strategy as a key risk management strategy with consequential amendments in chapters 1, 6 and 7 and schedule 10 as proposed below.

- Amend chapter 1 to include a definition of constraints under section 1.07.
- Amend chapter 4 to include new sub-sections under section 4.03 (4):
 - a) The MDBA undertake further modelling where constraints are relaxed or removed to improve knowledge of the impacts of constraints on environmental water delivery and meeting environmental water requirements;
 - b) The MDBA must prepare, within 12 months after the commencement of the Basin Plan a Constraints Management Strategy and report annually to the Murray–Darling Basin Ministerial Council on progress with the strategy; and
 - c) The MDBA will review and update the Constraints Management Strategy regularly (possibly bi-annually) and must publish the updated strategy as soon as practicable after it is updated.
- Amend chapter 4 to include a new section to provide for a Constraints Management Strategy with provisions to the effect that:
 1. The Constraints Management Strategy must:
 - a) identify and describe the physical, operational and management constraints that are affecting, or have the potential to affect, environmental water delivery;

- b) evaluate options, opportunities and risks associated with relaxing or removing key constraints and improving the effective and efficient delivery of environmental water; and
 - c) assess the impacts on environmental water delivery and third parties as well as downstream impacts and assess options to address the impacts.
2. To inform the preparation, review and updating of the Constraints Management Strategy, the MDBA must:
 - a) implement a program to improve knowledge of constraints and the impact on meeting environmental water requirements, actions to improve environmental water delivery and management of third party impacts;
 - b) consider constraints related to effective delivery of water during drought and low flows; and
 - c) undertake modelling to assess the effects on meeting environmental water requirements and third parties.
3. Prior to any review of sustainable diversion limits and the Basin Plan, the MDBA must have commenced implementation of the Constraints Management Strategy and must consider the implications of changes to constraints in the review.
4. The MDBA must prepare the Constraints Management Strategy, and any updates, in consultation with the Basin governments (this would include the Commonwealth Environmental Water Holder).
 - Amend chapter 6 to include an additional sub-section under section 6.06 (1):
 - Amend chapter 7 to include a new section which links the Constraints Management Strategy to the achievement of the objectives and outcomes of the Environmental Watering Plan.
 - Amend schedule 10 evaluation and reporting requirements to include an additional item requiring the MDBA and Basin States to report annually on progress with implementing actions and measures to relax or remove constraints, to improve environmental water delivery and to address downstream impacts and impacts on third parties in the short, medium and long term.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole (at matter 2), insofar as South Australia has expressed support for the consensus view.

With respect to the additional matters raised by South Australia regarding more comprehensive identification of risks that are clearly linked to specific risk management strategies: Chapter 4 identifies risks to the condition or the continued availability of the water resources of the Murray–Darling Basin, and includes strategies to manage or address those risks. The strategies to manage risks provide a framework within the legislative instrument on which risks can be flexibly managed. The objectives in section 5.03 include a reference to risks and threats and risk management is also supported through requirements for water resource plans to be prepared having regard to risks to the condition and availability of water (see Chapter 9).

5. Surface water sustainable diversion limits

MATTER

South Australian River Murray Sustainable Diversion Limit

Nature of the disagreement

The sustainable diversion limit (SDL) for the South Australian River Murray does not recognise South Australia's efficient water use practices and past responsible management.

South Australia's mandated contribution to the water recovery target must be no more than the 101 GL reduction to our Baseline Diversion Limits (BDL), as specified in the draft Basin Plan, and no further contribution to the water recovery target will be sourced from South Australia except where agreed to by the South Australian Government and the relevant industry organisations.

Issue and rationale

South Australia has a long track record of exemplary behaviour in managing the water resources of the River Murray. In response to declining water quality and quantity levels in the 1960s, the South Australian Government set its own cap in 1969. This was further reduced by the South Australian Government in 1979 and again in 1991 prior to the implementation of a Basin-wide Cap in 1997.

Over the past 30 years, a majority of South Australia's irrigation water delivery infrastructure has been upgraded, mostly to fully piped pressurised systems, with a proportion of the water savings being returned to the environment. On-farm, South Australian irrigators have also invested in irrigation efficiency to maximise water availability in the capped environment.

Despite this, the MDBA has given no recognition to South Australia's prior responsible behaviour in capping entitlements and investment in irrigation efficiency in the setting of SDLs in the revised draft Basin Plan. The proposed local 15% reduction from the BDL for the South Australian River Murray is exactly the same as that set for the upstream parts of the River Murray catchment. No account is taken of the fact that a large proportion of our diversions are for essential urban water supplies, including Metropolitan Adelaide and Country Towns.

Equally, the proposed shared downstream reduction amount of 971 GL for the southern connected Basin provides no specific recognition of South Australia's history of responsible water management.

This is not an acceptable outcome to the South Australian Government and irrigation communities, or to the broader South Australian community.

In practice a substantial amount of water has already been recovered for the environment from the South Australian River Murray, mainly from irrigators through the Commonwealth water buyback program. With other projects in the pipeline, the proposed 101 GL local reduction target is likely to be achieved in the near future.

As a result the South Australian Government is prepared to accept the proposed 101 GL reduction to our BDL (notwithstanding our reservations as to the fairness of how this figure was arrived at) on the proviso that any further water recovery from South Australia should only be through strategies agreed to by the South Australian Government and relevant industry organisations.

To achieve this outcome the Commonwealth Government must work with the State Government to identify a water recovery strategy for the State; and consult about the development of a

broader water recovery strategy across the Basin. The overall water recovery strategy must consider how to optimise environmental, social and economic outcomes.

Proposed resolution

The Basin Plan must address this by ensuring:

- sustainable diversion limits for the SA River Murray take into account the State's past responsible behaviour, investment in irrigation efficiency and large proportion of water held for its urban water supplies to avoid a disproportionate impact on South Australia's irrigated agriculture production, and associated flow-through impacts to dependent regional communities;
- that no further contribution to the water recovery target above the proposed 101 GL local reduction is sourced from South Australia except where agreed to by the South Australian Government and the relevant industry organisations; and
- the Basin Plan provisions include a requirement that the Commonwealth Government develop and publish a water recovery strategy that outlines its plan to 'bridge the gap' and ensures that there are no forced reductions in water entitlements. The Commonwealth Government must take a strategic approach to water recovery and water purchase in South Australia through consultation with, and the agreement of, the South Australian Government and relevant industry organisations.

AUTHORITY RESPONSE

This issue was raised by South Australia in the submission it made to the Authority during the public consultation period. The Authority considered this matter at the time and provided a response in its report *Proposed Basin Plan — consultation report (May 2012)* at Issue 21.²¹

The Authority has considered this matter again, as raised by South Australia, but in light of the fact that no additional material has been submitted to further support the position, the Authority reaffirms its initial response that the proposed Basin Plan takes into account historical effort, recognises the progress in environmental water recovery since 2009 and aims to build on and complement existing reforms. .

The Australian Government has committed to bridging the gap by 2019 through water-saving infrastructure and water purchases from willing sellers. The proposed Basin Plan was prepared based on this commitment. The Australian Government Department of Sustainability, Environment, Water, Population and Communities is preparing a water recovery strategy in consultation with Basin state governments.

²¹ *Proposed Basin Plan — consultation report (May 2012)* available on the MDBA website at <http://www.mdba.gov.au/proposed-basin-plan/consultation-report>

MATTER

Downstream apportionment

Nature of the disagreement

The Chair of the MDBA has written to the South Australian member of the Murray–Darling Basin Ministerial Council requesting advice on the issue of downstream apportionment.

Issue and rationale

The South Australian Government considers there may be benefits in apportionment providing greater certainty and considers that the Ministerial Council should give further consideration to this matter including whether State level downstream reduction targets should be incorporated into the Basin Plan prior to the Plan being made.

The South Australian Government considers that any State level apportionment must be based on surface water diversions excluding urban water use or critical human water needs.

The Water Act recognises that critical human water needs are the highest priority water use for communities who are dependent on Basin water resources. The South Australian Government has made significant investment in desalination, and stormwater and wastewater recycling as well as efficiency measures to address our current and future urban needs but it can not reduce the State's base level urban water requirements from the River Murray.

Without removal of these critical human water needs in calculating State level apportionment, water recovery will have a significant and disproportionately high impact on South Australian irrigators and regional communities.

South Australia is doing its share to recover water for the environment including offering water for purchase from non-critical water holdings held by SA Water and providing a six GL entitlement to the environment in return for investment in the Adelaide Desalination Plant.

The South Australian Government notes that its considerations through the Ministerial Council will be in the context that any further contribution by South Australia to water recovery should only be through strategies agreed to by the South Australian Government and relevant industry organisations.

Proposed resolution

The South Australian Government requests that the MDBA and Basin jurisdictions work together to further develop an apportionment option based on determining State shares based on surface water diversions excluding urban water use or critical human water needs.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 3, insofar as South Australia has expressed support for the consensus view.

MATTER

SDL Adjustment Mechanism

Nature of the disagreement

The Chair of the MDBA has written to the South Australian member of the Murray–Darling Basin Ministerial Council requesting advice on the development of a once off SDL adjustment mechanism for inclusion in the Basin Plan. The proposed mechanism would allow for adjustments to SDLs where environmental works and measures, efficiency measures and other initiatives allow for reductions or increases in environmental water recovery.

Issue and rationale

While the South Australian Government supports the MDBA working with Basin jurisdictions to develop a proposed mechanism for consideration by the Murray–Darling Basin Ministerial Council, the starting point must be a water recovery volume that meets key environmental outcomes as required under the Water Act and the draft Basin Plan objectives.

Currently the proposed water recovery scenario in the draft Basin Plan only meets around 45% of the 112 flow targets proposed by the MDBA as measures of environmental outcomes (Young et al, 2011). Even considering that a small number of these targets may not be achievable in a regulated system such as the Murray–Darling, this does not represent an adequate environmental baseline from which to consider SDL adjustments.

In addition, any SDL adjustment must only be permitted when initiatives result in equivalent or improved environmental outcomes. There should be no reduction in the ability to meet flow targets and no trade-offs between environmental outcomes.

The benchmark must include removal of key system constraints, or a process must be adopted to allow key constraints to be addressed to enhance environmental outcomes, before considering any increase in SDLs (i.e. water recovery being reduced). This is necessary to ensure key environmental outcomes are achievable under the Basin Plan. As such there must be a complementary process for addressing constraints that includes Commonwealth Government investment in addressing key constraints impeding environmental water delivery.

Any SDL adjustment mechanism must operate both ways and allow for SDLs to be both reduced (i.e. increase water recovery) as well as for SDLs to be increased (i.e. reduce water recovery).

It will be essential that any SDL adjustment mechanism operates on a transparent and legally sound basis using the best available science and a method developed in consultation with jurisdictions. Attachment 2 to this notice outlines some of the key elements the South Australian Government considers necessary in developing any SDL adjustment mechanism.

Proposed resolution

Further development of a proposed SDL adjustment mechanism on a transparent and legally sound basis using the best available science and a method developed in consultation with jurisdictions and involving independent, scientific expertise. Limitations and assumptions underpinning any proposed mechanism must be clearly articulated to support informed decision making.

The MDBA must consider the matters outlined in Attachment 2 to inform development of any proposed SDL adjustment mechanism. Critically, the starting point must be a water recovery volume that meets key environmental outcomes as required under the Water Act and the draft Basin Plan objectives, and any SDL adjustment must only be permitted if it results in equivalent or enhanced environmental outcomes.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 1, insofar as South Australia has expressed support for the consensus view.

With respect to the additional matters raised by South Australia, it is the Authority's view that modelling undertaken as part of developing the proposed Basin Plan provides confidence that a 2750 GL/y reduction in Basin-wide diversions provides sufficient water to enable the delivery of environmental outcomes consistent with achieving a healthy and working Basin. Given this, the Basin Plan identifies 2750 GL/y as the average annual amount of water that is to be recovered from surface water systems for environmental use. The Authority recognises that the environmental, social and economic outcomes implicit in this starting point can be improved on by initiatives that implement environmental works and measures or improve the efficiency of river operations by changes to rules and procedures. Further, those initiatives may enable an adjustment of SDLs. To this end the Authority has developed SDL adjustment provisions for inclusion in Chapter 6 of the proposed Basin Plan.

