The Victorian and NSW members of the Murray-Darling Basin Ministerial Council (Council) have additional views to those outlined in the s43A(7) Notice at <u>Attachment A</u> to the Commonwealth Minister, in response to the Murray-Darling Basin Authority's (MDBA) 6 August 2012 Altered Proposed Basin Plan. The issues on which Victoria and NSW have joint views are addressed in this notice. The Victorian and NSW members of the Council formally acknowledge that these comments will be circulated to their fellow Ministerial Council members.

Victoria and NSW's individual views on certain other issues are addressed respectively in Attachments D (NSW) and G (Victoria).

Victoria and NSW are disappointed with the MDBA's response to the s43A(4) joint Notice of Disagreement that the Council provided to the MDBA on 9 July 2012 (9 July 2012 Consensus Notice), which followed six weeks of intensive, highly constructive dialogue between Governments to achieve consensus on a range of critical Basin Plan matters.

The Victorian and NSW Governments consider that the 6 August 2012 version of the Altered Proposed Basin Plan does not address a number of important issues raised in the 9 July 2012 Consensus Notice, which if addressed appropriately in the next iteration of the Basin Plan would provide greater certainty to Basin States and their communities.

Victoria and NSW's joint views cover the following issues - the appendices contain suggested drafting changes to the Altered Proposed Basin Plan:

- 1. SDL adjustment mechanism (Appendix A)
- 2. SDL apportionment between Basin States
- 3. Groundwater
- 4. Jurisdictions' implementation obligations (Appendix B)
- 5. Continued operation of the Basin Salinity Management Strategy and Schedule B of the MDB Agreement (Appendix C)
- 6. No third party impacts of water quality and salinity targets (Appendix D)
- 7. Constraints management strategy and third party impacts (Appendix E)
- 8. Funding issues and structural adjustment for communities
- 9. Requirements for determining "actual take" (Appendix F)

1. SDL adjustment mechanism

Victoria and NSW consider that an SDL adjustment mechanism is essential to allow for the outcomes of environmental works and measures, potential changes to current operating rules, and changed river operations to generate an SDL offset of up to 650 GL.

However, this offset should apply to the 2,750 GL reduction in the first instance. Should there be any shortfall at this point requiring water purchase to bridge the gap to meet the 2750 GL reduction amount, then, in our view, this should only occur through strategic purchase or infrastructure programs to be agreed with the jurisdictions. Victoria and NSW do not support any further general purchase tenders in our jurisdictions.

Victoria and NSW considers that only after the 2,750 GL SDL reduction has been settled, that any further water recovery should occur as a result of the relaxation of constraints, and that this should only be through additional Commonwealth investment in water recovery that can occur with no social and economic impact.

Victoria and NSW believe that the current SDL adjustment provisions in the Draft Basin Plan to be a basis for further development. However, it is critical to our support of a Basin Plan that we have full confidence that the adjustment mechanism is designed to operate effectively and as the Ministers envisaged i.e. that up to 650GL of offsets will be able to be achieved through environmental works and measures and changes to river operating rules and procedures.

Victoria and NSW request that the Commonwealth Minister note the importance of this issue to Victoria and NSW and convey to the MDBA the need to work closely with us on the further development of the adjustment mechanism to ensure that we will have sufficient confidence in it to enable us to support a final Basin Plan.

There are a number of areas where further work is required. These include issues associated with:

- Initial conditions of development;
- The Benchmark model run;
- The design of the supply measure SDL adjustment;
- The design of the efficiency measure SDL adjustment; and
- The operation of the SDL adjustment mechanism including the interaction of the supply and efficiency SDL adjustment processes and the water resource planning process, the SDL commencement year and the SDL compliance process.

Each of these is discussed in more detail below and Victoria and NSW are willing to continue actively working with the MDBA on these in the near future.

(a) Initial conditions of development

The MDBA have not clearly defined what is included in the initial conditions in the modelling. This means it is unclear what opportunities are available to jurisdictions to close the gap or to present offsets under the SDL adjustment mechanism.

The fundamental concept of Initial Conditions of Development in clause 6.08 should be clarified. These conditions define what additional works, measures, management and operational changes can be considered as part of the SDL adjustment mechanism. Victoria and NSW understand these conditions to include the works, measures and water management laws

and rules in place (or assumed to be in place) at June 30 2009, as represented in the MDBA's model run 847. The one exception being The Living Murray works and measures which the MDBA acknowledged they had not been able to assess the benefits of before the Altered Proposed Basin Plan was released.

Victoria and NSW remain concerned that the initial conditions of development may assume that volumes recovered in the northern basin contribute to flows downstream of the Menindee Lakes required to deliver environmental outcomes in the southern basin, contrary to previous formal advice from the MDBA.

(b) The Benchmark model run

The benchmark model (clause 1.02) is critical to the operation of the SDL adjustment mechanism. This model determines the starting point from where the effect of supply and efficiency adjustments will be measured. Victoria and NSW believe that the benchmark model is the model and setup that was used by the MDBA to underpin their decision on 2,750 GL of water recovery (model run 847).

However, it is understood the MDBA would like to improve this model and setup prior to using it as the benchmark model to ensure that it will be capable of underpinning the adjustment process. This will involve fixing some technical issues and errors and enabling The Living Murray works to be assessed so that the full ecological benefits of the works can be more accurately modelled to determine potential offsets.

Victoria and NSW acknowledge that the SDL adjustment mechanism needs to be underpinned by a robust assessment process that can be consistently applied. However we have concerns around the degree of change that could occur. In our view, it is necessary to have agreed policy and principles and governance around any process to change the benchmark model and then oversee its use in the adjustment process.

Noting that the **PURPOSE** of revising the benchmark is to enable the offset adjustment approach to be effectively applied and to produce a fit for purpose benchmark which reflects the operating arrangements for the river and reasonable expectations for environmental water management, Victoria and NSW propose that the following principles direct what changes can be made to the benchmark model:

Principles for revising the benchmark

- The benchmark must represent the June 30 2009 or agreed future operating conditions and arrangements for the river systems;
- Any changes should be minimal and limited to those required to give effect to the above **PURPOSE**. Changes to the benchmark should not present an opportunity for further optimisation of outcomes outside of this **PURPOSE**;
- Improvements in the modelling to produce a benchmark should not change rules or river operations that may legitimately be claimed as an offset; and
- The guiding principles or criteria for flow events being selected in "pick-a-box" should be documented and used consistently between the benchmark and adjustment runs and be based as practically as possible on hindsight – that is, without assuming prior knowledge of future river conditions.

