



# WHERE'S THE GAP?

## A REPORT INTO WATER RECOVERY TARGETS AGAINST SUSTAINABLE DIVERSION LIMITS

NSW IRRIGATORS' COUNCIL

MARCH 2023



# EXECUTIVE SUMMARY

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## WHERE'S THE GAP?

This report looks at water recovery in the context of meeting Sustainable Diversion Limits (SDLs). It questions whether further water recovery is even required to meet SDLs.

The primary objective of the Murray-Darling Basin Plan is to set and implement SDLs. Water recovery from farmers (i.e., buybacks) was the primary means to “Bridge the Gap” to reduce water diversions from pre-Basin Plan Baseline Diversion Levels (BDLs) to SDLs.

SDLs came into effect in 2019, with 98% of surface water recovery and 92% of groundwater recovery against the Bridging the Gap target complete. Since then, data shows that not only are SDLs being complied with, but diversions are trending below SDLs.

Despite this, the Federal Government recently announced “Strategic Water Purchasing” to recover another 49.2 gigalitres (GL) of surface and groundwater in six valleys “to bridge the gap to the Sustainable Diversion Limits (SDLs) set out in the Basin Plan<sup>1</sup>”.

This is despite analysis of SDL accounting indicating the five ‘under-recovered’ NSW valleys are already meeting the SDLs; indeed, water use is on average below the SDL.

For example, water diversions in the NSW Murray in 2020-21 were 322.7 GL under the SDL, or 21%. The year before, diversions were 117.4 GL, or 8%, under the SDL. But the Government still wants to buy yet another 10 GL from farmers in the NSW Murray valley.

This report questions the necessity of further water recovery to bridge the so-called gap to SDLs. It suggests further work is required to ensure water recovery targets are based on up-to-date information, with due diligence.

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<sup>1</sup> <https://www.dcceew.gov.au/water/policy/mdb/commonwealth-water-mdb/strategic-water-purchasing>

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# THE BASIN PLAN

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## WE'VE COME A LONG WAY

The centerpiece of the Basin Plan is implementing, and achieving compliance with, Sustainable Diversion Limits (SDLs). This has been achieved.

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### What's it all about?

The Basin Plan's primary objective is to address the historic problem of over-extraction, by setting Sustainable Diversion Limits (SDLs).

Modelling for the Basin Plan showed that reducing water diversions to SDLs would require water recovery (i.e., buybacks) of 2,075 billion litres of water (gigalitres, or GL), as well as a suite of environmental projects (the SDL Adjustment Mechanism).

### Where are we at?

SDLs came into effect in 2019.

Data shows that all valleys are now not only compliant with SDLs\*, but have a chronic trend of underusage (i.e. water diversions are well under the SDL).

To date, 2,107.4 GL has been recovered, exceeding the 2075 GL target.

### What's left to do?

#### (i) SDL Adjustment Mechanism

The full suite of SDL Adjustment Mechanism projects is not expected to be completed by 2024, leaving a shortfall. These projects are essential to delivering the intended environmental outcomes using the water recovered from farmers, including to ensure that water can be delivered to the sites where it is needed.

#### ii) Bridging the Gap

Whilst SDLs are in place, and the total water recovery target has been met, water recovery in some valleys is less than the volume initially modelled to be required at valley level. These valley-level targets are known as 'Bridging the Gap', and will be the focus of this report.

# WATER RECOVERY

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## A MEANS TO AN END

Water recovery is a policy instrument designed to reduce water use so that total diversions for irrigation, towns and industry collectively are within the SDLs.

Simply, water recovery is the *means* to achieve the *end* of SDL compliance.

As part of developing the Basin Plan, modelling estimated the volumes of water required to achieve SDL compliance.

This involves recovery at both a valley level (local recovery target) and at a State and territory level (shared recovery target).

This form of water recovery is known as “Bridging the Gap”, as it is the amount of water recovery estimated to be required to close the gap from pre-Basin Plan diversions levels (Baseline Diversion Levels) to post-Basin Plan levels (SDLs, or Sustainable Diversion Limits).