To support the application of the adjustment mechanism, the Authority is liaising with jurisdictions to develop a guideline. The guideline will provide a transparent and reproducible pathway for application of the SDL adjustment mechanism as set out in the SDL adjustment provisions included in Chapter 6 and Schedule 5. The guideline will outline a methodology which ensures consistency with the work used to inform the 2750 GL/y reduction in the proposed Basin Plan and incorporates best available science.

Finally it is the Authority's view that the SDL adjustment mechanism should be supported by a joint administrative gateway managed by the Basin Officials Committee. Such a gateway would identify, assess and agree on the group of initiatives to be submitted for assessment through the SDL adjustment mechanism.

These measures will be complemented by the incorporation of a separate constraints management strategy in Chapter 6, detailed further in the response to matter 2, to address the progressive removal of constraints to environmental water delivery. The Authority's view is that there are substantial environmental benefits to be gained through the removal of constraints, but that these benefits need not be tied to specific SDL adjustments. Rather, addressing constraints may enhance the environmental benefits to be gained through any SDL adjustments that may increase the 2750 GL/y reduction amount but do not increase the social and economic impacts, for example water recovered through further improvements in irrigation infrastructure.

MATTER

Specifying the Commonwealth's obligation to bridge the gap and avoid forced reductions

Nature of the disagreement

The revised draft Basin Plan does not articulate the Commonwealth's obligation to 'bridge the gap' between the baseline diversion limits (BDLs) and SDLs through a combination of water purchase from willing sellers and water savings from investment in infrastructure and other projects.

Issue and rationale

The South Australian Government's position is that there should be no forced reductions, because the gap between the BDLs and SDLs will be bridged by the Commonwealth Government through a combination of water purchase from willing sellers, water savings from investment in infrastructure and other projects. In South Australia, this must be done in consultation with, and with the agreement of, the South Australian Government and relevant industry organisations.

With the Commonwealth bridging the gap between baseline diversion limits and sustainable diversion limits by water purchases and water savings, the Basin Plan will not require compulsory acquisition of water entitlements or the States to reduce allocations in order to achieve SDLs.

The Commonwealth Government's obligation is not specified in the Basin Plan creating uncertainty and concern for water users.

Proposed resolution

To provide certainty for Basin communities, the Basin Plan must address this issue by including provisions articulating the Commonwealth Environmental Water Holders obligation to 'bridge the gap' for both the local and shared reduction amounts.

Section 10.3 of this notice recommends amendments to the environmental watering plan under chapter 7.0 to recognise the Commonwealth Environmental Water Holder's responsibility to recover water through including provisions (under either Division 7 - Planning for recovery of additional environmental water or section 7.02) to the effect that:

The Commonwealth Environmental Water Holder will recover the volume of water necessary to bridge the gap between baseline diversion limits and sustainable diversion limits in order to achieve the objectives of the environmental watering plan.

AUTHORITY RESPONSE

This issue has been responded to in the matter specified by Council as a whole at consensus matter 5, in so far as South Australia has expressed support for the consensus views.

The Australian Government has committed to bridging the gap by 2019 through water-saving infrastructure and water purchases from willing sellers. The proposed Basin Plan was prepared based on this commitment. The Australian Government Department of Sustainability, Environment, Water, Population and Communities is preparing a water recovery strategy in consultation with Basin state governments.

As outlined in the response to the matters specified by Council as a whole at consensus matter 5, the Authority has included a provision in Chapter 6 allowing states a 'reasonable excuse' for non-compliance with SDLs if the Commonwealth has not 'bridged the gap'.

6. Groundwater sustainable diversion limits

MATTER

Nature of the disagreement

The revised draft Basin Plan does not specify a precautionary approach to setting groundwater sustainable diversion limits that requires an assumption of connection to surface water unless proven otherwise.

The MDBA and the Basin Plan must not allow for increased groundwater SDLs unless it can be demonstrated that, based on scientific evidence and analysis, increased diversions will not impact on surface water resources or environmental watering.

Issue and rationale

A precautionary risk management approach must be taken to manage groundwater extraction to avoid impacts on surface water flows and key environments. Consistent with the National Water Initiative (NWI), the National Water Commission advises that:

"To mitigate the risks to the water resource, the Commission considers that unless and until it can be demonstrated otherwise, surface water and groundwater resources should be assumed to be connected, and water planning and management of the resources should be conjunctive." (National Water Commission, 2009, pg 36).

Consistent with this principle, the MDBA must include the precautionary principle in the Basin Plan along with provisions to require appropriate scientific analysis and risk assessment to be undertaken to demonstrate that the extraction of groundwater will not adversely impact on surface water flows, environmental watering or associated ecosystems before allowing for increased groundwater SDLs. Review and amendment of the draft Basin Plan provisions should be undertaken before the Plan is finalised to ensure that these provisions are adequate to manage groundwater use in a precautionary manner that assumes a connection with surface water resources unless it can be demonstrated otherwise.

For example, Chapter 9 requires provisions which clearly set out that a risk assessment must be undertaken in order to determine whether a water resource plan needs to include rules to prevent groundwater use affecting surface water resources and environmental watering requirements, impacting on the productive base, water quality outcomes or priority ecosystem functions and assets (sections 9.18 to 9.21). In addition, it is recommended that the MDBA undertake a program to increase knowledge of groundwater-surface water interactions as a key risk management strategy in chapter 4 of the draft Basin Plan.

Proposed resolution

The MDBA and the Basin Plan must not allow for increased SDLs unless it can be demonstrated that, based on scientific evidence and analysis, increased diversions will not impact on surface water resources or environmental watering.

Review and amend the draft Basin Plan to ensure that its provisions are adequate to manage groundwater use in a precautionary manner that assumes a connection with surface water resources unless it can be demonstrated otherwise. This must include amendments to:

- include a precautionary principle in the Basin Plan with regard to groundwater that requires an assumption of connection to surface water unless proven otherwise;

- consistent with this principle, include provisions that ensure groundwater sustainable diversion limits cannot be increased unless it can be demonstrated that increased diversion will not impact on surface water resources or environmental watering; and
- include provisions under chapter 9 division 4 clearly stating that a risk assessment process must be undertaken as part of complying with sections 9.18 to 9.21.

AUTHORITY RESPONSE

This issue has been responded to in the matter specified by Council as a whole at matter 11, insofar as South Australia has expressed support for the consensus views.

The Authority recognises that surface water and groundwater systems are not separate resources but components of one system. The potential impact of groundwater extraction on surface water resources has been explicitly considered in determining the groundwater SDLs. The risk associated with lack of knowledge was also considered in determining groundwater SDLs, and the Authority considers the SDLs in the proposed Basin Plan reflect a precautionary approach.

7. Sustainable diversion limits and social and economic issues

MATTER

Nature of the disagreement

The Basin Plan fails to adequately address planning, investment and responsibilities for mitigating social and economic impacts and maximising economic opportunities from this reform.

Issue and rationale

The South Australian Government submission on the draft Basin Plan outlines the key issues and proposals for resolution.

Communities located in the Riverland and below Lock 1 may be particularly sensitive to changes as a result of the Basin Plan. For example, any reduction in irrigated agriculture production that results from water purchase can create third party impacts for farmers who remain, irrigation operators, businesses that service farmers, processing companies and community level businesses and services. These flow-on impacts can lead to significant local impacts over the short to medium term.

Beyond bridging the gap, there is opportunity for the Commonwealth Government to commit to a process of strengthening the affected regional economies of Basin jurisdictions through targeted economic development, diversification and industry development initiatives, which disappointingly have been largely ignored to date. Such investments will need to be above and beyond funding already available under *Water for the Future* and the *Regional Development Australia Fund*.

These water reforms could be used as an opportunity to support a long-term prosperous and sustainable future for Basin communities and to show the world that it is possible to deliver ecological sustainability alongside vibrant and productive industries and communities. The Commonwealth Government must take action to strengthen the economies of the South Australian Murray-Darling Basin region, including the development of a socio-economic plan to complement the Basin Plan that outlines programs to support affected communities to diversify economically and adapt, including adaptation to more water efficient industries.

In addition, it is imperative that Commonwealth Government funding criteria for infrastructure investment is relaxed and enhanced to enable these programs to better address the needs of South Australian industries and communities and provide more equitable access to funding.

Proposed resolution

The Commonwealth Government must:

- provide targeted social and economic support to vulnerable River Murray communities in South Australia to assist them to transition to a future with less water availability and increase their resilience; and
- develop a socio-economic plan to complement the Basin Plan.

The Commonwealth Government must change its funding criteria to ensure more targeted and equitable access to funds, including under the Water for the Future program and the Regional Development Australia Fund. In particular, the South Australian Government seeks flexibility in the application of remaining unspent Commonwealth funds.

AUTHORITY RESPONSE

The Authority recognises that reductions in water availability as a result of the Basin Plan could have social and economic impacts in the South Australian Riverland and below Lock 1. These impacts have been described in a number of studies commissioned by the Authority, including economic modelling by ABARES (2011)²²; a study by Arche Consulting (2011²³) on the local impacts of the Basin Plan; a report by Environmental Behaviour Consultants and others on the community impacts of the Basin Plan (EBC et al 2011a, 2011b)²⁴; and assessments by ABARES of community vulnerability (ABARE-BRS 2010; ABARES unpub.)²⁵.

Recognising the impacts of the Basin Plan, the Authority is proposing a transition period between 2012 and 2019 for implementation of the sustainable diversion limits proposed in the Plan. This will provide opportunities for further improvements in scientific knowledge to inform possible refinements to the Basin Plan and SDLs; for governments to take actions and examine potential

²² ABARES (Australian Bureau of Agricultural and Resource Economics and Sciences), 2011. *Modelling the economic effects of the Murray-Darling Basin Plan*. Report prepared for the Murray-Darling Basin Authority. ABARES project: 4311 (November).

²³ Arche Consulting, 2011. *Basin case studies: the socio-economic impacts of sustainable diversion limits and Water for the Future investments. An assessment at a local scale*. Reports for the Department of Sustainability, Environment, Water, Population and Communities and the Murray-Darling Basin Authority.

²⁴ EBC, RMCG, MJA, EconSearch, Geoff McLeod, Tim Cummins, Guy Roth and David Cornish, 2011a. *Community impacts of the Guide to the proposed Murray-Darling Basin Plan*. Report for the MDBA, Canberra. EBC, RMCG, MJA, EconSearch, Geoff McLeod, Tim Cummins, Guy Roth and David Cornish, 2011b. *Community impacts of the Guide to the proposed Murray-Darling Basin Plan: Volume 8. Regional Analysis - Victoria*. Report for the Murray-Darling Basin Authority, Canberra.

²⁵ ABARE-BRS (Australian Bureau of Agricultural and Resource Economics - Bureau of Rural Sciences), 2010. *Indicators of community vulnerability and adaptive capacity across the Murray–Darling Basin—a focus on irrigation in agriculture*. Report for the Murray-Darling Basin Authority, Canberra. ABARES (Australian Bureau of Agricultural and Resource Economics and Sciences), unpublished. *Refining the indicators of community vulnerability and adaptive capacity across the Murray-Darling Basin - a focus on irrigation in agriculture*. Unpublished work for the Murray-Darling Basin Authority, Canberra.

policy opportunities that could mitigate the social and economic impacts of the Basin Plan; and for communities to plan for their own futures, and to adjust to less water.

It is beyond the scope of the Basin Plan, or the remit of the Authority, to propose structural adjustment programs to support communities that might be affected by the Basin Plan. It is also beyond the scope of the Basin Plan, or the remit of the Authority, to change funding criteria for access to funds. These matters are being considered by other parts of the Australian Government.

8. Proposed 2015 review of sustainable diversion limits

MATTER

Nature of the disagreement

The South Australian Government rejects the need for a review of SDLs in 2015 on the basis that a review in 2015 will not allow time for sufficient, robust evidence to be gathered on which to review the SDLs. A review of SDLs in such a short time after completion of the Basin Plan introduces lack of clarity and further uncertainty for water users.