Governance of the process to revise the benchmark

The governance process associated with changing the benchmark model should:

- Ensure that the principles are appropriately applied;
- Deliver transparency, in recognition that revising the benchmark is a contentious issue with potentially high impacts for communities or the environment;
- Result in a clear decision, recognising that the various parties may have different or diametrically opposed expectations of the outcomes of the process;
- Be able to resolve disagreements; and
- Document the process so that changes to the benchmark model can be audited.

Victoria and NSW propose the following governance process to achieve these goals:

- Basin Officials Committee (BOC) oversight of the process with the suite of proposed changes to be agreed by BOC before implementation by the modellers; and the final benchmark, with documentation, to be provided for BOC approval;
- BOC could establish multi-jurisdictional working groups to assist e.g. a policy group to recommend a suite of changes (for confirmation by BOC), and a modelling group to work out how to implement the changes fairly and to oversee testing and review results; and
- All changes, and their rationale, to be documented to enable independent auditing of the process.

(c) The design of the supply measure SDL adjustment

The aim of the supply measure is to provide the same level of environmental outcomes as achieved by the Benchmark Model run with a reduced volume of held environmental water. Ministers' envisaged that the supply level adjustment could operate to provide the equivalent outcome of up to as much as 650GL of additional water. There are a number of detailed matters around the policy settings, methodology design and governance, works and measures eligible for consideration, which need to be resolved before Victoria and NSW would be satisfied that it would operate effectively in the way envisaged by Ministers. These include:

Living Murray works and measures

Victoria and NSW's position is that Schedule 5 be revised to clarify that the full benefit of Living Murray works and measures can be assessed as supply measures. This is consistent with the intention of the MDBA in their proposed 2015 review.

Safety nets

For the SDL adjustment mechanism to work effectively, it must permit choices to be made about where and when water should be applied to achieve the highest value environmental outcomes across the Basin. Victoria and NSW believe that the current safety nets in Schedule 5 (clause 1.07) are overly restrictive and will lead to few if any supply adjustments.

For example, there is no allowance for any change to the indicators at the Coorong, Lower Lakes and Murray Mouth Ramsar site. Any reduction in the proposed flows down the River will change flows out of the Mouth. This will lead to a change in the modelled outcomes, as these are all linked to modelled flow.

Victoria and NSW consider that:

• the proposed indicators could be assessed to identify those that are considered ecologically essential to ensure protection of the Coorong, Lower Lakes and Murray Mouth, and use

these as the basis of comparison between environmental outcomes achieved under the benchmark run and adjustment model runs;

- there are likely to be alternative options to meet many of the indicators, such as water delivery into the Coorong in a different way from the modelled approach; and
- there are potential works that could be implemented which would improve the ability to meet the indicators (e.g. reconnection of the South East Drainage Scheme or changed operation of Barrages).

Additionally, it is Victoria and NSW's position that the Coorong, Lower Lakes and Murray Mouth should be subject to the same safety net approach as that proposed for other upstream Ramsar sites, noting that this is highly conservative i.e. no more than 5% change. This at least allows for a level of change that could result from modelling uncertainty.

Victoria and NSW also ask that the MDBA be requested to demonstrate that the mechanism can operate effectively with such conservative safety nets in place. If this cannot be done then revised safety nets should be proposed and discussed.

Ecological weighting

Schedule 5 (clause 1.06(2)(c)) proposes to weight each flow indicator by the area inundated within each flow band. Such an approach would result in the score for some flow targets receiving 80 times the weighting of the score of other flow targets resulting in some environmental values being given inadequate weighting. There is no ecological evidence to support this result.

In the absence of strong ecological evidence supporting an alternative approach, Victoria and NSW suggest each flow indicator be given equal weighting. However, should such evidence emerge, alternative approaches to weighting could be discussed. For example, to make sure the benefits of all indicators are recognised, a weighting that diminishes with increasing area inundated could be used.

Treatment of tributary valleys

The scoring approach for the River Murray tributaries requires further discussion as it is unclear how the MDBA's policy decision that the local reduction amounts to meet the environmental water requirements for the tributaries has been accounted for.

Scale

The mechanism as proposed in Schedule 5 appears to allow tradeoffs between the northern and southern basin i.e. a decrease in environmental outcomes in the northern basin could be compensated for by greater outcomes in the southern basin.

Victoria and NSW do not support this approach as data quality between the two river systems are quite different, and given the modelling assumption that the systems are effectively hydrologically disconnected there is no apparent reason why they would now be considered as closely connected. Moreover, it is envisaged in both the 9 July 2012 Consensus Notice and the Altered Proposed Basin Plan, that further investigations and new science would be undertaken in the northern basin. An SDL adjustment mechanism may be possible but not if it depended on new science. Given this, when the Basin Senior Officials Group previously considered this issue, they agreed to the development of independent approaches in the north and south.

Victoria and NSW request that the SDL adjustment mechanism be applied independently to the northern and southern parts of the Basin.

Combining frequency and dry spell

In the detail of the proposed methodology, the MDBA propose that dry spell and frequency should be retained as separate measures all through the application of the method, while Victoria and NSW consider that while they should be assessed separately, as both are critical, they should be summed in the assessment method prior to determining the final score.

Also, all components of the environmental benefit scores determined for each reach should be combined before assessing the offset volume or compliance with the safety nets, rather than assessing dry spells and frequency separately (clause 1.06(1)). Assessing the scores separately is likely to make the adjustment method insensitive to adjustment proposals.

Environmental significance weighting

The metrics included in the weighting of environmental significance should be based on the extent of flood dependent native vegetation, number of threatened species and land tenure or land use. The additional metrics listed in Schedule 5 (clause 1.05(3)) would be extremely difficult to use as there are no consistent data sets available for these metrics.

In addition to these comments, Victoria and NSW have suggestions for specific amendments to Schedule 5 provided at Appendix A. We seek the opportunity to discuss these further with the MDBA as the SDL adjustment mechanism is developed further.