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“BRIDGING THE GAP WATER  
RECOVERY REMAINS CLOSE  
TO COMPLETION, WITH  
APPROXIMATELY 98% OF  
SURFACE WATER AND 92%  
OF GROUNDWATER  
RECOVERED”

- MURRAY DARLING BASIN AUTHORITY

## THE FACTS

- At a Basin scale about 98% of surface water recovery and 92% of groundwater recovery (against the Bridging the Gap target) is complete.
- The total amount of water recovered across the Basin is 2107.4 GL, higher than the overall target of 2075 GL/y.
- Some modelled local and shared water recovery targets have not yet been met at the valley scale. For surface water, a total 46 GL/y gap across seven valleys remains, and for groundwater, 3.2 GL/y.
- Some valleys have been over-recovered (i.e. recovery has exceeded the target).

The below table shows the remaining "Bridging the Gap" surface water recovery, based on the recovery modelled in 2012 as being required to achieve SDLs.

**Table 1: Surface water recovery remaining against initial estimates**

Valley	LOCAL REMAINING RECOVERY (GL)	SHARED REMAINING RECOVERY (GL)
QLD Condamine-Balonne	14.0	
NSW Barwon-Darling	1.6	
NSW Namoi	9.5	
NSW Border Rivers	5.1	
NSW Lachlan	0.9	
NSW Murray		10.0
ACT		4.9
TOTAL	31.1	14.9
<b>TOTAL WATER RECOVERY = 2,107.4 GL</b>	<b>REMAINING WATER RECOVERY = 46.0gl</b>	

# SDL COMPLIANCE

## HAVEN'T WE GOT THERE?

For many years, State governments already had their own limits on water extractions.

SDLs came into effect in 2019 and are binding on all States.

Each of the Basin's 29 surface water areas and 80 groundwater areas has its own SDL.

The MDBA is required to establish and maintain a register of the amount of water taken each year in each SDL resource unit across the Basin, and to publish these 'Registers of Take' to compare and track the annual water take against the SDLs.

The most recent SDL Account Register of Take (2020-21)<sup>2</sup> showed **108 of 109 water areas as compliant**. The one area that was not, the Barwon Darling, had a reasonable excuse claim submitted by the NSW Government, indicating it was due to a modelling issue, not over-extraction beyond the limit. Similarly, in the year prior, 106 of 109 water areas were compliant; two of those three were brought into compliance by 2020-21.

Table 1 Summary of finding for the 109 SDL resource unit in the 2020-21 water and comparison to prior water year.

Summary of registers of take	2020-21	2019-20
No. SDL units not exceeding compliance trigger	108/109	106/109
No. SDL units with compliance trigger exceeded	1/109	3/109
Reasonable excuse claims	1*	3
No. SDL units that exceeded the trigger in the previous year, but no longer exceed the trigger	2/3	n/a
No. accredited water resource plans	13/33	1/33

\*reasonable excuse claim referred to IGWC

<sup>2</sup> <https://www.mdba.gov.au/sites/default/files/pubs/sustainable-diversion-limit-accounts-registers-of-take-2020-21.pdf>

# IF WATER DIVERSIONS ARE NOW COMPLIANT WITH SDLS WITH WATER RECOVERY AT EXISTING LEVELS AREN'T WE THERE, THEN?

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The below tables show the surface water register of take for 2021-21.

The first table shows the whole Basin (excluding NSW), in **which every single valley is SDL compliant** (i.e. no compliance trigger – see final column). The following table shows the NSW Basin (shown separately as SDL compliance is legally the subject of bilateral agreements until Water Resource Plan accreditation).

Similarly, no NSW valley has extractions over the SDL (recognizing the aforementioned modelling issue in the Barwon-Darling, which authorities have repeatedly specified is not the result of over-extraction)<sup>3</sup>.