Issue and rationale

Noting the timeframes associated with the procedures for finalising the Basin Plan that are outlined in the Water Act, it is unlikely that the Basin Plan will come into effect prior to the end of 2012. This would mean that there may only be two years between the Basin Plan coming into effect and the review.

The proposed 2015 timeframe for review of SDLs raises a number of issues as:

- It introduces another level of uncertainty and lack of clarity by possibly leading to changes to SDLs only a short time after the Basin Plan is made;
- There is insufficient time to gather new knowledge and develop an adequate monitoring and evaluation program to support the review, including gathering information on whether key environmental outcomes are being delivered;
- Construction and successful implementation of many proposed and potential works and measures that aim to improve water use efficiency are unlikely to have occurred by this time, nor is there likely to have been time to realise the intended water savings and other benefits;
- Changes to river operations and management are also required to enable the efficient and effective delivery of environmental water and may have an impact on sustainable diversion limits. This will also take time to investigate, resolve and implement;
- The full water recovery volume will not be available to the environment at this time and there may only be limited improved understanding of whether the Basin's environmental water requirements are being adequately met. It will take time to determine Specific Measurable Achievable Realistic Time (SMART) bound condition objectives and targets, and then to determine trends in ecological health from monitoring and evaluation programs; and
- The proposed review sits outside of the Basin Plan monitoring and evaluation process. There is a need to develop robust monitoring and evaluation to support any review and how it would be used to inform review and revision of the Basin Plan.

The Water Act already supports a review process and clearly did not envisage that a review would take place so soon after the Basin Plan's adoption. The Water Act provides for the Basin Plan to be fully reviewed every ten years and in fact prohibits either the responsible Commonwealth Minister or Basin States from requesting a review within the first five years after the Basin Plan takes effect.

Proposed resolution

The Basin Plan must address these issues by:

- **determining a water recovery target and hence SDLs in the Basin Plan based on best available science;**
- **removing the 2015 review from the Basin Plan referred to in section 6.07;**
- **setting out a framework for any review including establishing a review advisory committee including jurisdictional representation and appropriate expertise (including scientific expertise); and**
- **providing for development of transparent terms of reference, governance and review methods in consultation with the Basin States.**

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 4, insofar as South Australia has expressed support for the consensus view.

After careful consideration of the issues raised by South Australia and other stakeholders, the Authority has decided to remove the formal 2015 review of SDLs but to allow for new work to inform future reviews of the Basin Plan. Any research and investigations the Authority may conduct into aspects of the work underpinning sustainable diversion limits or other aspects of the Basin Plan will be done in consultation with Basin states. These future reviews may lead to changes in the SDLs; apportionment of the reduction target between Basin states or SDL resource units; or any other matter addressed in the Basin Plan. Such an approach encapsulates the Authority's commitment to adaptive management, but does not include the specific time frame of 2015 or limit the review to only considering changes to SDLs. Any future reviews or amendments to, the Basin Plan would be conducted in accordance with the Water Act.

9. *Water quality and salinity management plan*

MATTER

Maintaining strong and effective water quality and salinity management at a Basin and water resource management plan scale

Nature of the disagreement

The water quality and salinity management plan and the associated water resource plan requirements in the draft Basin Plan need to be strengthened and not further weakened to the point that there is no obligation placed on Basin governments to take action.

Issue and rationale

Poor water quality and high salinity affects environmental assets, irrigators and critical human water supplies and has significant environmental, social and economic implications. Water quality and salinity issues affect water resources across the Basin and must be managed in a coordinated and integrated manner.

The draft Basin Plan proposes a management framework that includes water quality and salinity management targets to guide management and planning and requirements for water resource plans to identify the causes of water quality degradation, assess risks and develop and include management measures and strategies.

Under no circumstances should the MDBA weaken or reduce the water quality and salinity objectives, targets and management frameworks in the Basin Plan. The Basin Plan must include non-discretionary requirements for water resource plans to manage water quality and salinity.

Proposed resolution

There should not be any further weakening or removal of water quality and salinity objectives and targets and the associated management frameworks. As outlined in this notice additional or improved targets are required and the raw water targets that have been removed need to be reinstated.

The water resource plan requirements under Chapter 9 water must include clear nondiscretionary requirements to identify causes of water quality and salinity degradation, set management targets, assess the risks to water quality and salinity and include measures and strategies to address the identified causes and risks.

Additional salinity targets upstream of South Australia to guide management of water flows should be included in the Basin Plan (as recommended in the Government's previous submission of 16 April 2012); and the MDBA should coordinate a process to develop further salinity targets for consideration in any future review and amendment of the Basin Plan.

AUTHORITY RESPONSE

The Authority considers that the water quality and salinity management plan is an important component of the proposed Basin Plan and that its implementation will result in improved water quality at both Basin level and water resource plan level. The Authority notes that the matter of additional targets can be considered in the first review of the water quality and salinity plan, required under section 12.08 of the proposed Basin Plan. The Authority also notes that the water quality and salinity management plan includes objectives at section 8.05 for raw water that is to be treated for human consumption.

MATTER

Targets for managing water flows

Nature of the disagreement

The provisions in the revised draft Basin Plan fail to indicate that flows must be managed to not exceed the targets set in section 8.12 and must clearly indicate that 95% of the time is an annual requirement.

The salinity flow management target at Lock 6 (section 8.12) is located within South Australia and does not provide for adequate accountability for salinity levels entering South Australia.

An additional salinity flow management target is required for Lake Alexandrina.

Issue and rationale

Flow management actions upstream of the South Australian border can significantly impact water quality and salinity levels in South Australia. It is therefore critical that the Basin Plan sets clear management targets to ensure flows are managed to not exceed the salinity targets.

The South Australian Government submission on the draft Basin Plan recommended a target be set at or upstream of its border to provide a basis for assessment of water quality entering the State and to guide upstream management actions. The MDBA has not adopted the site proposed by South Australia for a salinity operational target (at the border) and instead proposes a site at Lock 6. South Australia has previously provided information to the MDBA on the border target site at monitoring station A4261022 and detailed rationale for using this border location, including:

- the site at the South Australian border is fully telemetered and the equipment operates well with monitoring data readily available;
- water at this location is fully mixed including main channel flows from above Lock 7, Lake Victoria/Rufus River inflows and Lindsay River inflows; and
- it provides more precise insight into the quality of water entering South Australia.

In addition, the South Australian Government submission on the draft Basin Plan recommended an additional salinity operational target for salinity levels in Lake Alexandrina be included such that salinities *“are maintained below 600 mg/L (~1000 EC) for 95% of the time (lake average) and below 900 mg/L (~1500 EC) for 100% of the time”*. While it is noted that the target has been partially adopted in the revised draft, there is no reference to the upper maximum value.

The current provisions under section 8.12 fail to make it clear that flows must be managed to avoid exceeding the listed salinity targets. Instead the current drafting appears to state that management of flows must aim to meet the targets.

The provisions under section 8.12 fail to clearly define how the salinity targets will be assessed and over what time period. The provisions should make it clear that the achievement of the specified targets in 8.12 paragraph (5)(c) are for 95% of the annual water accounting period i.e. 95% of days within the year. The MDBA also needs to demonstrate that Milang is an appropriate site for representing average salinity for Lake Alexandrina as an operational target.

Proposed resolution

The Basin Plan must address these issues by amending:

- section 8.12(5)(c) to make it clear that flows must be managed to not exceed the target values listed;
- replacing the target site at Lock 6 with the target site at the border, that is amending section 8.12(5)(c) Item 3 to refer to the River Murray at the South Australian Border (A4261022). This site to have proposed target value (mg/L) of 310 and target value (EC) of 517 unless MDBA modelling can justify a different target value.
- more clearly specifying how the targets will be assessed including defining that the 95% of the time requirement refers to a twelve month period i.e. one water accounting period; and
- section 8.12 should be amended to include an additional operational target for water flows in Lake Alexandrina as sub-section 5(d): To maintain salinities below 900 mg/L (~1500 EC) (lake average) 100% of the time measured in Lake Alexandrina.

The MDBA must also demonstrate that Milang is an appropriate measurement site noting that lake salinities should be measured as an average across several spatially representative sites.

AUTHORITY RESPONSE

The Authority has provided further clarity in respect to 'must have regard to' in the Explanatory Statement and its application to flow management and planning decisions, and may publish guidelines on this, and any other matter relevant to the water quality targets (for example, on water quality target assessment). The Authority considers that further revision, adjustment (including assessment periods) or location of water quality and salinity targets is a matter for the first review of the water quality and salinity management plan, as required under section 12.08 of the proposed Basin Plan. Therefore, Lock 6 should remain the appropriate target location in line with advice from the Authority's surface water flow modellers; and additional targets and their location for Lake Alexandrina should be reassessed at the first review.

MATTER

Inclusion of a water level target for the Lower Lakes

Nature of the disagreement

The revised draft Basin Plan does not include a water level target for the Lower Lakes.

Issue and rationale

The experience of the recent extreme drought highlights the importance of a water level target below Lock 1 to maintain water quality and prevent ecological collapse and adverse community and economic impacts. Both water levels and salinity are critical parameters in the prevention of adverse impacts below Lock 1 and the Lower Lakes. Water levels below 0.0 metres AHD result in an increased risk of broad scale acidification (Heneker and Higham, 2012; Pollino et al, 2011). As such maintaining Lower Lakes water levels above 0.0 metres AHD has been set as an environmental water requirement by the MDBA. It should be noted that water levels less than 0.4 metres AHD preclude the release of flows to the Coorong and even at this level, releases are severely restricted due to the effect of sea levels.

A minimum water level target provides for salt management by permitting releases and management of potential acidification of Lake Albert, the margins of Lake Alexandrina, and the river below Lock 1 by maintaining the inundation of sulfidic sediments. Subsequently, it will permit the avoidance of salinity and acidification risks to water quality and agricultural production along the main river channel below Lock 1 if combined with barrage releases.

Maintaining water levels will minimise lowering of adjacent water tables that leads to increasing salinity and acidification.

Based on its scientific analysis, the South Australian Government supports a water level target that maintains levels above 0.4 metres AHD with an absolute minimum of 0.0 metres AHD measured as daily averages across Lake Alexandrina. This proposal anticipates a variable lake operating regime. It is noted that, depending on flow, this would achieve water levels higher than these minimums between Lock 1 and Wellington.

Proposed resolution

The revised draft Basin Plan must also include a minimum operational water level target of 0.4 metres AHD for 95% of the time with an absolute minimum of 0.0 metres AHD for 100% of the time (measured as a daily average across Lake Alexandrina).

The Basin Plan's environmental watering plan should include a requirement to provide for the use of Commonwealth held water and other relevant held environmental water to maintain water levels above a minimum operational water level target of 0.4 metres AHD for 95% of the time and above an absolute minimum of 0.0 metres AHD for 100% of the time (measured as a daily average across Lake Alexandrina).

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 10, insofar as South Australia has expressed support for the consensus view.

A provision has been added at 7.06(3)(e) to the effect that:

"[a]n objective is to protect and restore connectivity within and between water-dependent ecosystems, including by ensuring that... (e) as far as practicable, water levels in the Lower Lakes are maintained above 0.0 metres Australian Height Datum".

MATTER

Timeframe for achievement of the salt load target

Nature of the disagreement

The timeframe for measuring the achievement of the salt load target (i.e. averaged over 10 years) is too long and will average out and mask significant impacts that may occur. The revised draft Basin Plan does not set out what actions will occur to address a situation where the salt load target is not met on an ongoing basis.

Issue and rationale

Scientific analysis including modelling undertaken by the South Australian Government (Heneker, 2010) shows that to ensure adequate monitoring of salt discharge to ensure river flows are being managed to maintain connectivity with the sea and avoid salt build up and ecological damage, measurement of the target over a three year rolling average is necessary.

The modelling analysis shows that:

- the impact of a single large inflow event to the Lower Lakes and the resulting ability to export salt is generally exhausted within any 2-3 year period, due to evaporation in the Lower Lakes; and
- a 10 year rolling average target can be met while still experiencing significant peaks in salinity in the lakes that could damage the ecological character of the site.