(d) Efficiency Measures

The aim of the efficiency measures is to enable further water recovery where improved environmental outcomes can be achieved without worsening socio-economic impacts. A key element of this is that river constraints must be lifted to enable the effective and efficient use of additional water before any additional water recovery increases, i.e. it must be clear that the lifting of the constraints and provision of more water will result in worthwhile environmental outcomes.

Consistent with the 9 July 2012 Consensus Notice, Victoria and NSW request that this dependency between the lifting of constraints and the demonstration of greater levels of ecological outcomes before investment in additional water recovery is made, is clarified in the Basin Plan.

In addition, Victoria and NSW are very concerned to ensure that additional water recovery will not result in more socio-economic impacts. To guarantee no increase in impacts, we require information on how the additional water is to be recovered and to be involved in the development of criteria against which impacts will be measured. Any criteria must include assessments of the impact on production for participating farms, where the water has been acquired and be consistent with maintaining the viability of irrigation distribution businesses and regional industries. These criteria need to be agreed with the relevant jurisdiction.

(e) **Operation of the adjustment mechanism**

Victoria and NSW understand there is still some uncertainty about how the SDL adjustment mechanism will be implemented and that a number of issues are still under development and discussion.

It is proposed the following broad process could be applied to the operation of the mechanism:

• 2012-2016 – investigation of environmental works and measures, smarter rules and river operations and constraint investigations;

- 2016 assessment of the potential supply offsets leading to a downward movement in the SDL reduction amount and a consequential increase in the SDL as a result of accredited offsets;
- 2016 2019 Water Resource Plans are developed to deliver 2016 SDL estimates, environmental works and measures are constructed, changes in river rules and operations are implemented and funded constraint reduction programs are implemented. In addition, if funding is available, efficiency adjustment programs are implemented; and
- 2019 and beyond Water Resource Plans start to implement the final SDLs taking account of any held water acquired through the efficiency adjustment programs and SDLs then commence, subject to the gap being bridged by the Commonwealth. We note that further time may be allowed to finalise any environmental works and measures, complete purchase programs consistent with state agreements and complete any efficiency adjustment programs. Any resulting increases in water recovery resulting from these final efficiency measures will be held by the CEWH and water resource plans should enable recognition of the recovered water.

In conclusion, Victoria and NSW reiterate that an effective SDL adjustment mechanism working in the range envisaged by Council is a critical element in our support for a Basin Plan. It is requested the Commonwealth Minister suggest to the MDBA the matters outlined above. Victoria and NSW look forward to actively working with the MDBA and other jurisdictions on the continued development of the SDL adjustment mechanism prior to and if necessary after, the completion of the Basin Plan.

2. SDL apportionment between Basin States

The Altered Proposed Basin Plan includes proposed cuts to productive water use of 2,750 GL comprising set amounts for within-valley needs, and shared reduction targets for the northern and southern basins for contributions to end of system needs.

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. The principles for water apportionment across both the northern and southern basin must promote equity, transparency and consistency.

The 9 July 2012 Consensus Notice stated that:

In the case of the downstream SDL reduction for surface water in the southern Basin zone ('southern shared SDL'), Council considers there is benefit in apportionment of any downstream SDL reduction apportioned to each State in the Basin Plan, and that States would determine the apportionment of the State share to catchments within their jurisdictions.

However, the Altered Proposed Basin Plan does not include a definitive method that would allow the MDBA to distribute these shared reduction targets between States and river systems in the Plan. The absence of shared reduction targets creates unacceptable levels of uncertainty for future investment and planning purposes for Basin communities and industries.

Victoria and NSW acknowledge that since the release of the Altered Proposed Basin Plan the MDBA has distributed suggested amendments to section 6.05, section 6.13 and Schedule 2 to address the apportionment of shared reduction targets in the southern basin.

Victoria and NSW request that the Altered Proposed Basin Plan be amended so that the values of the shared reduction targets in the southern basin are apportioned at the State level based on the proportioning of surface water diversions with urban water use included in recognition that all extractions impact on river health. This would result in the 971 GL per annum shared reduction target for the southern basin being shared between Basin States as follows:

- Victoria 425 GL per annum, being 43.8 per cent of 971 GL;
- NSW 458 GL per annum, being 47.2 per cent of 971 GL;
- South Australia 83 GL per annum, being 8.5 per cent of 971 GL; and
- Australian Capital Territory 5 GL per annum, being 0.5 per cent of 971 GL.

In accordance with the 9 July 2012 Consensus Notice Basin States should be free to determine the apportionment of the State share to catchments within their jurisdictions.

In the case of the northern basin, given the need for further work on the shared downstream reduction, NSW is prepared to work with Queensland on finalising the volume and the allocation between states and catchments. However, consistent with the 9 July 2012 Consensus Notice, the apportionment between jurisdictions should be undertaken on a consistent, equitable and transparent basis.

Victoria and NSW further request that the Commonwealth Minister suggest to the MDBA that the Altered Proposed Basin Plan be amended so that, following the operation of any SDL Adjustment Mechanism, the States will advise final within-catchment apportionments for the purposes of preparation of the Water Resource Plans according to the requirements of the

Basin Plan, which would incorporate this apportionment. The Commonwealth's Water Recovery Strategy would then be revised accordingly.

3. Groundwater

Victoria and NSW request again adjustments to some of their groundwater SDLs.

Victoria and NSW acknowledge some stakeholder concerns in relation to the potential adverse connectivity impacts of groundwater usage on surface water SDLs. Victoria and NSW acknowledge this concern as justified in order to protect the anticipated environmental benefits from the MDBA's proposed surface water SDLs. However, in recognition of the conservative approach that already underpins groundwater management policy settings in both states, Victoria and NSW request that the MDBA be enabled to consider increases in specific groundwater SDLs as requested by individual jurisdictions, provided that the requesting jurisdiction demonstrates that through the operation of its groundwater management policy settings, the requested increase will not have a detrimental impact on any related surface water resources.

The following sections explain in more detail why Victoria and NSW consider their current groundwater management arrangements are effective and, if applied with the requested changes to the groundwater SDLs, will not undermine the positive benefits expected to be delivered by the MDBA's proposed surface water SDLs.