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<sup>3</sup> For further information on the Barwon-Darling, see: <https://www.industry.nsw.gov.au/water/allocations-availability/tracking-surface-water/reasonable-excuse-faqs>; and [https://www.industry.nsw.gov.au/\\_data/assets/pdf\\_file/0003/509565/reasonable-excuse-report-for-bd-sdl-compliance-2020-21.pdf](https://www.industry.nsw.gov.au/_data/assets/pdf_file/0003/509565/reasonable-excuse-report-for-bd-sdl-compliance-2020-21.pdf)





Table 4: Surface water registers of take for 2020-21 under accredited Water Resource Plans (WRPs). All numbers are in GL (1 gigalitre = 1 billion litres)

State	SDL resource unit	SDL resource unit code	SDL	Annual Permitted Take <sup>1</sup>	Annual Actual Take	Annual Balance <sup>2</sup>	Cumulative Balance - Start of 2020 -21 <sup>3</sup>	Cumulative Balance - End of 2020-21 <sup>4</sup>	HEW Adjustments <sup>5</sup>	Adjusted Cumulative Balance - End of 2020-21 <sup>6</sup>	Compliance Trigger (-20% of SDL) <sup>7</sup>	Was the trigger exceeded? (Yes/No)
QLD	Queensland Border Rivers	SS24	363.6	508.2	452.4	55.8	0.00	55.8	0.00	55.8	-72.7	No
QLD	Moonie	SS25	89.9	114.3	58.8	55.5	0.00	55.5	0.00	55.5	-18.0	No
QLD	Condamine-Balonne	SS26	919.0	853.9	848.4	5.52	0.00	5.52	0.00	5.52	-183.8	No
QLD	Nebine	SS27	17.1	16.9	11.1	5.78	4.92	10.7	0.00	10.7	-3.41	No
QLD	Warrego	SS28	55.5	38.1	21.8	16.3	24.4	40.8	0.00	40.8	-11.1	No
QLD	Paroo	SS29	11.8	10.9	10.9	0.08	0.08	0.15	0.00	0.15	-2.36	No
ACT	Australian Capital Territory (surface water)	SS1	53.4	35.1	19.8	15.3	0.00	15.3	0.00	15.3	-10.7	No
VIC	Victorian Murray <sup>8</sup>	SS2	1319.8	1266.8	1137.7	129.1	0.00	129.1	0.00	129.1	-264.0	No
VIC	Kiewa <sup>9</sup>	SS3	27.7	28.4	20.9	7.49	0.00	7.49	0.00	7.49	-5.54	No
VIC	Ovens <sup>9</sup>	SS4	85.8	91.2	75.2	15.9	0.00	15.9	-0.04	15.9	-17.2	No
VIC	Broken <sup>9</sup>	SS5	49.0	44.6	42.2	2.42	0.00	2.42	0.00	2.42	-9.80	No
VIC	Goulburn <sup>9</sup>	SS6	1278.0	1149.1	797.0	352.1	0.00	352.1	0.00	352.1	-255.6	No
VIC	Campaspe <sup>9</sup>	SS7	111.7	80.5	68.1	12.4	0.00	12.4	0.00	12.4	-22.3	No
VIC	Loddon <sup>9</sup>	SS8	127.7	81.9	73.2	8.77	0.00	8.77	0.00	8.77	-25.5	No
VIC	Wimmera-Mallee (surface water) <sup>8</sup>	SS9	76.1	72.3	48.2	24.1	0.00	24.1	0.00	24.1	-15.2	No
SA	South Australian Murray <sup>9</sup>	SS11	542.2	635.4	629.6	5.72	0.00	5.72	-13.6	-7.87	-108.4	No
SA	South Australian Non-Prescribed Areas <sup>9</sup>	SS10	55.2	55.2	23.3	31.9	0.00	31.9	0.00	31.9	-11.0	No
SA	Marne-Saunders <sup>9</sup>	SS12	3.00	1.94	1.44	0.50	0.00	0.50	0.00	0.50	-0.60	No
SA	Eastern Mount Lofty Ranges <sup>9</sup>	SS13	28.3	27.2	18.1	9.13	0.00	9.13	0.00	9.13	-5.66	No
VIC	Goulburn-Broken-Campaspe-Loddon <sup>8,10</sup>		1566.4	1356.1	980.5	375.6	0.00	375.6	0.00	375.6	-313.3	No
VIC	Victorian Murray-Kiewa-Ovens <sup>8,10</sup>		1433.3	1386.4	1233.8	152.6	0.00	152.6	-0.04	152.5	-286.7	No
<b>Basin Total (incl. NSW)<sup>11</sup></b>			<b>11820.3</b>	<b>10705.6</b>	<b>10551.2</b>	<b>154.4</b>	<b>616.8</b>	<b>771.2</b>	<b>54.1</b>	<b>825.3</b>	<b>-2364.1</b>	