The South Australian Government's scientific analysis also indicates that the MDBA is not currently using the appropriate relationship between flow and salinity to estimate salt discharge and that the most robust approach involves modelling and measurement of both flow and salt levels.

Proposed resolution

The following changes are required to the Basin Plan:

- section 8.18(4) must be amended to require the MDBA to assess, on an annual basis, achievement of the salt load target against the number of tonnes of salt per year averaged of the preceding three years;
- section 8.18(3) must be amended to require the MDBA to use 'best available scientific methods' to estimate the discharge of salt; and
- a section added to outline the actions to be taken by the MDBA where the salt load target is not met on an ongoing basis.

It is recommended that the MDBA engage with South Australian Government officials to discuss its approach to measurement of the salt load target.

AUTHORITY RESPONSE

In response to Council's advice on the salt-load target, the Authority has presented salt load as a water quality and salinity management plan objective and inserted a new clause at section 8.09. Further changes in the methodology to assess achievement are not proposed before the first review of the water quality and salinity management plan as required under section 12.08 of the proposed Basin Plan. The Authority may prepare guidelines on other matters related to water quality and salinity targets. The Authority will develop in consultation with the states the methodology to estimate the salt-load discharged to the Southern Ocean, based on the best available scientific information.

This issue has been responded to in more detail in the matters specified by Council as a whole at matter 9.

MATTER

Provisions for water quality targets for raw water for human consumption

Nature of the disagreement

The water quality targets for raw water for human consumption have been removed from the revised draft Basin Plan with potential to increase the economic cost of water treatment and to put treated water quality at risk for small communities with limited treatment capacity.

Issue and rationale

South Australians have an expectation that water quality across the Basin is well managed so that water flowing into South Australia is of a reasonable quality. The best practice approach to managing water quality risks to drinking water supplies is a multi-barrier approach which aims to ensure that contaminants are not present in the raw water that is extracted for treatment for human consumption.

The removal of the raw water quality targets places treated water quality at risk for small communities with limited treatment capacity and has the potential to increase the economic cost of water treatment in South Australia.

It is stated in the MDBA's public consultation report for the draft Basin Plan that the raw water quality provisions have been removed in response to feedback from the States and makes reference to the Australian Drinking Water Guidelines (ADWG) as providing adequate guidance. The South Australian Government has not provided any feedback of this nature.

The Australian Drinking Water Guidelines is based on a risk management process and six guiding principles; the first of which is:

The greatest risks to consumers of drinking water are pathogenic microorganisms. Protection of water sources and treatment are of paramount importance and must never be compromised.

Within the risk based water quality management framework in the ADWG it is a clear requirement that source water management is required to ensure that adverse pollution loads do not place undue reliance on the downstream interventions, such as filtration and disinfection. None of the treatment systems and options available are absolutely effective and all processes are subject to failures at times.

Recognition of this is one of the factors behind the multiple barrier concept which is to ensure that there is sufficient resilience in the total system to avoid adverse public health outcomes. The abrogation of a source water authority from its responsibilities to protect source water quality in favour of water treatment options runs counter to the ADWG and demonstrates a lack of understanding of the ADWG.

The World Health Organisation has adopted the same approach in its International Guidelines for Drinking Water and also emphasises the importance of source water protection in the total scheme of public water supply production.

Although the States have adopted the ADWG, this should not be taken as a reason for abandoning source water quality protection. Doing so is clearly against the guiding principles of the ADWG. The second guiding principle of the ADWG is:

The drinking water system must have, and continuously maintain, robust multiple barriers appropriate to the level of potential contamination facing the raw water supply.

Removal of any focus on source water protection implies an increased risk to public health and the water utilities would need to consider the addition of further treatment steps to achieve adequate safety – with the corresponding costs.

Targets in the plan are achievement points to be aimed for, that should drive planning and positive action, or discourage negative action, to enable achievement of the targets.

For all the other water quality objectives in chapter 8 for which objectives are specified (e.g. water-dependent ecosystems, irrigation water and recreational water), the objectives have been clarified by providing more specific targets. It is very concerning that the target for the raw water objective, arguably the most important value of them all, has been removed.

Proposed resolution

The water quality targets for raw water for human consumption contained in the 28 November 2011 version of the draft Basin Plan must be reinstated. This includes sections 8.09 (1)(b), 8.13, 9.36(2)(b) and 9.38 of the 28 November draft Basin Plan.

AUTHORITY RESPONSE

The Authority notes that the proposed Basin Plan provides water quality objectives under section 8.05 of part 3 of Chapter 8 for raw drinking water, related to both health and palatability. It notes also that achievement of these objectives is through the state's water resource plans, and considers that reference to the Australian Drinking Water Guidelines will provide adequate direction for the water resource planning process.

MATTER

Reference to Ramsar Ecological Character Descriptions

Nature of the disagreement

The provisions for setting water quality targets for declared Ramsar wetlands have been revised and do not allow for the best available approach to setting water quality targets for these important wetlands.

Issue and rationale

The MDBA has amended the provisions in the revised draft Basin Plan relating to water quality targets for declared Ramsar wetlands under section 8.14 to remove reference to targets in ecological character descriptions. This change and changes to section 9.32(4) then preclude water resource plans from setting better targets than provided for under schedule 9 of the draft Basin Plan. It is noted that for many sites there are no salinity targets set under this schedule, the targets lack site specificity and do not necessarily represent the best targets for these sites. The targets included in schedule 9 for South Australian Ramsar sites have been developed using the least preferred methodology included in the ANZECC guidelines, and are not adequate to provide for the protection of these sites.

For other water-dependent ecosystems alternative values can be included if the target complies with section 9.32(4)(a-d).

Section 8.14 should state that the water quality targets for declared Ramsar wetlands are those set out in schedule 9 unless a better target value is set out in an Ecological Character Description for that wetland.

Section 9.32(4) requires amendment to allow for better water quality targets to be set in water resource plans for declared Ramsar wetlands consistent with protecting the ecological character of these sites.

If the MDBA removes the reference to Ecological Character Description then South Australia requires a change to include the term described ecological character in the Basin Plan.

Proposed resolution

The following amendments to the revised draft Basin Plan are required:

- Chapter 8 (Parts 3) 8.04(1) 'Objectives for water-dependent ecosystems' proposed wording:
 - a) The water quality objective for declared Ramsar wetlands is that the quality of water is sufficient to maintain the described ecological character of those wetlands.
- Chapter 8 (Parts 4), section 8.14 (2) Water quality targets for water-dependent ecosystems: The link to described ecological character descriptions must be retained as a more appropriate default reference than the targets in schedule 9 in the absence of better targets in a water resource plan. Add a sub-section that states:
 - a) Despite subsection (1), for a declared Ramsar wetland, if better target values are described in an ecological character description for that wetland published on the Commonwealth Department's website then these target values apply.
- Chapter 9, section 9.32(4) should be amended to allow for a water resource plan to propose a better target consistent with protecting the ecological character of these sites.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 9.

The Authority agrees that states should be able to set better targets, consistent with protecting the ecological character of the Ramsar sites, in their water resource plans. The Authority had previously allowed flexibility to set better targets than those specified in the Basin Plan for all targets except those relating to declared Ramsar wetlands. This exception has now been removed, allowing flexibility in relation to all water quality targets.

Chapter 9 has been amended (at 9.32(4)) to allow persons preparing water resource plans to set water quality targets for declared Ramsar wetlands that are more appropriate for a particular site than those specified by Chapter 8 of the Basin Plan.

10. Environmental watering plan

MATTER

Improvements to the Environmental Watering Plan

Nature of the disagreement

The South Australian Government's recommendations 45 to 53 on the draft Basin Plan regarding the Environmental Watering Plan have not been adequately addressed.

Issue and rationale

The recommendations sought changes to improve the workability and robustness of the Environmental Watering Plan. While a number of the issues and recommendations are reiterated below, for completeness the MDBA should refer to pages 61 to 67 of the South Australian Government submission to the draft Basin Plan.

Proposed resolution

The MDBA should hold bilateral discussions with South Australian Government officials to discuss the recommendations and how the outcomes being sought could be addressed in the Basin Plan.

AUTHORITY RESPONSE

This issue was raised by South Australia in the submission it made to the Authority during the public consultation period. The Authority considered this matter at the time and provided a response in its report *Proposed Basin Plan — consultation report (May 2012)*.^[1] The Authority has reconsidered its initial response and determined that no change is required.

MATTER

Effect of the Environmental Watering Plan on the Commonwealth Environmental Water Holder

Nature of the disagreement

While the revised draft Basin Plan requires the Commonwealth Environmental Water Holder (CEWH) to operate consistently with the Environmental Watering Plan and the proposed new Basin wide environmental watering strategy, there is no requirement to consider State long term watering plans.

Issue and rationale

State long term watering plans will be detailed planning documents that will identify assets, objectives, targets and watering requirements, cooperative arrangements, and risks among other things. They will be developed through a consultative process. State long term plans should inform the actions of the CEWH.

Proposed resolution

Amend the Basin Plan (for example in section 7.02) to require the Commonwealth Environmental Water Holder to have regard to State long term environmental watering plans in performing its functions.

^[1] *Proposed Basin Plan — consultation report (May 2012)* available on the MDBA website at <http://www.mdba.gov.au/proposed-basin-plan/consultation-report>

AUTHORITY RESPONSE

The Commonwealth Environmental Water Holder (CEWH) will be required to perform its functions and exercise its powers in a way that is consistent with the Environmental Watering Plan (EWP) (including the environmental management framework), which sets out the important role of long-term watering plans. The CEWH will also be required to act consistently with the Basin-wide environmental watering strategy, which will provide guidance on the development of consistent long-term watering plans. Given that in some cases long-term watering plans may not be developed for several years (subject to agreement) and that they will not be subject to accreditation, the Authority considers the current provisions relating to the CEWH to be appropriate.

MATTER

The Commonwealth Environmental Water Holder's role in recovery of environmental water

Nature of the disagreement

The Basin Plan fails to articulate the responsibility of the CEWH to recover water to bridge the gap through water savings infrastructure, irrigation efficiency investments, water purchase and potentially other market-based approaches.

Issue and rationale

The Commonwealth Government has made a commitment to 'bridge the gap' between BDLs and SDLs in the Basin Plan. This should be reflected in the Basin Plan to provide certainty for water users and reduce the risk that SDLs would need to be enforced through reductions in State water resource plans.

Proposed resolution

Amend the environmental watering plan under chapter 7.0 to recognise the CEWH's responsibility to recover water to bridge the gap. A new section should be included, under either Division 7 - Planning for recovery of additional environmental water or section 7.02 (which outlines the effect of the environmental watering plan on the Commonwealth Environmental Water Holder), to the effect that:

The Commonwealth Environmental Water Holder will recover the volume of water necessary to bridge the gap between baseline diversion limits and sustainable diversion limits in order to achieve the objectives of the environmental watering plan.

AUTHORITY RESPONSE

This issue has been responded to in the matter specified by Council as a whole at matter 5, insofar as South Australia has expressed support for the consensus views.

The Commonwealth Government is recovering water on behalf of the Commonwealth Environmental Water Holder and is developing a water recovery strategy in consultation with Basin state governments as part of their discussions on the Intergovernmental Agreement.

The Australian Government's commitment to recover water to 'bridge the gap' is outside the scope of the EWP and the Basin Plan. However, in the event that the gap has not been bridged ahead of SDL implementation, the Authority have included a new provision for a reasonable excuse to be

employed for the purpose of SDL compliance for non-compliance circumstances beyond the state's control.

The Australian Government has committed to bridging the gap by 2019 through water-saving infrastructure and water purchases from willing sellers. Water recovery is outside the remit of the EWP and the Basin Plan.

MATTER

Environmental objectives and targets to measure progress

Nature of the disagreement (R45)

The revised draft Basin Plan does not specify a process for developing measurable objectives and targets and how these will be assessed. The proposed planning and prioritisation framework does not include an integrated framework for monitoring and evaluation that allows for both short term adaptive management and longer term review.