Victorian Groundwater SDLs

Victoria requested in its 9 July 2012 Appendix G Notice that, for the Goulburn-Murray Sedimentary Plain groundwater area, the MDBA increase the BDL from 203.5 GL to 217.9 GL and increase the SDL from 199.4 GL to 217.9 GL. In the Altered Proposed Basin Plan, the MDBA left the BDL for this area unchanged but increased the SDL to match the BDL.

Victoria retains its strong view that the MDBA's BDL and SDL for the Goulburn-Murray Sedimentary Plain groundwater area are unreasonably conservative and are not an appropriate application of the MDBA's own policies.

Groundwater in Victoria is managed via a range of instruments that include plans and other legal tools based on best available technical information. These management instruments have regard for the physical management of groundwater usage and related environmental and social interactions in order to ensure groundwater is not over-extracted.

Permissible Consumptive Volumes (PCV) are a fundamental part of Victoria's longstanding approach to groundwater management. They are made by the Victorian Water Minister and are the legal limit on the total volume of groundwater that can be licensed in a groundwater area. PCVs are formally made separate to specific management plans and exist independently of any restrictions placed on usage from time to time by such plans. As such, any management plans must work within the parameters of PCVs. The PCVs are therefore an effective primary management tool.

Where a plan exists, the MDBA's policy is to acknowledge as the BDL the "plan limit", that is the total amount of water that can be licensed. Victoria is strongly of the view that the PCVs should be used as the "plan limits" for the purposes of setting both the BDLs and the SDLs.

The Goulburn-Murray Sedimentary Plain groundwater area includes both the Katunga Water Supply Protection Area and the Lower Ovens Groundwater Management Area. It also includes land outside these two management areas. The sum of the PCVs for these two groundwater management areas, plus the entitlement volumes outside the groundwater management areas

and estimates of the domestic and stock use total 217.9 GL. Victoria considers that the BDLs and SDLS for the Goulburn-Murray Sedimentary Plain groundwater area should therefore be set at 217.9 GL.

However, the MDBA has chosen not to apply this approach.

For the Katunga Water Supply Protection Area, the MDBA has adopted as the BDL, a restriction rule within the current plan that limits extraction to 70 per cent of the PCV. However, this rule can vary with time and groundwater conditions. A recent Victorian review of the State plan recommended changing this restriction policy, including consideration of lifting the 70 per cent rule.

In the Lower Ovens Groundwater Management Area, a recently completed plan, which will be submitted to the MDBA as an Interim Water Resource Plan under the Basin Plan, confirmed that the PCV set for this area remains appropriate. This is based on extensive recent technical assessments, including a numerical groundwater model. This technical information confirms Victoria's views that the Gazetted PCV should be adopted as the BDL.

Victoria considers that the MDBA's decision not to fully recognise Victoria's PCVs for the Goulburn-Murray Sedimentary Plain groundwater area is unreasonable as it is inconsistent with:

- The MDBA's own policy for setting BDLs at "plan limits"; and
- Recent technical reviews and analysis prepared for Katunga and the Lower Ovens about what is the sustainable limit.

Victoria therefore requests that the Commonwealth Minister suggest to the MDBA that it amend item 4 of Schedule B of the Altered Proposed Basin Plan to increase both the BDL and SDL values for the Goulburn-Murray Sedimentary Plain groundwater area to 217.9 GL, incorporating 100 per cent of Victoria's PCVs, including the full PCV for both the Lower Ovens and Katunga.

Victoria's groundwater policy settings and frameworks will ensure that these changes will not impact surface water SDLs.

In the event that it is not possible for the Altered Proposed Basin Plan to be amended on this basis, Victoria requests that an alternative approach would be for the MDBA to set the BDL at the PCV limits. This would enable the Commonwealth to bridge the gap between the BDL (217.9GL) and the Murray Basins estimated SDL (199.4GL).

Once the SDLs have been amended as suggested above, Victoria requests that the Commonwealth Minister suggest to the MDBA that it examine the feasibility of developing a groundwater SDL adjustment mechanism in order that new scientific and hydrogeological information may be taken into account as it becomes available and used to adjust groundwater SDLs across the Basin on an 'as needs' basis. This groundwater SDL adjustment mechanism should take account of the risk-based methods that are currently applied by the States in managing groundwater resources.

NSW Groundwater SDLs

NSW understands the concerns expressed by environmental interest groups during the consultation period that an increase in groundwater extraction may compromise the effect of reducing the diversion of surface water to meet Sustainable Diversion Limits.

NSW shares those concerns as it does not intend to reduce volumes of surface water that would otherwise be available for use by licensed entitlement holders, including Commonwealth and State environmental water holders.

In this respect, NSW has generally agreed to the MDBA's proposed SDLs for aquifers where there is greater than minimal connectivity between the surface water and groundwater.

However, the altered draft Plan includes groundwater SDLs for four NSW deep and brackish aquifers which have been set at unnecessarily restrictive levels by the MDBA. They have not been determined with consideration of NSW's more significant groundwater management mechanisms which ensure that there are no impacts on surface water resources nor with proper consideration of the extent of connectivity and the scientific information available about these aquifers.

The MDBA has applied a standard 25% limit to all aquifers across NSW where there is unassigned water irrespective of the degree of connectivity and availability of information.

NSW has made available 50 years of groundwater studies and investigations to MDBA staff, in support of the NSW approach to setting extraction limits

The NSW approach to setting a long term average annual extraction limit (LTAAEL) in its water sharing plans for groundwater sources provides for extraction to be limited to a proportion of the estimated diffuse rainfall recharge. A risk-based approach is used to determine the proportion of the recharge volume that will be available for extraction with the remainder retained to meet environmental needs and the long term sustainability of the resource.

This assessment considers the risk that groundwater extraction would place on the groundwater source and its high priority groundwater dependent ecosystems and identifies risks to ecological, water quality and aquifer integrity assets. The socio-economic risk assessment looks at the dependence of local communities on groundwater extraction in terms of the risk to financial and sociological assets. An overall risk valuation is attained for the groundwater source.