Notes:  
<sup>1</sup>Annual Permitted Take: The annual permitted take method set out in WRPs for surface water regulated rivers is generally determined by hydrological models, with post modelling adjustments made to the output to allow for components not processed within the model. The adjustments include:



Table 7: Surface water interim registers of take for 2020-21 under Bilateral Agreements. All numbers are in GL (1 gigalitre = 1 billion litres)

State	SDL resource unit	SDL resource unit code	SDL	Annual Permitted Take <sup>1</sup>	Annual Actual Take	Annual Balance <sup>2</sup>	Cumulative Balance - Start of Year <sup>3</sup>	Cumulative Balance - End of Year <sup>4</sup>	HEW Adjustments <sup>5</sup>	Adjusted Cumulative Balance - End of Year <sup>6</sup>	Compliance Trigger (-20% of SDL) <sup>7</sup>	Was the trigger exceeded? (Yes/No)
NSW	Intersecting Streams	SS17	119.3	119.3	119.3	0.00	0.00	0.00	0.00	0.00	-23.9	No
NSW	NSW Border Rivers	SS23	320.1	304.7	365.8	-61.1	32.3	-28.9	1.43	-27.4	-64.0	No
NSW	Gwydir	SS22	530.2	755.5	811.4	-55.9	-5.19	-61.1	0.00	-61.1	-106.0	No
NSW	Namoi	SS21	490.3	384.0	386.9	-2.84	44.4	41.6	2.59	44.2	-98.1	No
NSW	Macquarie-Castlereagh	SS20	633.8	681.4	580.2	101.2	-37.2	64.0	0.00	64.0	-126.8	No
NSW	Lachlan	SS16	578.3	449.1	421.3	27.7	4.03	31.7	1.10	32.8	-115.7	No
NSW	Murrumbidgee	SS15	2209.6	1460.2	2207.4	-747.2	456.6	-290.7	36.8	-253.9	-441.9	No
NSW	Barwon-Darling Watercourse	SS19	176.2	187.6	207.3	-19.6	-49.2	-68.8	1.94	-66.9	-35.2	Yes
NSW	NSW Murray	SS14	1512.3	1241.7	1084.0	157.7	141.2	298.9	23.9	322.7	-302.5	No
NSW	Lower Darling	SS18	35.4	10.2	9.46	0.69	0.54	1.24	0.00	1.24	-7.08	No

Notes

<sup>1</sup> Annual Permitted Take: The annual permitted take method set out in WRPs for surface water regulated rivers is generally determined by hydrological models, with post modelling adjustments made to the output to allow for components not processed within the model. The adjustments include:

- Adjustments for bridging the gap held environmental water (HEW) to SDL setting. The models used to generate annual permitted take do not explicitly model HEW entitlements. This means that all of the entitlements within the model are assumed to be used for consumptive purposes, and an adjustment is required to remove the proportion attributed to entitlements that have since been recovered and are now HEW. The methods used by each Basin state for this process are set out in their accredited or proposed WRPs.
- Trade adjustment. As allocation trade (i.e. including tagged trade) is not included in the model, an adjustment is required for trade between SDL resource units, such that the permitted take is increased in the unit that the water is traded to and reduced in the unit the water is traded from. Not adjusting for this trade could lead to actual take exceeding permitted take despite irrigators legitimately being able to use more water. Trade between the consumptive and environmental pools is separately adjusted in the cumulative balance (see note 3).

<sup>2</sup> As per Basin Plan (s. 6.08(3)(a)&(b)). Negative numbers indicate a debit amount, positive numbers indicate a credit amount.

