



NSW updated factors for water recovery

Submission to the
NSW Department of Industry – Lands and Water Division

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Southern Riverina Irrigators

SRI is a peak organisation providing advocacy for our membership comprised of five landholder associations representing irrigators operating within the footprint of Murray Irrigation Limited in the southern Riverina of NSW.

Formed in the 1960s, SRI now represents over 1,600 water users committed to producing food and fibre through environmentally and economically sustainable practices.

Our key principles are:

- We recognise the property rights of water entitlements
- Water reform must deliver against the “triple bottom line”.

Key industries

Our region is highly productive utilising water sourced from the NSW Murray above the Barmah Choke. Industries have developed to suit the highly variable water product that is predominant in the region. Despite seasonal variabilities, we continue to produce high quality crops sustainably and efficiently contributing significantly to the gross value of irrigated agricultural production.

Industry	2015-16 (\$M) (23% water allocation)	Average 2010-2016 (\$M)
Rice	\$26.5	\$105.3
Cereals	\$72	\$60.8
Other broadacre (inc cotton)	\$10	\$10
Dairy	\$112	\$99
Livestock	\$58	\$56

Source: ABS Gross Value of Irrigated Agricultural Production 2015-16, NSW Murray

SRI provides the following commentary on the *Updated factors for water recovery consultation paper* released by the Department of Industry – Lands and Water Division (DoI-LW) in June 2018.

Summary

SRI acknowledges that the long-term diversion limit equivalence factors (LTDLE) are an accounting tool to effectively equalise the different water products within the Basin to enable the Commonwealth to better evaluate how much water has been recovered for the environment.

The LTDLE factors are said to reflect more accurately than previous Cap Factors the historical use of water allocations, not how much water is available for access. As such, both DoI-LW and the Murray-Darling Basin Authority (MDBA) have been at pains to point out that the LTDLE will not affect allocation or reliability and should have no market impact, SRI is concerned that the factors will be used as a default reliability indicator and therefore may have an impact on valuation of assets.

The key issue for SRI is the impact the change to LTDLEs will have on future water recovery. While the Consultation Paper and Technical Report both indicate that local recovery in the NSW Murray has still been met regardless of which LTDLE factor is used (2011 or 2018), the updated factors will be used to account for future water recovery to deliver efficiency measures (450GL upwater) and if there is any further recovery required to meet the 2,750 target for the Basin Plan.

A review of the LTDLE factors was required to address acknowledged limitations to factors previously agreed by the Murray-Darling Ministerial Council. The previous factors resulted in water use estimations that were vastly different to the Baseline Diversion Limits (BDLs) used to establish the basis of water recovery under the Basin Plan. In essence, the new LTDLEs reverse engineer usage factors to meet the BDLs.

While it is understood that it is important to get the LTDLE factors right for to ensure there is no inadvertent over or under recovery and no breach of sustainable diversion limits (SDLs), we request further clarity and confirmation about how environmental water use, which has not been factored into this review, will be treated for the purposes of future SDL compliance.

In 2015 the Ministerial Council agreed to undertake a review of LTDLEs across the Basin and across over 150 different water products. Unfortunately, to date, we have only been given access to information about the NSW review and therefore cannot assess whether the methodology used for establishing the LTDLEs is equitable across the Basin and if key issues such as trade – which impact on the final LTDLE number – is being given the same consideration in neighbouring jurisdictions.

SRI is particularly concerned with how trade has been treated in the review which assumes “usage” of traded allocation against the purchaser’s entitlement rather than against the seller’s entitlement. This means, the allocation transferred effectively changes characteristics in the transfer process.

While bringing in new data to establish historical water use, the review has not assessed use of supplementary water at all, rather it has assumed that supplementary use is equal to the estimates contained in the original BDL calculations. Understanding that supplementary water is not ‘held’ water, the fact that as a licenced entitlement it has an intrinsic value means that it must have a considered reliability and we question whether actual use should be considered in the review.

1. Impact on asset value

Both the DoI-LW and the MDBA have gone to great pains to say the LTDLEs should not be used to assess the value of water entitlements as an asset, the fact that the MDBA and the Department of Agriculture and Water Resources are using them to establish a 'common currency' for water entitlements effectively implies a value or reliability can be drawn from the factors.

We acknowledge that the technical report makes it clear that the LTDLE factors have been based on a formula that includes Announced Water Determinations and net trade to establish actual use and therefore does not represent average announced allocations (reliability), however, not everyone will read the technical report.

As the LTDLE factors are a construct of the Basin Plan and have been developed in consultation and review by the MDBA and DoI-LW, it is the responsibility of these agencies to ensure they are not misused. In all communications regarding the LTDLEs, it must be made very clear that they are not linked to reliability. Further, any **water market information and trade information should clarify actual reliability for asset valuation purposes to avoid the inadvertent misuse of LTDLEs.**

2. Impact on recovery

While the Basin Plan identifies a Basin-wide water recovery target of 2,750GL, for irrigators and Basin communities, the key question is the amount of water entitlements that are purchased from the consumptive pool. The LTDLE factors establish the effective value of those entitlements for the purposes of water recovery – effectively giving the various entitlements a common currency.

The key issue within the various catchments is how much currency is withdrawn from the market place. While we acknowledge the view that even with the LTDLE review numbers, NSW is effectively “recovered” for the purposes of the 2,750GL target, the risk to the valleys is from future recovery under the SDL adjustment mechanism from both efficiency measures (450GL ‘up water’) and in the event the supply measures do not live up to expectations (605GL ‘down water’).