As a result, a sustainability index is determined which sets a proportion of recharge to be available for extraction, while the remaining proportion of the estimated recharge volume and all the volume of groundwater held in storage are reserved in the plan under the planned environmental water provisions. All rainfall recharge in areas of high conservation areas, e.g. National Parks, is also reserved as planned environmental water. Recharge across the entire outcrop area of the water source is considered. All water that is held in storage which equates in many cases to millions of GLs is reserved and cannot be made available for extraction. Despite NSW's scientific and precautionary approach, the MDBA has set SDLs for some NSW aquifers well below NSW long term average extraction limits developed through its water sharing plan process.

NSW has substantially revised its recommended SDLs from the 9 July 2012 notice, but the following remain in contention:

Water Source	MDBA SDL GL	NSW Recommended SDLs GL	Comment
Western Murray Porous Rock	116.6	222.1	The Western Murray Porous Rock water source was assessed by the MDBA to have a low risk to the environmentally sustainable level of take factors and a low uncertainty risk, yet the SDL is severely limited by the MDBA reportedly due to poor data quality.
			NSW does not agree that there is poor data for this water source. The recharge rates are well known and established through a joint CSIRO / NSW Government field trial sites that relate long term recharge rates to soil type and land use.
Lachlan Fold Belt	259	259 as a single SDL across the aquifer	This water source has very minimal connection to surface water. NSW can accept a 259 GL SDL for the whole water source provided this is not divided into zones. To remove the zones would have no adverse impact on environmental assets or stream base flow due to the rules and provisions in the NSW Lachlan Fold Belt water sharing plan. While MDBA has removed the zones for the New England Fold Belt in the altered draft, it has retained zones for this water source without explanation.
Eastern Porous Rock	131.7	146.6	This water source has very minimal connection to surface water. The MDBA has made some concession to NSW advice in the latest draft and removed its previous 200 meter depth constraint, but the SDL still remains inadequate.
Adelaide Fold Belt	4.43	9.61	This water source has no connection to surface water yet is set at a SDL that would imply a high degree of connectivity.

NSW policy settings and frameworks that are much more effective than an extraction limit in managing groundwater and ensuring that connectivity with surface water is not impacted. These include the following:

- Rules for granting or amending water supply work approvals and the management of existing works for groundwater sources. These rules determine where water supply works can be located and how existing works may be managed where they are already within the distance restriction.
- For new and replacement works there are rules to minimise interference between neighbouring works, protect water levels for high priority groundwater dependent

ecosystems, protect groundwater dependent culturally significant sites and manage surface and groundwater connectivity.

- The NSW Water Management Act allows for temporary restrictions to be placed on extractions where there are local impacts, such as draw-downs from pumping during dry periods.
- Water extractions can also be managed through allocation announcements where allocations are reduced, if extraction exceeds the limit.

Further to this are the provisions of NSW aquifer interference policy, which is about to be released. Under this policy, new developments that extract groundwater will have to obtain licences not only from the water source from which they take water directly; but also from any nearby or overlying water sources from which they indirectly take water through seepage. This includes induced losses from surface streams.

All of these measures provide strong restrictions to ensure that the groundwater source is managed sustainably and that the connectivity issue is addressed through the requirement to hold a surface water licence for any leakage that a development may cause.

4. Jurisdictions' implementation obligations

The 9 July 2012 Consensus Notice included a request for the MDBA to include a general provision in the Basin Plan requiring the MDBA to use its best endeavours to enter into agreements with the Basin States in relation any Basin Plan obligations that impose additional costs on them and to consider Commonwealth-State funding arrangements in those agreements.

In addition, the 9 July 2012 Consensus Notice requested that the Commonwealth make a regulation about the scope and standards that the MDBA will apply in accrediting water resource plans.

The amended section 9.06 of the Altered Proposed Basin Plan includes requirements for the MDBA to enter into agreements with the Basin States on water resource plan requirements that impose costs on the Basin States and for these agreements to take into account Commonwealth-State agreements. However, this section 9.06:

- Only relates to water resource plan requirements it does not cover all new requirements under the Basin Plan that impose additional costs on the Basin States; and
- Only refers to Commonwealth-State agreements generally and does not specifically reference Commonwealth-State "funding" agreements.

Victoria and NSW endorse the Council's view in Attachment A that the MDBA endeavour to enter into agreements with Basin States to cover all obligations arising from the entire Basin Plan, taking into account all relevant Commonwealth-state agreements, including funding agreements.

In line with this, and expanding on Council's advice, Victoria and NSW request that the Commonwealth Minister suggest to the MDBA that the Altered Proposed Basin Plan be amended to include a new section in Chapter 1 to clarify that the agreements between the MDBA and the Basin States need to cover all new obligations that impose costs on the Basin States in order to ensure there is a shared understanding between them about how the new obligations will be met. These obligations are not limited to the water resource plans. In addition, the Basin Plan should specifically refer to Commonwealth-State "funding" agreements, rather than generally to Commonwealth-State agreements.

Supporting this, Victoria and NSW request that the Commonwealth Minister facilitate the Commonwealth making a new regulation under the Commonwealth Water Act 2007 that reflects the scope and standards under the agreements between the MDBA and the Basin States as they apply to water resource plan accreditation.

In addition to these comments, Victoria and NSW have suggestions for specific amendments to Chapter 9 provided at Appendix B.

5. Continued operation of the Basin Salinity Management Strategy and Schedule B of the MDB Agreement

Both the 9 July 2012 Consensus Notice and Victoria's Appendix G Notice requested that the MDBA clarify in the Basin Plan, the relationship between the provisions in Chapter 8 and the Basin Salinity Management Strategy (BSMS) and Schedule B of the Murray-Darling Basin (MDB) Agreement.

Despite the inclusion of an additional note in section 8.10, Victoria and NSW remain concerned that Chapter 8 is silent on how the Basin Plan is intended to operate alongside the historical approach to managing salinity in the southern Murray-Darling Basin under the BSMS. In Victoria and NSW's view, this lack of clarity threatens to substantially undermine, and potentially reverse, the successes already achieved across the southern Basin with respect to salinity management. It potentially exposes the managers of water and salinity programs to competing and conflicting objectives.

The Altered Proposed Basin Plan does not include a process to guide the resolution of potential conflicts or competing needs.

Victoria and NSW are concerned that having two potentially conflicting frameworks creates an unacceptable risk of potential future legal challenge.