Issue and rationale

The Environmental Watering Plan should include a section which sets out the framework through which the MDBA will work with the Basin States to develop a robust environmental monitoring and evaluation plan for annual adaptive management as well as longer term measurement of progress. This will allow for adaption and improvement in long term and annual environmental water planning and prioritisation processes. The monitoring and evaluation framework should be linked to State long term watering plans and the ecological objectives and targets developed in those plans.

Proposed resolution

The Basin Plan must include provisions under Part 3:

- for the MDBA to develop, in consultation with Basin States, SMART objectives and targets, and a detailed plan for assessing progress for achieving these targets and objectives including baselines, indicator sites and indicators/measures, assessment criteria and methods, and monitoring and evaluation; and
- provide for environmental monitoring and evaluation linked to State long term watering plans.

AUTHORITY RESPONSE

The Authority considers the 'overall environmental objectives for water-dependent ecosystems' of the Basin and 'targets by which to measure progress towards the objectives' are consistent with the requirements of the Water Act 2007. Basin states will have the opportunity to develop measurable objectives and targets for priority assets and priority functions when developing long-term watering plans. This is expected to aid in the refinement of objectives and targets over the longer term with the five year review of the EWP.

All aspects of the environmental management framework are adaptive. The Basin-wide environmental watering strategy, long-term watering plans, and annual priorities can be updated at any time to take account of new information allowing for adaptive management over the short term. Over the longer term, the Water Act requires that the EWP be reviewed every five years.

Furthermore, the reporting requirements set out in the Monitoring and Evaluation Program align with and will help give effect to the adaptive approach of the EWP over the short and longer term.

The two key policy objectives of the Monitoring and Evaluation Program (MEP) are to:

- enable the Authority to assess and report on the extent to which the Basin Plan is achieving its purposes, objectives and outcomes; and
- inform adaptive management.

Monitoring and evaluation undertaken in accordance with the MEP is expected to generate new knowledge and information that can inform adaptive management approaches to Basin Plan implementation. In implementing or amending the Basin Plan, the Authority and Basin states must have regard to any findings and recommendations arising from the evaluations and reviews undertaken by the MEP (12.12). The Basin Plan also provides for reviews of water quality targets and the environmental watering plan every five years after the commencement of the Basin Plan (12.07-12.09), commencing in 2017, as well as annual and 10 yearly reviews of the Basin Plan itself. As such, the Authority considers that both short-term adaptive management and longer term review needs will be met by the MEP.

MATTER

Governance, coordination and integration

Nature of the disagreement

The revised draft Basin Plan does not adequately provide for clear governance and strong coordination mechanisms for planning in connected systems, environmental water delivery and real time adaptive management.

Issue and rationale

Effective coordinating mechanisms need to be included to avoid duplication and the establishment of parallel processes between the MDBA, Basin States and the CEWH. This should not only cover planning and prioritisation but also environmental water delivery, monitoring and evaluation and adaptive management.

Experience with policy and planning for environmental watering to date has shown the need for coordination mechanisms, not just in policy and planning, but also in delivery and real time management to avoid duplication and discrepancies between planning and delivery objectives.

The South Australian Government recommended a number of simple changes to address these issues, including stronger and broader provisions regarding the establishment of committees, principles about cooperation, reference in the Basin Plan to the development of guidelines for prioritisation of environmental water delivery and monitoring and evaluation.

The current guidelines referenced in the revised draft Basin Plan are insufficient and do not cover all aspects of environmental watering.

Committees should have a broader function than simply advising on Basin-wide environmental watering priorities and should be able to advise on environmental watering priorities, water delivery, monitoring and evaluation and provide policy and operational advice to both the MDBA and the CEWH. The existing provisions regarding a committee are not considered adequate.

In addition, the South Australian Government recommended that the MDBA coordinate the development of long term watering plans for connected water resources. While the MDBA has now revised the draft Basin Plan to include reference to a Basin-wide environmental watering strategy, it is unlikely that this strategy would adequately address the coordination issues raised.

A new section is required to provide for coordination mechanisms in environmental water planning in connected systems and environmental water delivery and real-time management.

Proposed resolution

The Basin Plan must:

- include a new section to provide for coordination mechanisms in environmental water planning in connected systems, environmental water delivery and real-time management;
- establish committees to coordinate and advise on environmental watering activities from planning through to delivery and monitoring;
- include an additional principle (or principles) requiring the MDBA, Basin States and the CEWH to work cooperatively to determine and implement environmental watering priorities in the Basin;
- refer to and develop guidelines in consultation with jurisdictions that outline the detail of how environmental watering prioritisation decisions will be made (e.g. including decision making criteria and conflict resolution processes) and how environmental water delivery, reporting and monitoring and evaluation will be coordinated; and
- require the MDBA to coordinate the development of long term watering arrangements, in particular for connected water resources, in consultation with jurisdictions.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 10.

MATTER

Basin-wide environmental watering strategy and State long term watering plans

Nature of the disagreement

The revised draft Basin Plan includes provision for a Basin-wide environmental watering strategy. There is a need to clarify the intent and application of the strategy in relation to its timeframe, interaction with state long term watering plans and the process for identifying priority assets and functions and their watering requirements.

It is considered that State long term watering plans are not given appropriate weighting as a key element of the environmental watering framework. The Basin-wide environmental watering strategy should not delay the development of State long term watering plans and where relevant should be informed by those long term watering plans.

Issue and rationale

The revised draft Basin Plan proposes the development of a Basin-wide environmental watering strategy within 24 months after the commencement of the Basin Plan with States to develop long term watering plans within 12 months after the Basin-wide environmental watering strategy.

Three years to have long term watering plans is too long and any Basin-wide strategy could be informed by State long term watering plans and priorities, including identification of priority assets, functions and watering requirements.

Issues include:

- a three year delay before long term watering plans are developed leaving a length of time with no coordinated guidance for environmental water prioritisation and delivery;
- an effective environmental water management framework should include State long term watering plans as a core planning mechanism which can inform the Basin-wide environmental watering strategy as well as setting of Basin annual priorities; and
- State long term watering plans will be comprehensive documents that identify priority assets and functions and their watering requirements and involve engagement with local communities and people affected by the management of environmental water. However they are not given adequate standing in the proposed environmental water management framework. In the draft plan, the long term watering plans are one of a number of matters that are considered when Basin annual watering priorities are developed. Long term watering plans and State annual priorities should be given far greater weighting to avoid a duplication of processes and to determine appropriate priorities for water delivery.

The Basin Plan should require the MDBA to focus on the areas where it can add value and provide a truly Basin-wide perspective e.g. the identification of gaps, the resolution of conflicts in priorities and development of multi-site watering objectives and associated flow regimes for connected systems when developing the Basin-wide environmental strategy and the annual priorities.

There is a need to clarify the interaction and hierarchy between different plans and strategies to avoid the risk of process duplication, inconsistencies, and lack of achievement of key environmental objectives and outcomes.

If the MDBA is unable to address the timing issue described above, the Basin Plan must provide for the development of a specific interim environmental watering plan for the southern connected system in consultation with relevant jurisdictions and the Commonwealth Environmental Water Holder, to commence in the 2013-14 water year and which guides the application and delivery of environmental water.

Proposed resolution

The Basin Plan must address these issues by revising the timing and process for development of a Basin-wide environmental watering strategy, State and Basin annual priorities and state long term watering plans to:

- enable planning to occur in a shorter timeframe with State long term watering plans to be developed prior to or parallel to the Basin-wide environmental watering strategy;
- clarify the interaction between the Basin-wide environmental watering strategy and State long term watering plans, including allowing for the strategy to have regard to the state plans;
- make it clear in section 7.29 that identification of assets and priority ecosystem functions would only occur by the MDBA where gaps or conflicts in State long term watering plans and annual priorities have been identified;

- ensure that section 7.14(2)(a)(ii) is a mandatory content of the Basin wide environmental watering strategy, to provide for multi-site watering objectives and associated flow regimes for connected systems; and
- amendments to section 7.29 are required to give a greater weighting to State long term watering plans and annual priorities.

If there are to be delays in developing a plan and priorities for the southern connected system then the Basin Plan must provide for the development of a specific interim environmental watering plan for the southern connected system, in consultation with relevant jurisdictions and the CEWH, to commence in the 2013-14 water year and which guides the application and delivery of environmental water.

The South Australian Government proposes the MDBA arrange a bilateral discussion to clarify the Government's concerns and proposed solutions regarding the operation of the environmental watering plan.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 10.

MATTER

Environmental Watering Plan Implementation and compliance

Nature of the disagreement

State implementation obligations are unclear and greater guidance is required.

Issue and rationale

The Environmental Watering Plan should make specific reference to the development of detailed guidelines to guide implementation, coordination and cooperative arrangements. Issues and areas where guidance is required have previously been outlined in the South Australian Government's submission on the draft Basin Plan.

Proposed resolution

The Basin Plan must include provision for the development of guidelines by the MDBA in consultation with the Basin States and Commonwealth agencies (including the CEWH) that have regard to long term planning, prioritisation and application of environmental water.

AUTHORITY RESPONSE

The Authority considers that the obligations of Basin states are clearly set out in the EWP. The Basin-wide environmental watering strategy will provide additional guidance in relation to the development of consistent long-term watering plans.

MATTER

Managing salinity and securing the health of the Coorong, Lower Lakes and Murray Mouth

Sections 2.3, 9.2 and 9.3 discuss issues relating to salinity management and securing the health of the Coorong, Lower Lakes and Murray Mouth. These issues and the proposed resolutions should be considered in making amendments to the environmental watering plan.

AUTHORITY RESPONSE

The Authority has amended the EWP to include an additional objective (at 7.06) to protect and restore connectivity within and between water-dependent ecosystems, including by ensuring that as far as practicable, water levels in the Lower Lakes are maintained above 0.0 metres AHD. This complements existing objectives for the Coorong and Murray Mouth at 7.06(3)(c) and (d).

An additional provision has also been included to allow for the Basin-wide environmental watering strategy to specify end-of-system targets for environmental outcomes, including the Lower Lakes.

Setting a minimum water level objective does not preclude the inclusion of a higher water level target in the Basin-wide environmental watering strategy, long-term watering plans or annual priorities.

11. Water resources plan

MATTER

Nature of the disagreement

The approach to ‘having regard to risk’ and the need for management and ‘fit-for-purpose’ planning within the water resource plans chapter (Chapter 9) has not achieved the right balance and lacks clarity.

The revised draft Basin Plan has not addressed South Australia’s recommendation that wherever there is a need to ‘have regard to’ an issue or risk in water resource plans, jurisdictions must demonstrate that they have given adequate regard to that requirement.

Similarly, if there is a requirement to consider if rules are necessary, there should be a clear evidence base before electing not to include rules. This could include demonstration that a risk assessment has been conducted.

The MDBA has claimed that the Basin Plan allows for fit-for-purpose planning using the ‘have regard to’ construct, however this has not been applied consistently across Chapter 9.

The MDBA must be rigorous and transparent in their accreditation assessments.

Issue and rationale

There is the risk that jurisdictions will have cursory regard to requirements and risks (particularly lower level risks) whenever there is a need to ‘have regard’ to a range of issues and requirements necessary for water resource plans. If there is a requirement to consider if rules are necessary, it is left to the jurisdiction to determine this with little guidance as to how or any requirement for evidence of what was considered in the decision making process. For example, section 9.22(b) in its current form only requires an explanation, if a risk assessment has been undertaken and risks have been identified. The new clause 9.31 has the same construct and therefore the same flaw.

There are elements in Chapter 9, for example section 9.09 - register for held environmental water and 9.51 - measures in response to extreme events where the flexibility provided in other parts in terms of the ‘having regard to’ construct has not been included and therefore South Australia still considers that there is a risk that requirements that are tailored to regulated highly developed river systems have to be rigidly applied to undeveloped, unregulated surface water and groundwater systems which are less applicable.

Water resource plans are one of the key mechanisms for implementing the Basin Plan and must be transparently accredited and effectively implemented.

Proposed resolution

The Basin Plan should require that wherever it is necessary to ‘have regard to’ whether it is necessary to include rules, there must be a requirement to undertake a risk assessment to demonstrate that regard was had. If the water resource plan determines that it is not necessary to include rules, it must provide in all cases a clear rationale for determining why it was not necessary to include rules to manage water resource issues identified in Chapter 9. In particular, section 9.22 needs to be strengthened to address this flaw.