SRI is based in the NSW Murray and therefore have focussed our attention on that valley, however, we acknowledge that our concerns may be shared by others.

The impact of the proposed changes to entitlement numbers is significant and will impact market capacity. The concern is that, just as the Basin Plan implementation is starting to settle, the goal-posts are moving. Further, there is no guarantee that the factors will not be reassessed again in the future as water use patterns change again in response to changing ownership, crop-types, technology and the like.

If we are to assume proportional recovery of the 450 across jurisdictions and pro-rata recovery across entitlement types in line with historic recovery, the change in LTDLE factor could have a significant impact on how many entitlements need to be purchased.

It is estimated that 90GL of the 450GL will be sourced from the NSW Murray. Based on recovery proportions to date¹ potential future recovery could be as follows.

¹ Proportional as per Table 21 NSW environmental entitlements registered, Derivation of LTDLE Factors in NSW, NSW Department of Industry, 2018, p 33.

Entitlement	Efficiency measure target (ML)	2011 factor	2018 factor	2011 Entitlement recovery	2018 Entitlement recovery	Increased recovery (entitlements)
High security	4,050	0.95	0.873	4,263	4,639	376
Conveyance	2,700	0.784	0.918	3,444	2,941	(503)
General security	82,800	0.81	0.699	102,222	118,455	16,233
Supplementary	450	0.735	0.703	612	640	28

In the region of concern to SRI, the Murray Irrigation districts, already around 30 percent of the original number of entitlements has been transferred to environmental accounts. The increased recovery of general security entitlements represents a further two percent of Murray Irrigation’s current non-government held entitlements which has the potential to have significant impacts on the water market.

SRI contends that if the revised LTDLE factors are to be used for future water recovery, the impact of the changed factors must be considered when Governments and the Ministerial Council review the social and economic neutrality test applied to efficiency measures.

3. Environmental water use and SDL compliance

When reviewing the LTDLE factors, there was no distinction made between environmental water use and consumptive water use. This is understandable when considering the BDLs were assumed to represent use as at 2009 prior to the bulk of environmental water purchase.

Going forward, when establishing SDL compliance, it is important that environmental water use is differentiated and effectively removed from actual usage figures when measured against annual permitted take.

It is also important to monitor and review how the changed usage patterns in both held environmental water and consumptive water as a result of water recovery impacts on overall usage into the future.

4. Basin-wide review of LTDLE factors

In 2015 the Ministerial Council committed to updating LTDLE factors across the Basin based on agreed and consistent assumptions, however, to date we have only seen the review of the NSW factors and cannot verify if indeed the other jurisdictions are following similar methodology.

This is an important consideration when establishing whether the way NSW is treating trade of allocation for the purposes of establishing LTDLEs is, in fact, consistent. If other jurisdictions apply different principles for assessing trade, the results may skew the factors they apply to water recovery.

It is important that all States apply consistent methodology and that the process is transparent and open to evaluation by other jurisdictions.

5. Treatment of trade

The methodology to establish the LTDLE factors looks at historical usage and trade data (2004-2017), however, the technical report is contradictory on the treatment of trade and how that impacts actual use and LTDLE factors.

To establish the utilisation factor, the average account usage is divided by the AWD plus net trade noting that a positive net trade figure represents an increase in water available for an entitlement type. However, the original BDLs did not include a representation of trade.

Further, at one point the paper states that temporary trade is usage attributable of the source entitlement class (p47). That is the entitlement that sells the allocation is assumed to have 'used' the allocation. But by summing the average AWDs with the net trade, it would appear that the traded water is 'used' by the purchasing entitlement.

DoI-LW must clarify exactly where trade is assumed to be 'used'. Further, it must be clearly established that the same 'usage' rules are being applied consistently across all jurisdictions to ensure that trade is not inadvertently double counted or missed through the application of different methodologies.

6. Supplementary use

Supplementary licences allow access to flows in excess of environmental and regulated needs and are accessed on an opportunistic basis when announced within the rules of the Water Sharing Plans. For the purposes of the LTDLE review it is stated that the initial share of the BDL for supplementary entitlement types was adopted from the BDL model run (p12, technical report). However, the review has resulted in changes to the LTDLE factors for supplementary water in most valleys. It is unclear how these changes were established if the BDL assumptions did not change from one process to another.

Further, while it is acknowledged that when available use of supplementary water is maximised in lieu of using allocation – availability of supplementary water is highly variable and therefore usage may be significantly lower than the BDL estimates.

The fact that the LTDLE methodology establishes a utilisation factor for all entitlement types except supplementary and general security and applies the BDL share for supplementary and effectively 'making up the difference' with the LTDLE factor for general security does not appear to be a robust methodology. By following this process, the final LTDLE for general security is not based on any historic use or trade patterns and is reverse engineering the formula to equal the pre-determined results.

In a valley like the Murray Valley where the predominant entitlement on issue is general security and the majority of water recovery has been, and is likely to be, from the general security pool, the lack of accountability for general security LTDLEs is cause for concern.

Conclusion

SRI's main concern about the review of LTDLE factors is the impact on external factors including the water market and asset values. We acknowledge that the factors should not be used to establish market or asset value, the fact is that by establishing a common currency factor the implication is that it is relevant to asset reliability. Further the impact of potential increases in entitlement recovery due to a change in factors (mid-way through the process) undermines market confidence and, if recovery is ongoing, will continue to stretch an already constrained market.

Gabrielle Coupland
Chair