Victoria and NSW request that the Commonwealth Minister suggest to the MDBA that the Altered Proposed Basin Plan be amended to include specific additions in sections 8.14 and 8.19 of the Altered Proposed Basin Plan to clarify the relationship between the provisions in Chapter 8 and the BSMS and Schedule B of the MDB Agreement.

In addition to these comments, Victoria and NSW have suggestions for specific amendments to Chapter 8 provided at Appendix C.

6. No third party impacts of water quality and salinity targets

The Council noted in its 9 July 2012 Consensus Notice that it is highly desirable that the Basin Plan clarify that the operation of targets under Chapter 8 is intended to have no third party impacts and suggested that a specific new section be added to this effect into Chapter 8.

The MDBA has not made any specific changes to address the issue of no third party impacts but has instead claimed that section 6.28 already provides for this. However, section 6.28 deals with "reliability of water allocations" generally rather than water quality and salinity targets specifically. It is not sufficiently clear that section 6.28 addresses the Ministerial Council's concern.

In Victoria and NSW's view, the Altered Proposed Basin Plan remains insufficiently clear that the operation of targets under Chapter 8 is intended to have no third party impacts.

Victoria and NSW request that the Commonwealth Minister suggest to the MDBA that section 8.13 of the Altered Proposed Basin Plan be amended to deal explicitly with the issue of "no third party impacts" from water quality and salinity targets.

In addition to these comments, Victoria and NSW have suggestions for specific amendments to Chapter 8 provided at Appendix D.

7. Constraints Management Strategy and Third Party Impacts

The 9 July 2012 Consensus Notice requested that the MDBA include in the Basin Plan, a requirement for the MDBA to prepare a Constraints Management Strategy within 12 months of the Basin Plan being made.

The MDBA included a new section 6.07 of the Altered Proposed Basin Plan in relation to a Constraints Management Strategy.

Victoria and NSW are concerned that while section 6.07(1)(c) of the Altered Proposed Basin Plan requires the MDBA to assess the third party impacts of any proposed modifications to constraints, it will not necessarily prevent third party impacts occurring if constraints are modified on the basis of the Constraints Management Strategy.

Any decision to remove constraints should only be taken with full consideration of how any third party impacts will be addressed and this requirement must be incorporated in the Basin Plan.

Victoria and NSW therefore request that the Commonwealth Minister suggest to the MDBA that an additional subsection be added to section 6.07 to require that any modifications that are undertaken, must include measures to address any third party impacts. This will ensure that actions arising from the Constraints Management Strategy have regard for third party impacts, rather than limiting these assessments to the Strategy itself.

In addition to these comments, Victoria and NSW have suggestions for specific amendments to Chapter 6 provided at Appendix E.

Further, Victoria and NSW are aware that recent delivery of environmental water has had unintended third party impacts due to the flooding and consequential restricted access to private land. Victoria and NSW require 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.

Victoria and NSW request that the Basin Plan include a specific statement that it will not result in the compulsory acquisition of land and easements.

8. Funding Issues and structural adjustment for communities

Victoria and NSW will not be able to implement the Basin Plan once it is agreed, unless funds are provided. The issue of funding of State costs must be resolved before the Basin Plan is submitted to the Commonwealth Parliament.

Similarly there has been no progress on the development of a structural adjustment assistance package for communities and industries impacted by water buybacks. Resolution of this is essential before the Basin Plan is submitted to the Commonwealth Parliament.

9. Requirements for determining "actual take"

The 9 July 2012 Consensus Notice stated, in relation to determining an estimate of actual take, that:

The method and duration of the estimate to be used in a Water Resource Plan should be agreed between the Authority and the relevant Basin State, taking into account cost effectiveness.

While section 9.15(2)(b) of the Altered Proposed Basin Plan now permits Basin States to estimate "actual take", it does not explicitly state the duration for which the estimate remains valid.

Victoria and NSW request that the Commonwealth Minister suggest to the MDBA that the Altered Proposed Basin Plan be amended to clarify that the estimate of "actual take" remains valid for the duration of the water resource plan, unless otherwise agreed between the MDBA and the particular Basin State.

In addition to these comments, Victoria and NSW have suggestions for specific amendments to Chapter 9 provided at Appendix F.

Appendix A: SDL adjustment mechanism - suggested amendments to Schedule 5

In addition to the comments provided above, Victoria and NSW request that the Commonwealth Minister suggest to the MDBA that it actively work with the Basin States to amend the Altered Proposed Basin Plan in relation to the SDL adjustment mechanism. The following amendments to Schedule 5 provide an initial basis for progressing this work.

Schedule 5 - Calculation of supply adjustment

Note: See Part 3 of Chapter 6.

Part 1—Description

1.01 Description of the calculation

- (1) This Schedule sets the method by which the supply adjustment is calculated for Part 3 of Chapter 6.
- (2) The benchmark environmental outcomes and initial conditions of development referred to in that Part are also identified in this Schedule.
- (3) A summary of the method is as follows:
 - (a) identify the hydrological model of the Basin that is to be used for the calculations (the benchmark model this is the model that was used to arrive at the initial reduction amounts, with some modifications);
 - (b) identify the indicator sites that are to be used in applying the model (these have been chosen to be representative, while ensuring that areas of high ecological value are given due weight);
 - (c) identify the flow regime characteristics that are to be used as a measure of environmental outcomes, and that are to be measured or assessed in relation to those indicator sites;
 - (d) calculate the benchmark environmental outcomes, which are the scores for those characteristics that result from applying the model under the assumptions of:
 - (i) the initial conditions of development; and
 - (ii) a repeat of the historical climate conditions; and
 - (iii) consumptive use of water at the levels of the initial SDLs;
 - (e) identify the method of comparison between the benchmark environmental outcomes and another set of environmental outcomes — this uses a scoring method, including preference curves and weightings for environmental significance. A higher score will represent a preferable environmental outcome;
 - (f) identify the limits of changes in score or outcome ('safety nets') that ensure that no supply adjustment will produce an unacceptable change in a particular environmental outcome;

- (g) calculate the supply adjustment as follows:
 - (i) choose a test reduction of an amount that is likely to be smaller than the supply adjustment;
 - (ii) calculate the environmental outcomes that result from applying the model under the assumptions of:
 - (A) the initial conditions of development with the addition of the works and measures of the adjustment measures;
 - (B) a repeat of the historical climate conditions;
 - (C) consumptive use of water at the levels of the initial SDL increased by the test Gap reduction;
 - (iii) compare the environmental outcomes against the benchmark environmental outcomes and assess whether the score is equivalent or higher;
 - (iv) repeat with successive test reductions until the largest reduction is found that still results in an equivalent or higher score;
 - (v) the supply adjustment is equal to that reduction.