There should be a consistent approach to ‘fit for purpose’ planning based on a risk management approach and a clear statement upfront in the water resource plan requirements allowing ‘fit-for-purpose’ planning based on a risk management approach, i.e. flexibility to adapt accreditation requirements based on the management objectives and risk assessment for the water resource.

The MDBA must prepare and publish a publicly available report on its accreditation process for each water resource plan.

AUTHORITY RESPONSE

The Authority agrees that there will need to be consistency in applying requirements that require a state to have regard to an issue or risk. The Authority agrees that it is appropriate to provide further guidance in relation to the obligations to ‘have regard to’ matters set out in the Basin Plan. A note has been added to the definitions section (section 1.07) providing clarification in relation to the way ‘have regard to’ and similar phrases should be interpreted. The note also refers to additional material set out in the Explanatory Statement which accompanies the Basin Plan. This explanation makes reference to the intention that such phrases should be interpreted consistent with case law and sets out the approach which decision-makers are expected to take when making decisions ‘having regard to’ specified matters. The Explanatory Statement has included a number of examples to further illustrate the intended operation of requirements to ‘have regard to’ particular matters.

The Authority has prepared a draft handbook (for consultation with Basin states) to assist water planners in preparing water resource plans for accreditation in accordance with the requirements of Chapter 9.

12. Water trading rules

MATTER

Nature of the disagreement

The revised draft Basin Plan proposes that all trade rules will commence on 1 July 2014 which extends the period where it is possible for inappropriate barriers to trade to still be put in place.

Issue and rationale

The 28 November 2011 version of the draft Basin Plan proposed that water trade rules with exceptions for some surface water trade rules would commence from 1 July 2013. This has been amended so that all trade rules would commence from 1 July 2014. The 2014 date extends the period where it is possible for inappropriate barriers to trade to still be put in place.

While it is recognised that States will require a transition period, this could be achieved by allowing the trade rules to commence on 1 July 2013 thus preventing any new trade restrictions but for the MDBA to exercise discretion in implementing compliance and enforcement until 1 July 2014.

Proposed resolution

Sections which deal with preventing inappropriate trade restrictions must commence on 1 July 2013. The MDBA is to exercise discretion in implementing compliance and enforcement, which is to be fully implemented from 1 July 2014.

AUTHORITY RESPONSE

The Authority considers that 1 July 2014 is an appropriate timeframe to ensure all affected stakeholders can anticipate, plan for and manage the introduction of the water trading rules.

This issue was raised during the public consultation period. The Authority considered this matter at the time and provided a response in its report *Proposed Basin Plan — consultation report (May 2012)* at issue 80.²⁶

13. Monitoring and evaluation

MATTER

The Basin Plan should require a detailed monitoring and evaluation plan

Nature of the disagreement

The Basin Plan should include provisions to require a more detailed and specific monitoring and evaluation plan to be developed. The Basin Plan itself only provides a high level framework.

Issue and rationale

Chapter 12 in the revised draft Basin Plan contains a very high level outline of principles and a framework for monitoring, evaluation and reporting. Without further elaboration of a detailed monitoring and evaluation plan or plans, Chapter 12 is not considered sufficient to effectively monitor the outcomes of the Basin Plan.

South Australia has previously recommended that the Basin Plan set out provisions that refer to the development of a detailed monitoring and evaluation plan to address a number of matters, including outlining in more detail roles and responsibilities, the determination of reporting requirements, indicators and funding arrangements. Any monitoring and evaluation detail must build on the existing programs within the States and be funded adequately into the future to ensure consistency in data collection and analysis.

A key purpose for a detailed plan would be to gain commitment from the various parties to assign roles and responsibilities for the monitoring, evaluation and reporting and address the mandate set out in Chapter 12 of the Basin Plan.

²⁶ *Proposed Basin Plan — consultation report (May 2012)* available on the MDBA website at <http://www.mdba.gov.au/proposed-basin-plan/consultation-report>

Proposed resolution

South Australia recommends a new section under Chapter 12 which should include provisions to the effect that *"...the MDBA, in consultation with Basin States, will prepare and implement a Basin Monitoring and Evaluation Plan which is reviewed on an annual basis"*.

The Basin Monitoring and Evaluation Plan should include a detailed framework for monitoring and collation of lines of evidence and scheduled evaluations to support an overall Monitoring, Evaluation, Reporting and Improvement (MERI) framework (refer to the Australian Government MERI framework for NRM; Australian Government, 2009). Agreement by named contributors where partnerships are required to assure availability of data and other sources of evidence is required to support Basin Plan MERI. The plan could include:

- evidence gathering to support the information needs of the Basin Plan, which outlines:
 - criteria by which the MDBA will assess each matter outlined in Schedule 10;
 - indicators (biophysical, socio-economic and resource management);
 - monitoring programs;
 - other sources of evidence (e.g. relevant reports and expert knowledge);
- evaluations to support the evaluation, reporting and review requirements of the Basin Plan; and
- data management provisions.

AUTHORITY RESPONSE

The Authority does not agree to a provision mandating the preparation of a Monitoring and Evaluation Program (MEP) that would be reviewed on an annual basis as the Authority considers this would be overly prescriptive and onerous. However, the Authority agrees with the intent to provide clarity on how the MEP will be implemented. The Authority will identify and implement ways to achieve this in consultation with Basin states. Options may include (but not be limited to) documents such as the MEP guideline and Basin Plan Implementation Strategy.

MATTER

Changes to Schedule 10

Nature of the disagreement

The South Australian Government is concerned that the current drafting of Schedule 10 weakens and obscures the monitoring and evaluation reporting requirements under the draft Basin Plan.

Issue and rationale

The Government is not supportive of the changes made to Schedule 10, from the 28 November 2011 version of the draft Basin Plan, in particular the replacement of reference to outcomes to be achieved with the broader concept of 'matters' upon which to report. This weakens the transparency and undermines the ability to demonstrate accountability for the outcomes the Basin Plan intends to achieve.

The MDBA must demonstrate transparency and logic in setting expected outcomes and targets (refer to Australian Government MERI framework for NRM). Linking the anticipated intermediate and long term outcomes to the compliance and audit functions of the plan is also important to ensure a robust and defensible picture of the success of the plan.

The environment can take some time to respond to management actions. A clear line of sight is needed between monitoring short-term achievements and how they demonstrate progress towards the longer term objectives and outcomes. This will create the transparency and accountability required by the MDBA to demonstrate the success of the Basin Plan to all stakeholders including the Australian public.

A strong and robust MERI will provide the appropriate mechanism to adjust and improve all elements of the Plan, including the SDL, the specific requirements, the targets and the indicators of success. South Australia has provided two options to the MDBA in Attachment 2 to strengthen Schedule 10 by including a more direct link between outcomes and the reports required.

The State Government's submission on the draft Basin Plan recommended that the MDBA consider provisions in the Environmental Watering Plan that provide for guidelines on the trade of environmental water by the Commonwealth Government (recommendation 68). This has not been addressed but could be explored through other mechanisms such as revision of schedule 10 to enable reporting against environmental water traded. Schedule 10 currently requires reporting on the identification of environmental water and the monitoring of its use. This could be expanded to include reporting on trade.

Proposed resolution

South Australia recommends a clear link to outcomes be made evident in schedule 10 by the inclusion of a column specifically for management and condition outcomes to be achieved in relation to each matter (see example in Attachment 2). A second option is to reinstate Schedule 10 from the November 2011 version with additional columns of category and links to the relevant chapter (see example in Attachment 2 - option 2).

Schedule 10 must be amended to include reporting on the trade of environmental water by the CEWH which must occur annually.

AUTHORITY RESPONSE

The Authority notes the concerns raised by South Australia. However, the Authority's view is that current drafting of Chapter 12 and Schedule 11 provide a sufficient legislative basis for transparent and robust monitoring and evaluation of the proposed Basin Plan.

Schedule 11 has been drafted at a high level to enable adaptive management by allowing for flexibility in the implementation of the MEP over time and avoiding perverse outcomes from being overly prescriptive. The Authority notes that transparency of progress against objectives and outcomes is facilitated via section 12.06 (key evaluation questions) which includes an evaluation question on achievements against Basin Plan objectives and outcomes.

Specific details on the MEP and its reporting obligations for state and Commonwealth parties can be clarified and addressed via other supporting documents, such as the Chapter 12 guideline and Basin Plan Implementation Strategy, drafts of which have been provided to Basin states for consultation. This approach may be applied to the proposal raised by South Australia, to include trading of environmental water under Schedule 11. That is, the Authority considers that the current wording of Schedule 11 (matter 9) is sufficiently broad to include this. Further details on monitoring and reporting requirements related to trading of held environmental water may be further addressed through the Chapter 12 guideline.

14. Transitional arrangements and implementation costs

MATTER

Nature of the disagreement

State implementation obligations and requirements under the Basin Plan remain unclear. The MDBA needs to work closely with the South Australian Government to establish pathways and practical timeframes for transition.

Issue and rationale

The accreditation process for water resource plans and other Basin Plan implementation requirements must be clearly articulated by the MDBA. To date, draft guideline development has not adequately articulated accreditation and other implementation requirements.

The delay in the development of the Basin Plan already has implications for the development of compliant water resource plans in South Australia in accordance with the timeframes established under the Water Act. The MDBA needs to work closely with the South Australian Government to establish pathways and practical timeframes for transition.

Proposed resolution

The Basin Plan must address these issues by clearly defining implementation and accreditation requirements for States, including clear guidelines, and developing an agreed implementation schedule. This could include allowance for a partial accreditation or pre-accreditation process to fit in with State statutory planning processes.

Ideally this should be done before the MDBA revises the draft Basin Plan for provision to the Murray-Darling Basin Ministerial Council for further consideration and comment.

The MDBA must work closely with the South Australian Government to develop transition pathways and practical timeframes for transitioning from existing water resource plans to Basin Plan compliant water resource plans.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 8, insofar as South Australia has expressed support for the consensus view.

ATTACHMENT G: VICTORIA

This section considers the comments and matters specified by The Hon Peter Walsh MLA, Minister for Water and Minister for Agriculture and Food Security as the representative on the Murray–Darling Basin Ministerial Council for Victoria, which were set out in Attachment G of the notice from the Council.²⁷

1. *SDL Adjustment Mechanism*

MATTER

Victoria strongly endorses the Council's request that the Authority work with Basin States to develop an SDL Adjustment Mechanism for inclusion in the Basin Plan, that is capable of adjusting the SDL reduction amount up to a range of +/- 25%.

Related to this, Victoria recognises that Commonwealth held water may be as low as 2100 GL, pending the outcome of any SDL adjustment in 2016 and the proposed review of SDLs in the northern Murray-Darling Basin.

The inclusion of an SDL Adjustment Mechanism in the Basin Plan will allow for the formal recognition of options that achieve environmental outcomes with less water, without requiring a formal amendment of the Plan. This will allow the socio-economic impacts of water recovery to be better managed, and wherever possible, substantially mitigated.

Victoria maintains its long-held position that the priority for any additional water for the environment should be infrastructure and on-farm programs, ahead of purchase. Complementing this, environmental works and measures and smart systems operations should be undertaken wherever possible to ensure efficient use of environmental water, thus reducing the volume of water that needs to be taken from productive use.

In line with Council's request, Victoria looks forward to working closely with the MDBA to further develop the SDL Adjustment Mechanism methodology, benchmark modelling and relevant draft Basin Plan provisions, with a view to finalising advice to Basin Water Ministers by the end of July 2012. To this end, Victoria strongly recommends that the following be used to inform this work:

- In the Authority's February 2012 Hydrologic Modelling Report (p. 196), it noted that in the development of the Proposed Basin Plan and SDLs, current works under the Living Murray Initiative did not contribute to an off-set of the SDL reduction amount. Instead, the Authority proposed that an assessment of these off-sets would form a major input to the proposed 2015 Review of the Plan. Under the parameters of the proposed 2015 Review, Living Murray Initiative works could provide for the SDL reduction amount to be substantially reduced. In line with this, Victoria believes that the SDL off-sets associated with current works under the Living Murray Initiative must allow for the SDL reduction amount to be adjusted under the requested SDL Adjustment Mechanism.
- Beyond this, the SDL Adjustment Mechanism package of initiatives should also include additional environmental works to improve watering regimes and outcomes at key assets,

²⁷ Notice from Victoria: Attachment G available on the MDBA website at http://download.mdba.gov.au/revise-BP/AttachmentG_Vic_comments.pdf

and operational measures that provide equivalent or improved environmental outcomes more efficiently.