<sup>3</sup> Start of year balance is reset to zero for the first water year following WRP accreditation, in accordance with the Basin Plan (s. 6.08(5) & (6)). In 2020-21 this applies to all SDL Resource Units in VIC, ACT, and SA, as well as the Queensland Border Rivers, Moonie, and Condamine-Balonne

<sup>4</sup> As per Basin Plan (s. 6.08(3)(c)).

<sup>5</sup> HEW adjustments include the net HEW acquisition and disposal under Basin Plan (s. 6.12(1)(a)), and where applicable, adjustments for the previous year's Annual Expression of Incomplete Recovery (AEIR) under Basin Plan (s. 6.11(5))

<sup>6</sup> Adjusted cumulative balance to determine non-compliance as per Basin Plan (s. 6.12(1)(a))

<sup>7</sup> Numerical compliance trigger as per Basin Plan (s. 6.12). The trigger is exceeded when the corresponding adjusted cumulative balance is lower than this number.

# WHERE'S THE GAP?

## IS THERE A GAP LEFT TO BRIDGE? DATA SAYS NO.

Taking data from the above SDL Account Register of Take (2020-21), and applying the compliance criteria set out in the Basin Plan Ch. 6, Part 4, Section 6.12, we have calculated the percentage by which each NSW valley was over or under its SDL.

Water use above and below the SDL in a given year (overs and unders) is common in water diversion accounting, reflecting wet and dry conditions. But SDL compliance requires that over the long term, the annual use trend must average

out at the SDL, and use in any one year must not be more than 20% above the SDL.

The findings are in Table 5 below. It shows that overall, NSW Basin valleys were 1% below their SDLs in 2020-21, ending the year with 55.64 GL in credit.

Valleys where use was higher than the SDL in 2020-21 were all still well below the 20% non-compliance trigger for the year. The exception was the Baron Darling, which was 38% over due to the aforementioned modelling issues, not over-extraction.

Table 5: 2020-21 SDL compliance in NSW Basin valleys (in GL)

SDL resource unit	SDL	Adjusted Cumulative Balance - End of Year (over/under SDL)	Compliance Trigger (-20% over SDL)	End of year GL balance as % of SDL (over/under)	Over/under against SDL	Was the 20% over SDL compliance trigger exceeded?
NSW Border Rivers	320.1	27.4	64	9%	Over	No
Gwydir	530.2	61.1	106	12%	Over	No
Namoi	490.3	-44.2	98.1	-9%	Under	No
Macquarie-Castlereagh	633.8	-64	126.8	-10%	Under	No
Lachlan	578.3	-32.8	115.7	-6%	Under	No
Murrumbidgee	2209.6	253.9	441.9	11%	Over	No
Barwon-Darling	176.2	66.9	35.2	38%	Over	Yes*

NSW Murray	1512.3	-322.7	302.5	-21%	Under	No
Lower Darling	35.4	-1.24	7.08	-4%	Under	No
<b>Total</b>	<b>6486.2</b>	<b>-55.54</b>	<b>1297</b>	<b>-1%</b>	<b>Under</b>	<b>No</b>

The SDL accounting from 2019-20 below (Table 6) shows almost all NSW valleys were well under their SDLs in GL and percentage in the first year of SDL accounting. The exception was Barwon Darling due to the aforementioned modelling issues.

Table 6: 2019-20 SDL compliance in NSW Basin valleys (in GL)

SDL resource unit	SDL	Adjusted Cumulative Balance - End of Year (over/under SDL)	Compliance Trigger (-20% over SDL)	End of year GL balance as % of SDL (over/under)	Over/under against SDL	Was the 20% over SDL compliance trigger exceeded?
NSW Border Rivers	320.1	-33.8	64	-11%	Under	No
Gwydir	530.2	-85.9	106	-16%	Under	No
Namoi	490.3	-39.7	98.1	-8%	Under	No
Macquarie-Castlereagh	633.8	-0.47	126.8	0%	Under	No
Lachlan	578.3	9.88	115.7	2%	Over	No
Murrumbidgee	2209.6	-285.5	441.9	-22%	Under	No
Barwon-Darling	176.2	57.7	35.2	33%	Over	Yes*
NSW Murray	1512.3	-117.4	302.5	-8%	Under	No
Lower Darling	35.4	-4.16	7.08	-12%	Under	No
<b>Total</b>	<b>6486.2</b>	<b>-699.35*</b>	<b>1297</b>	<b>-11%</b>	<b>Under</b>	<b>No</b>

\*Credit adjusted down to 587.5 GL as starting balance in 2020-21 report, without explanation.