Part 2—Method

1.02 Benchmark model

(1) The benchmark model run will comprise the MDBA model run 847 with a refinement to adjust the overall reduction from 2800 GL/year to 2750 GL/year.

Note: MDBA model run 847 is described in MDBA 2012a.

- (2) The *initial conditions of development* are those conditions of infrastructure, regulation, economic activity and policy settings incorporated in or assumed for the purposes of the benchmark modelling run.
- (3) The *initial conditions of development* must take into account policy settings included in the initial conditions of development that, at the time the method is applied, are no longer expected to be implemented by 2019.
- (4) The benchmark pattern of reliability of supply to entitlement holders is that provided for in the benchmark model run.
- (5) A supply adjustment assessed against the benchmark model run under this method:
 - (a) includes all of the works and measures under the Living Murray program
 - (b) may include works or measures that were:
 - (i) not included in the initial conditions of development; or
 - (ii) included in the initial conditions of development to the extent that they can be further optimised; and
 - Note: (ii) includes further optimisation of policy settings incorporated in or assumed for the purposes of the benchmark modelling run.

- (c) must take into account policy settings included in the initial conditions of development that, at the time the method is applied, are no longer expected to be implemented by 2019.
- Note: For example, crediting of environmental return flows for downstream environmental applications.

1.03 Indicator sites that are to be used

(1) The indicator sites, and corresponding river reaches and associated floodplain, that are to be used are those used in the development of the Environmentally Sustainable Level of Take (ESLT) ('the ESLT method') for which detailed assessments of environmental water requirements were done.

Note: Refer to MDBA 2011, 2012a, 2012b.

- (2) Each reach is to incorporate one hydrologic indicator site (HIS) used in the ESLT method for which detailed assessments of environmental water requirements were done.
 - Note: The ESLT method involved detailed assessments at 24 sites/reaches across the Basin, including 5 in the River Murray; refer to MDBA 2012b.

1.04 Things that are to be measured or assessed

- (1) The flow regime characteristics, assessed against the flow event targets in the ESLT method, to be assessed are:
 - (a) frequency with which flow events occur; and
 - (b) length of dry spells (i.e. intervals between watering events).
- (2) Scores are to be generated for each flow regime characteristic and then summed:
 - (a) at the reach scale; and
 - (b) at the Basin scale; and
 - (c) for any Ramsar-listed wetland or national park area within a reach.
 - Note: The northern and southern basins will be independently assessed with scores for each area being maintained.

The score for a reach includes a score for the additional benefit provided by a works site within a reach.

(3) The **benchmark environmental outcomes** are those scores calculated in accordance with this clause based on the application of the method set out in this Schedule.

1.05 Ecological elements of the scoring method

- (1) Scientifically peer reviewed, fit for purpose preference curves will be used in the method.
 - Note: Preference curves describe a relationship between environmental outcome and a flow statistic such as frequency or dry spell. For example, achievement of a target frequency of inundation may score 100 points, with this score reducing towards zero for frequencies below the achievement of the target.

- (2) Scientifically peer reviewed, fit for purpose metrics for weighting environmental significance of the flood dependent area will be used in the method.
 - Note: The choice of preference curves and metrics and weightings for environmental significance will be based on both scientific advice and consultation with Basin jurisdictions, and be those regarded as the best available for the method.
- (3) The metrics to be used for weighting environmental significance in (2) may include consideration of the:
 - (a) extent of flood dependent native vegetation;
 - (b) status and number of threatened species and communities; and,
 - (c) land tenure and or land use.

1.06 How the method is to be applied

- (1) The method is based on the achievement of:
 - (a) the same overall environmental scores (for the summed frequency and dry-spell scores) at the Basin scale under:
 - (i) the benchmark model run; and
 - (ii) a run with a smaller volumetric reduction together with the improved environmental outcomes associated with the supply measures being considered.
 - Note: The difference in volumetric reduction between the two runs achieving the same overall environmental scores is the supply adjustment.
- (2) For any model run the score for each reach, and cumulatively the overall score, is that resulting from the following steps:
 - (a) calculation of the flow event frequency and dry spell statistics from the modelling;
 - (b) converted to a measure of environmental outcome by the application of preference curves;
 - (c) weighted by the environmental significance of the various components of the flood dependent area in each reach;
 - (d) with the sum of the scores for each flow event target added together to ascertain the score for the reach.
 - Note: These steps will need to be performed separately for areas with environmental works and combined at step (d).
- (3) Hydrologic modelling under the method to establish a supply adjustment will:
 - (a) start with the benchmark environmental flow events and these will only be modified as necessary to reflect the outcomes of the proposal and potential supply adjustment; and
 - (b) be done in a way that ensures demands associated with base flows and freshes are treated consistently between model runs.
- (4) The supply adjustment method can be applied to all surface water SDL areas within the Basin.

- Note: The method may be applied using separate modelling runs for the northern and southern Basin, or parts thereof, as necessary to determine relevant supply adjustments.
- Note: The approach for calculating the score for any Ramsar-listed wetland or national park area within a reach would be an approach consistent with this clause.

1.07 Limits of changes in score or outcomes ('safety nets')

The following limits of change in score or outcome ('safety nets') will apply in the method over the period of the model run:

- (a) for both the southern and the northern parts of the basin, and the basin as a whole — no reduction in the benchmark environmental outcome scores, although some reductions in individual elements may be permitted if they are offset by increases in other elements.
- (b) for each reach no reduction in scores greater than 15% of the benefit provided by the benchmark run.
- (c) for any Ramsar-listed wetland or national park area within a given reach no reduction in scores greater than 5% of the benefit provided by the benchmark run.
- (d) For the Coorong, Lower Lakes, Murray Mouth *(to be confirmed through further discussions with jurisdictions)*
- Note: The limits of change ('safety nets') are to be applied directly to the environmental outcome scores obtained for the benchmark run.