- Victoria notes that the baseline for environmental and socio-economic factors is critical to the successful application of the SDL adjustment mechanism, and therefore needs to be agreed with States. In line with this, and in recognition of Council's preferred 2,750 GL benchmark modelling run as outlined in the Authority's Hydrologic Modelling Report, Victoria acknowledges that some technical modifications of the modelling may be required at times. Any proposed changes to the benchmark modelling should be overseen by a multi-jurisdictional working group established under the auspices of the Basin Officials Committee. This is analogous with existing processes that oversee changes to the Basin models used for Cap compliance or salinity audits.
- Finally, whilst Victoria supports the Authority undertaking the modelling to ascertain the final SDL adjustment, to ensure transparency and confidence, it is preferable that the process of undertaking the assessment includes oversight by a multi-jurisdictional working group of the type described above.

Victoria further notes Council's view that the proposed SDL Adjustment Mechanism should operate through an objective method which will determine the quantum of SDL adjustment. Recognising the related list of matters for consideration provided at Annex A to Attachment A, Victoria's strong preference is that the method to determine the quantum of SDL adjustment include the following specifically:

- Scoring the predicted ecological outcomes by assessing:
 - The flood frequency, duration and length of dry spells generated from model runs, taking into account the area and conservation significance of inundated land;
 - The area inundated by the eligible initiatives relative to the area of the floodplain that can be actively managed (note that this is the approach referred to in the Authority's 'Ecologically Sustainable Level of Take' report);
 - Other matters could be included where information is relevant and available, and methods are agreed.
- Scoring of eligible initiatives and comparing them to the benchmark score within: the river reach that is directly affected by the initiative(s); at all relevant key indicator sites; and the relevant river system scale.
- No net diminution of outcomes at a system scale (e.g. Hume to Wellington), with a limit on the extent of not achieving particular targets at remaining sites (e.g. no targets can go down by more than 10% at priority sites).
- Summing the scores at individual sites and reaches along the River Murray.

Victoria notes that the process for developing initiatives for incorporation into the Adjustment Mechanism will be governed by a gateway process that will be overseen through cooperative arrangements between jurisdictions. Fundamental to this, Victoria considers that Commonwealth funding could be made available from existing funding mechanisms to provide support for this process. Arrangements for this could subsequently be outlined in the Basin Plan Implementation Inter-Governmental Agreement (IGA).

Supporting this, at the point when SDLs are adjusted in 2016, Victoria recommends that a final baseline model should be settled for the purposes of assessing SDL compliance from 1 July 2019. This model should be accredited in line with existing arrangements under which States' Cap models are independently audited. Utilisation of the accredited model to assess SDL compliance should also take account of all credits that have been accumulated under the existing Basin Cap arrangements.

Related to the above, Victoria is strongly supportive of Council's advice to the Authority that the proposed 2015 Review be removed from the Basin Plan.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 1, insofar as Victoria has expressed support for the consensus view.

The aim of the SDL adjustment mechanism is to ensure that SDL adjustment initiatives achieve equivalent or improved environmental outcomes when compared to those likely to be achieved with a 2750 GL/y reduction in long term average diversion.

To represent the outcomes anticipated by the proposed Basin Plan and measures included as part of a Basin scale reduction of 2750 GL/y, a benchmark modelling scenario will be prepared by the Authority. The key elements of the Benchmark modelling scenario will be detailed in a schedule 5 to the proposed Basin Plan.

The Authority has considered Victoria's request to take account of credits accumulated under the Basin Cap arrangements in setting the benchmark. However, the Authority's view is that there is a fundamental difference between the Cap and SDLs. The Cap was introduced to limit further growth in diversions whereas SDLs are required to be set at a level that is environmentally sustainable. Because of these differences, the Authority's view is that it is not appropriate to include Cap balances.

The Benchmark modelling scenario is defined in schedule 5, and has been developed following discussions with jurisdictions. The Authority acknowledges the comments Victoria has made regarding the method for determining the quantum of SDL adjustment and the suggestions regarding the scoring of ecological outcomes. The Authority is liaising with jurisdictions to develop a guideline to provide a transparent and reproducible pathway for application of the SDL adjustment mechanism as set out in the SDL adjustment provisions included in Chapter 6 and the schedule. The guideline will outline a methodology which ensures consistency with the work used to inform the 2750 GL/y reduction in the Basin Plan and incorporates best available science.

The Authority views on-farm efficiency programs as an important element to an effective SDL adjustment mechanism. Water recovered through on-farm efficiency programs will enable the same or improved environmental outcomes to be achieved while maintaining or reducing social and economic impacts. On-farm efficiency programs are beyond the scope of the Basin Plan, or the remit of the Authority, these matters are being considered by other parts of the Commonwealth Government.

2. Apportionment and Water Recovery

MATTER

Victoria is strongly supportive of Council's view that, on balance, an apportionment approach is appropriate under the Basin Plan. This will provide much needed certainty to Victorian communities with regard to SDLs, particularly in terms of future investment and planning purposes.

Victoria supports Council's position, as outlined in Attachment A, that State apportionment for the Southern Basin shared downstream reduction be included in the Basin Plan, and for a process to review the shared northern reduction and its apportionment for the Northern Basin by 2015/16.

In line with Council's advice on this matter, Victoria looks forward to working closely with other Basin Water Ministers to give further consideration to the most consistent, equitable and transparent approach to determining the apportionment of SDLs. Victoria's view remains that apportionment must be incorporated into the Basin Plan prior to it being made, and strongly urges the Authority to take into account Council advice in this regard.

Victoria also acknowledges the undertaking of the Commonwealth Government to develop a Water Recovery Strategy that aligns with Council's advice regarding the SDL Adjustment Mechanism and apportionment of SDLs. To complement this, Victoria strongly recommends that the Commonwealth link its Water Recovery Strategy to a Commonwealth funded socio-economic adjustment package, which must outline its actions to provide structural adjustment assistance for Basin communities.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 3, insofar as Victoria has expressed support for the consensus view.

3. Delivery Mechanisms

MATTER

Victoria is aware that the delivery of environmental water has the potential to cause unintended third party impacts due to the flooding of private land, and access to land. Victoria strongly recommends that the Authority ensure that the Basin Plan sets in place mechanisms whereby third party impacts will be avoided to the greatest extent possible, and notes that in the first instance, any acquisition of land for easements should be voluntary.

Victoria strongly recommends that the Authority take this matter into account when preparing the Constraints Management Strategy under the Basin Plan, which Council has requested be prepared under Attachment A.

Similarly, Victoria considers that the Environmental Watering Plan under the Basin Plan should also incorporate delivery arrangements that specifically address third party impacts.

AUTHORITY RESPONSE

The Authority acknowledges the importance of managing risks involved in environmental watering and has agreed to Council's recommendation to develop a constraints management strategy within 12 months of making the Basin Plan. The Strategy will include an assessment of environmental water delivery and potential impacts on third parties. This issue was also raised by NSW, and the Authority intends taking it up in the context of the proposed constraints management strategy discussed in more detail in the matters specified by Council as a whole at matter 2.

4. Commencement of SDLs

MATTER

Victoria acknowledges that Council prefers to set a timeframe of 2019 to commence enforcement of SDLs in order to provide certainty for Basin communities, and strongly endorses this position.

Related to this, Victoria has remained concerned that under the Plan, States may be left liable for any 'gap' should SDLs not be fully met by 1 July 2019, or recovery/SDL adjustments anticipated under constructed works are not completed by this time.

To ensure this outcome does not eventuate, Victoria considers that States should not be required to enforce SDLs where, through no fault of their own, a gap between BDLs and SDLs remains at the time compliance arrangements commence. Victoria strongly urges the Authority to take into account Council's observation in Attachment A that the Basin Plan may specify the use of reasonable excuse provisions in the compliance mechanism to ensure that States are not unfairly or unreasonably bound to enforce any residual SDL liability from 1 July 2019, including if anticipated works associated with any SDL adjustment mechanism are not completed by this time.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 5, insofar as Victoria has expressed support for the consensus view.

5. Jurisdictional Implementation Obligations

MATTER

Victoria has repeatedly expressed its concern regarding the wide range of implementation obligations that are expected to be placed on Basin States by the Basin Plan, and their associated cost impact. As noted by Council in Attachment A, Victoria supports an approach whereby implementation of the Basin Plan takes place in a way that achieves its objectives in an efficient and cost-effective manner.

To give effect to this, Victoria strongly urges the Authority to accept Council's advice that a general provision be included in the Plan that allows it to enter into agreements with States in relation to the implementation of obligations under the Plan. Victoria considers that this intent is best captured through a general provision in the introductory section of the Plan, and be reiterated wherever obligations under the Plan have the potential to pose a large cost impact.

To support finalisation of these agreements, Victoria strongly advises the MDBA to clarify its intended implementation requirements for States, preferably before the next iteration of the Plan is returned to Council for further consideration and comment. Where this is intended to be underpinned by guidelines on any matter, Victoria also requests the Authority to prepare these in close consultation and agreement with Basin States, before those implementation requirements commence.

Related to this, Victoria urges the Authority to adopt Council's advice in Attachment A as it relates to 'must have regard to' provisions under the Plan. Council has noted that this phrase is used in several Chapters of the Proposed Plan, with a slightly different contextual basis in many cases. In line with this, Victoria strongly supports Council's request that the Basin Plan define the phrase 'must have regard to' as it applies to the entire Plan. Based on Victoria's previous experience in this area, the following text is provided for the Authority's consideration. It further clarifies Victoria's preferred approach in this regard:

must have regard to imposes a positive obligation to think about Basin Plan content. This obligation is balanced by a discretion to determine what weight should be given to that content. 'Have regard to' does not mean that all of the specified matters must be applied, and includes the option to give little or no weight to specified content in a particular case.

Note: Where agreed, protocols may be developed to clarify the process for 'having regard' as it relates to the operation of particular Chapters.

Supporting the above, once finalisation of implementation agreements under the Plan is complete, it is Victoria's strong preference that the Commonwealth Minister make a regulation under the Commonwealth Water Act 2007, that reflects the scope and standards under those agreements as they apply to State Water Resource Plan accreditation.

Informing this, in Victoria's view, State Water Resource Plan accreditation arrangements must be fit-for-purpose, based on the principle of cost efficiency, and be implementable within existing State water management frameworks (i.e. not require major legislative amendment to give them effect).

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 8, insofar as Victoria has expressed support for the consensus view.

A draft Basin Plan Implementation Strategy and draft of the *Guideline to Basin Plan Monitoring and Evaluation Program reporting requirements—a handbook for practitioners* has been provided to Basin states for consultation. Similarly, a draft handbook for practitioners has been developed to support water planners in preparing water resource plans for accreditation with the Basin Plan and consultation on the draft handbook is being undertaken with state water planners.

The Authority agrees that it is appropriate to provide further guidance in relation to the obligations to 'have regard to' matters set out in the Basin Plan. A note has been added to the definitions section (section 1.07) providing clarification in relation to the way 'have regard to' and similar phrases should be interpreted. The note also refers to additional material set out in the Explanatory Statement which accompanies the Basin Plan.

This explanation makes reference to the intention that such phrases should be interpreted consistent with case law and sets out the approach which decision-makers are expected to take when making decisions 'having regard to' specified matters. The Explanatory Statement has a number of examples included to further illustrate the intended operation of requirements to 'have regard to' particular matters.

The Authority has revised Chapter 9 to include a requirement that the Authority uses its best endeavours to enter into an Agreement with each state regarding water resource plan requirements (as outlined in the Authority's response to Council's recommendations at matter 8). However the Authority does not see a need to extend this to making regulations, and does not support Victoria's proposal in this regard.