Whilst it is early days for SDL accounting, the above tables do not provide justification for a policy intervention (such as further water recovery) to remedy a situation of non-compliance. To the contrary, they demonstrate that diversions are tracking to SDL compliance, and that the overall trend in the last two years is still towards chronic underuse below SDLS, consistent with the chronic underuse trends already evident under the previous Cap accounting and reporting framework.

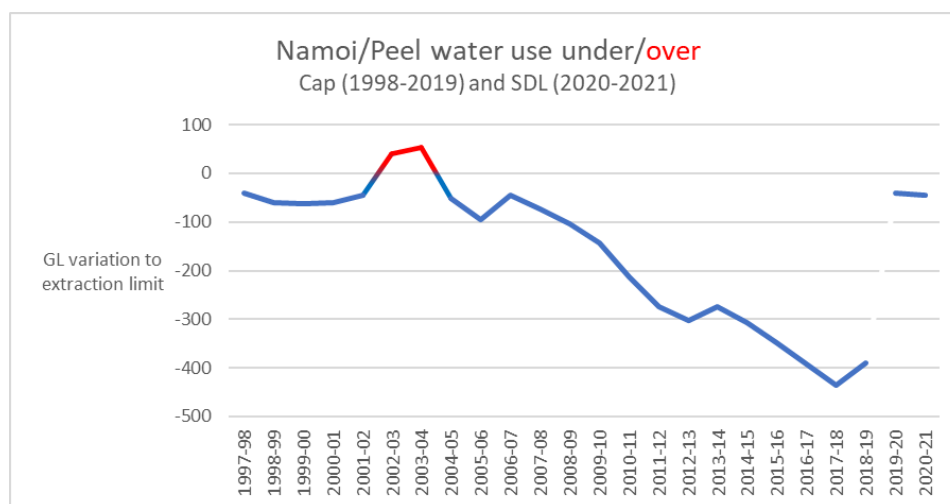
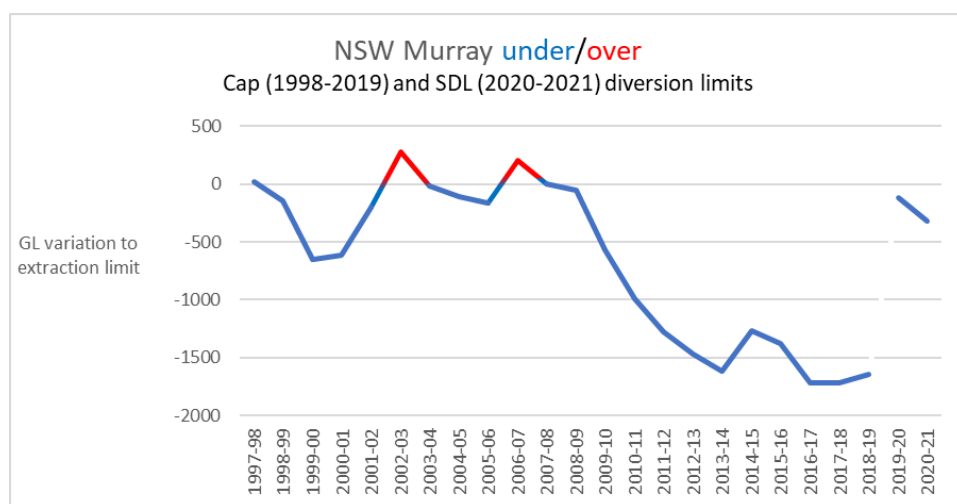
## COMPARING TO PREVIOUS CAP ACCOUNTING

SDL accounting only replaced the former Cap compliance accounting in the 2019-20 year, so there are only two years of SDL accounting to date. Whilst this data is indicative, it is not long enough for any long-term over/under trends to be concluded.