1.08 References

(1) MDBA (Murray Darling Basin Authority) 2011. The proposed "environmentally sustainable level of take" for surface water of the Murray-Darling Basin: Methods and outcomes, MDBA publication no: 226/11, Murray-Darling Basin Authority, Canberra.

http://download.mdba.gov.au/proposed/ESLT_MDBA_report.pdf

(2) MDBA (Murray-Darling Basin Authority) 2012a. Hydrologic modelling to inform the proposed Basin Plan - methods and results, MDBA publication no: 17/12, Murray-Darling Basin Authority, Canberra

http://download.mdba.gov.au/proposed/Hydro_Modelling_Report.pdf

(3) MDBA (Murray-Darling Basin Authority) 2012b. Refer to "Assessing environmental water requirements for the Basin's rivers" web page:

http://www.mdba.gov.au/draft-basin-plan/science-draft-basin-plan/assessing-environmental-water-requirements

Appendix B: Jurisdictions' implementation obligations - suggested amendments to Chapter 1 and Chapter 9

In addition to the comments provided above, Victoria and NSW request that the Commonwealth Minister suggest to the MDBA that the following specific amendments to chapters 1 and 9 of the Altered Proposed Basin Plan be made to address issues on jurisdictions' implementation obligations.

1.11 Agreements in relation to States' implementation obligations

- (1) The Authority must use its best endeavours to enter, within 2 years after the commencement of the Basin Plan, into an agreement with each Basin State in relation to the requirements of this Basin Plan within the Basin State.
- (2) An agreement must be developed taking into account any relevant Commonwealth-State funding agreements.
- (3) An agreement does not affect the requirements of the Basin Plan.
- (4) The matters with which an agreement may deal include:
 - (a) the manner in which particular requirements of this Chapter are given effect, for example, in applying the risk identification and assessment required by Part 9; and
 - (b) the Authority's expectations of the standards that a proposed water resource plan should meet before the Authority recommends the plan for accreditation by the Minister.

9.06 Matters relating to requirements of Chapter

- (1)
- (2)

Agreements in relation to requirements

- (3) The Authority must use its best endeavours to enter, within 2 years after the commencement of the Basin Plan, into an agreement with each Basin State in relation to the requirements of this Chapter for the water resource plan areas within the Basin State.
- (4) An agreement must be developed taking into account any relevant Commonwealth-State agreements.
- (5) An agreement does not affect the requirements of this Chapter.
- (6) The matters with which an agreement may deal include:
 - (a) the manner in which particular requirements of this Chapter are given effect, for example, in applying the risk identification and assessment required by Part 9; and

(b) the Authority's expectations of the standards that a proposed water resource plan should meet before the Authority recommends the plan for accreditation by the Minister.

Appendix C: Continued operation of Basin Salinity Management Strategy and Schedule B of the MDB Agreement - suggested amendments to Chapter 8

In addition to the comments provided above, Victoria and NSW request that the Commonwealth Minister suggest to the MDBA that the following specific amendments to Chapter 8 of the Altered Proposed Basin Plan be made to address issues on water quality and salinity management.

8.14 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.
- (4)
- (5)
- (6)

8.19 Salinity Targets

- (1)
- (2)
- (3) In line with arrangements specified in Schedule B of the Murray-Darling Basin Agreement, the following entities are to apply the targets in performing long-term salinity planning and management functions:
 - (a) the Authority;
 - (b) the Basin Officials Committee;
- (c) agencies of Basin States.

Appendix D: No third party impacts of water quality and salinity targets - suggested amendments to Chapter 8

In addition to the comments provided above, Victoria and NSW request that The Commonwealth Minister suggest to the MDBA that the following specific amendments to Chapter 8 of the Altered Proposed Basin Plan be included to address issues on third party impacts of water quality and salinity targets.

8.13 Guidelines

- (1) The Authority may publish guidelines relating to the application of the targets set out in this Part, for example, recommending actions to be taken by relevant persons and bodies in order to achieve the targets or in the event that a target is not met
- (2)
- (3) Without limiting the operation of Schedule B of the Agreement, where targets under this Chapter are exceeded, the process outlined in the guideline to Chapter 8 will determine the response to an exceedence and must promote the principle of no impact on the amount of water delivered under State Water shares (i.e. there should be no impact on the volume of water available to the States).

Appendix E: Constraints Management Strategy - suggested amendments to Chapter 6

In addition to the comments provided above, Victoria and NSW request that the Commonwealth Minister suggest to the MDBA that the following specific amendments to Chapter 6 of the Altered Proposed Basin Plan be made to address issues on the Constraints Management Strategy.

6.07 Constraints management strategy

- (1) Within 12 months after the commencement of the Basin Plan, the Authority must prepare a constraints management strategy that:
 - (a) identifies and describes the physical, operational and management constraints that are affecting, or have the potential to affect, environmental water delivery; and
 - (b) evaluates options, opportunities and risks to water users, communities and the environment, associated with relaxing or removing key constraints and improving environmental benefits through the effective and efficient delivery of environmental water; and
 - (c) assesses the impacts of modifications of constraints on environmental water delivery and third parties, as well as downstream impacts, and assesses options to address those impacts; and
 - (d) identifies mechanisms by which impacts on third parties can be addressed.
- (2) The strategy, and any substantive amendments to the strategy, must be prepared in consultation with the Basin States and the public.
- (3) The Authority must annually give a report to the Murray-Darling Basin Ministerial Council on progress on the matters covered by the strategy.
- (4) The Authority must publish the strategy on its website.
- (5) Any modifications that are subsequently taken on the basis of the strategy must include measures to address any third party impacts.

Appendix F: Requirements for determining "actual take" - suggested amendments to Chapter 9

In addition to the comments provided above, Victoria and NSW request that the Commonwealth Minister suggest to the MDBA that the following specific amendments to Chapter 9 of the Altered Proposed Basin Plan be made to address issues on the requirements for determining "actual take".

9.15 Determination of actual take must be specified

- (1)
- (2)
- (3) Where a determination for a form of take is made by estimating the quantity of water actually taken, the water resource plan must provide:
 - (a) for the estimate to be done consistently with the method for subsection 9.10(1) that relates to that form of take; and
 - (b) that the estimate will apply for the duration of the water resource plan, unless otherwise agreed between the Authority and the Basin State.
- (4)