6. Requirements for Determining ‘Actual Take’

MATTER

Victoria endorses Council’s view in Attachment A that determinations of ‘actual take’ must be made by using cost-effective, fit-for-purpose methods. Victoria considers this to be a highly sensible principle for the Authority to incorporate into the final Basin Plan, as a number of the accounting requirements in the Proposed Plan will offer little material benefit for the expected large cost impact of implementing them.

In line with this, and expanding on Council’s advice as provided in Attachment A, Victoria strongly recommends that where forms of take are not expected to materially impact on other uses, the Basin Plan allow for them to be estimated. The Plan should also allow for such estimations to include an error margin, and subsequently those estimations would not change for the life of the Plan.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 7, insofar as Victoria has expressed support for the consensus view.

With respect to the additional matters raised by Victoria, these have been addressed in amendments made to Chapter 9. The provision now clarifies that actual take may be estimated or measured using the best information available at the time.

Victoria also proposed that the water resource plan requirements for actual take include a requirement to identify the error margin associated with any estimates. The Authority accepts that there will be an error margin associated with all estimates but that these may be difficult to quantify, and that the relative comparison of estimates using the same method is the likely approach for managing this effect. Given this, the water resource plan requirements provide for consistent methods to be used, along with the use of the best available information, and the Authority has chosen not to include the extra requirement proposed by Victoria.

7. Water Quality and Salinity

MATTER

Victoria is strongly supportive of the intent of Council’s advice in Attachment A as it relates to Water Quality and Salinity. Victoria’s firm view is that the intended operation of the Water Quality and Salinity Management Plan (WQSMP) under the Basin Plan must be made as clear as possible, particularly with regard to:

- the ongoing status of the Basin Salinity Management Strategy (BSMS) and the continued operation of Schedule B of the Murray-Darling Basin Agreement (MDB Agreement); and
- without limiting the above, the non mandatory nature of targets under the WQSMP, particularly in terms of clarifying that operation of targets has no third party impact.

Recognising Council’s requested changes to the WQSMP in Attachment A, the following text is provided for the Authority’s consideration. It further clarifies Victoria’s preferred approach for reflecting Council’s requested changes within the Basin Plan itself:

- In order to further underpin the status of relevant content of the MDB Agreement (Schedule 1 of the Commonwealth Water Act), it is recommended that the following changes to section 8.12 and section 8.17 of the Proposed Plan, as underlined, are made:

8.12 Targets for managing water flows

- 1) Without limiting the operation of section 141 or Schedule B of the Agreement [Schedule 1 of the Water Act], the Authority must have regard to the targets in subsection (5) when performing its functions under the Agreement relating to the management of water flows.
- 2) Without limiting the operation of section 141 or Schedule B of the Agreement [Schedule 1 of the Water Act], the Basin Officials Committee must have regard to the targets in subsection (5) when performing its functions under the Agreement relating to the management of water flows.
- 3) Without limiting the operation of section 141 or Schedule B of the Agreement [Schedule 1 of the Water Act], an agency of a Basin State must have regard to the targets in subsection (5) when performing functions relating to the management of water flows.

8.17 Salinity Targets

- 1) This section sets out surface water salinity targets for the purpose of long-term salinity planning and management for the Murray-Darling Basin.
- 2) The Murray-Darling Basin and End-of-Valley Targets for salinity are set out (as absolute values) in Appendix 1 of Schedule B to the Agreement as amended from time to time.
- 3) In line with arrangements specified in Schedule B of the Murray–Darling Basin Agreement, the following entities will apply the targets in performing long-term salinity planning and management functions:
 - i. the Authority;
 - ii. the Basin Officials Committee;
 - iii. agencies of Basin States.

Victoria also strongly supports Council's request to the Authority that corresponding sections of Chapter 9 of the Basin Plan (i.e. sections 9.29 – 9.35, Water Quality Objectives), be modified to clearly reflect the overall intent of the WQSMP, particularly as it relates to the non mandatory nature of targets and that targets have no third party impact.

In accordance with this, Victoria supports Council's view that section 9.33 be modified to note that a Water Quality Management Plan, to be included in a State Water Resource Plan, may identify measures, but is not expressly required to identify measures.

In its entirety, the inclusion of these changes to the Basin Plan would ensure that salinity will continue to be managed in a way that is practical and feasible, and which also recognises the operational realities of the system.

Complementing the above Victoria reiterates its view that in its entirety, arrangements under the WQSMP should be consistent with those already in place under existing national policies for water quality management including the National Water Quality Management Strategy (NWQMS) and the Australian and New Zealand Environment and Conservation Council (ANZECC) Guidelines.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 9, insofar as Victoria has expressed support for the consensus view.

8. Trading rules

MATTER

Victoria remains concerned that the Basin Plan does not allow a suitable transition period for the State to meet the Authority's trading rule requirements under Chapter 11.

There are inconsistencies between the trading rules approach proposed in Chapter 11 of the Plan, and the Victorian Water Act and existing State policies with regard to trade. These cannot be addressed with any assurance within the Authority's proposed commencement of Chapter 11 provisions on 1 July 2014.

To comply with the Basin Plan will require changes to Victoria's legislation and, subsequently, changes to legislative instruments, the water register system, forms, procedures and communications. Accordingly, the current 1 July 2014 timeframe for Chapter 11 to come into effect allows insufficient leeway for the delivery of the complex transitional activities described above.

Should the requisite changes to State arrangements not be achieved in time, there is a high risk that a situation could arise where a trade cannot be approved under Victoria's legislation, but has to be approved under the Basin Plan.

To avoid this highly undesirable outcome, Victoria requests that the Basin Plan require a commencement date for Chapter 11 of 1 July 2015.

Notwithstanding this, Victoria reiterates the commitment it made under the October 2011 Agreement Supporting the Victorian Food-Bowl Modernisation Project, to remove the 4 per cent limit on out of district trade by 30 June 2014.

AUTHORITY RESPONSE

The Authority delayed the implementation of the water trading rules from 1 July 2013 to 1 July 2014 in recognition of the need to ensure stakeholders can anticipate, plan for and manage the introduction of the water trading rules.

This issue was raised during the public consultation period. The Authority considered this matter at the time and provided a response in its report *Proposed Basin Plan — consultation report (May 2012)* at issue 80.²⁸

²⁸ *Proposed Basin Plan — consultation report (May 2012)* available on the MDBA website at <http://www.mdba.gov.au/proposed-basin-plan/consultation-report>

9. Environmental Watering Plan

MATTER

Victoria is strongly supportive of the intent of Council's advice in Attachment A as it relates to the Environmental Watering Plan (EWP) under the Basin Plan. In Victoria's view, the Authority's acceptance of Council advice with regard to requested changes to the EWP, will maximise the efficiency and effectiveness of future Basin-wide environmental watering arrangements.

Complementing this, Victoria recommends that the Authority give due consideration to ensuring that targets under the EWP are capable of giving communities confidence that there has been sound thought put into determining what needs to be, and can be achieved with both the EWP and the water returned to the environment under the SDLs.

AUTHORITY RESPONSE

This issue has been responded to in the matters specified by Council as a whole at matter 10, insofar as Victoria has expressed support for the consensus view.

The Authority considers that the targets set out in Schedule 6 are consistent with the requirements of the Water Act. Notwithstanding, the Authority will work collaboratively with Basin states and the Commonwealth Environmental Water Holder to set appropriate targets for particular priority assets and ecosystem functions when developing the Basin-wide environmental watering strategy.

Appropriate target setting will also be an obligation for Basin states when meeting their planning and prioritisation obligations set out in the environmental watering plan.

10. Groundwater SDLs

MATTER

The SDLs for some groundwater resources in Victoria have been set by the Authority without full acknowledgement of the management expertise and conservative, risk-based methods already adopted by the State in managing those resources.

In Victoria, the Authority's proposed SDLs undermine the State's already highly sustainable approach to groundwater management by not fully recognising Permissible Consumptive Volumes² (PCVs) for the Lower Ovens and Katunga, and the technical grounding on which they are based.

In addition it is Victoria's strong view that the SDLs for Victoria's deep groundwater areas are unreasonably conservative, and appear to have no rational scientific or policy basis.

Further, there remain issues related to the SDL resource unit boundaries for Victoria's groundwater areas, which must be addressed before the Basin Plan is finalised.

Victoria recognises and supports Council's advice in Attachment A that the Authority work with the States' hydrogeologists within the next three weeks to finalise the SDLs for the next version of the Basin Plan.

The table below is intended to provide the Authority with indicative advice of the position Victoria will put forward in relation to how it considers the State's groundwater SDLs should be reflected in the Plan. In line with Council's advice, Victoria will ensure its hydrogeologists are available in the next three weeks to present the detailed technical basis for these numbers.

Beyond this Victoria notes that should there be, within the final Basin Plan, a ‘gap’ in relation to groundwater SDLs for the State, the Victorian Government expects that under the ‘Bridging the Gap’ commitment, the difference will be secured through Commonwealth buy-back of entitlements.

Indicative Advice – Victoria’s Preferred Amendments to Schedule 4

****[Note: Includes underlined text at rows 6 & 7.]**

| <u>Victoria</u> | | | | |
|--|--|---|--|---|
| Goulburn-Murray water resource plan area (GW2) | | | | |
| 4 | Goulburn-Murray: Sedimentary Plain (GS8) | all groundwater from the land surface to 200 metres below the surface or 50 metres below the base of the Tertiary sediments, whichever is the deeper, excluding groundwater in item 2 | 203.5 217.9 | 199.4 217.9 |
| 5 | Goulburn-Murray: deep (GS8) | all groundwater, excluding groundwater in items 2, 3 and 4 | 0.0 | 5.00 20.0 |
| Wimmera-Mallee (groundwater) water resource plan area (GW3) | | | | |
| 6 | Wimmera-Mallee: Highlands (GS9) | all groundwater in the outcropping Palaeozoic rocks (or the in-situ weathered horizon where it is within 5 metres of the surface) from the land surface to 200 metres below the surface | 1.26 | 2.14 |
| 7 | Wimmera-Mallee: Sedimentary Plain (GS9) | all groundwater from the land surface to 200 metres below the surface or 50 metres below the base of the Tertiary sediments, whichever is the deeper | 68.9 <u>To be determined based on revised area excluding the part of the defined Murray Darling Basin that lies inside the West Wimmera Groundwater Management Area.</u> | 190.7 <u>To be determined based on revised area excluding the part of the defined Murray Darling Basin that lies inside the West Wimmera Groundwater Management Area.</u> |
| 8 | Wimmera-Mallee: deep (GS9) | All groundwater, excluding groundwater in items 6 and 7 | 0.0 | 5.00 20.0 |

AUTHORITY RESPONSE

The Authority's views on the Victorian groundwater requests:

- There should be no revision to the BDL for the Goulburn-Murray: Sedimentary Plain SDL resource unit as the Authority's BDL policy that has been applied consistently across the Basin has been applied in this area.
- It is proposed that the SDL for the Goulburn-Murray: Sedimentary Plain SDL resource unit be revised to the BDL (203.5 GL/y). This has been proposed as the Authority has reconsidered the significance of the reduction previously proposed. In the Goulburn- Murray: Sedimentary Plain SDL resource unit if the BDL and SDL are considered to two significant figures the difference is zero. Hence, the SDL has been revised to the BDL.
- Victoria provided new information regarding the Lower Ovens Groundwater Management Area in support of revising the SDL to the current planning arrangements . Following an assessment of the information the Authority has decided that there should be no further revision to the proposed BDL and SDL for the Goulburn-Murray: Sedimentary Plain SDL resource unit.
- Agreement to amend the description of the Wimmera-Mallee Highlands (GS9) SDL Resource Unit.
- Supportive of the exclusion of the West Wimmera GMA from the Wimmera-Mallee Sedimentary Plain (GS9) by regulation as a Basin resource. The BDL and SDL are described in a way that will accommodate the potential exclusion.
- The proposed SDLs for the two Victorian deep groundwater SDL resource units has been revised to 20 GL/y on the basis that the proposed SDL will not pose a risk to groundwater resources or to groundwater dependent ecosystems.

The accepted revisions are included in Schedule 4 of the proposed Basin Plan.