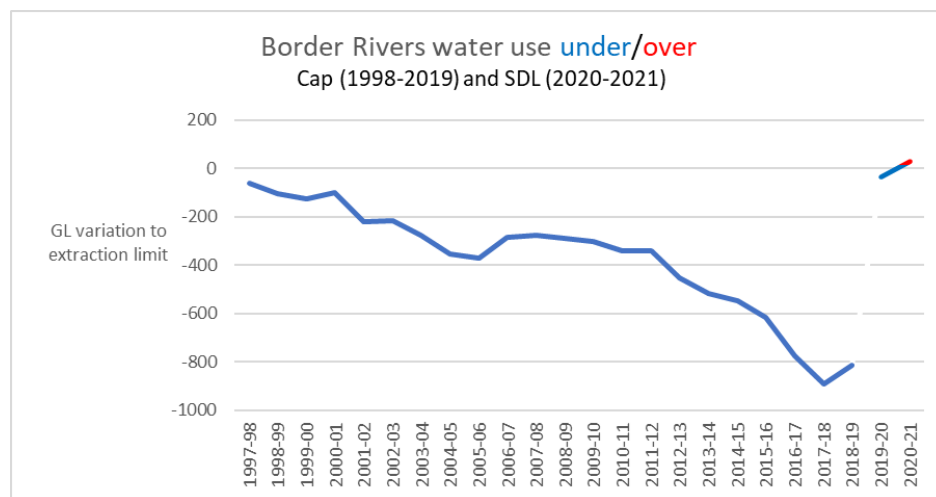
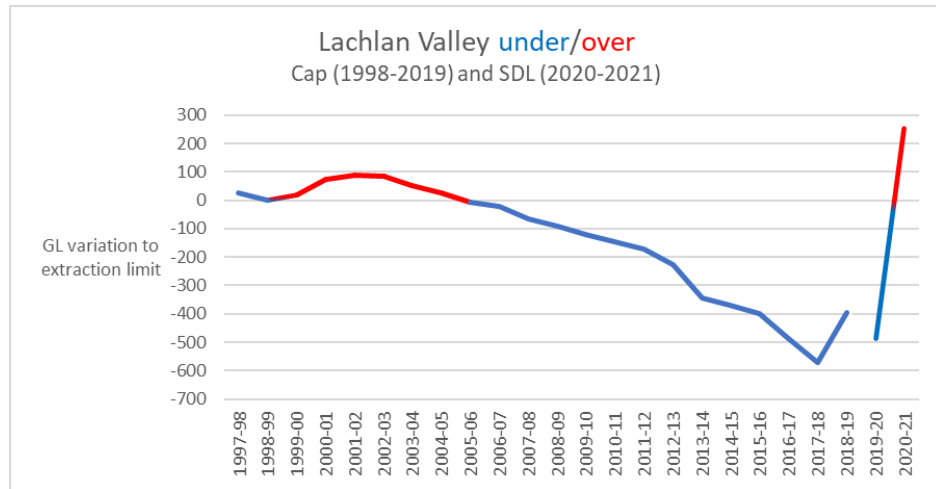
However, interestingly, under the Cap accounting framework, large Cap credits accumulated over 20 years.<sup>4</sup> The pattern emerging under the SDL accounting framework reflects the earlier trends under the Cap accounting.

The Cap 'credits' were forfeited with the commencement of SDL accounting, but nonetheless, even with the reset to zero, the underuse trend is appearing to persist in SDL accounting too, with credits accumulating in many valleys.

To demonstrate this trend is not just a one-off with the short data period for SDL accounting to date, the below diagrams show the chronic trend of diversions being persistently below extraction limits. Specifically, the below diagrams for four 'under-recovered' valleys show the variation of diversions over and under the extraction limit shown as 0 GL), with underuse (blue line) and overuse (red line). Note: the extraction limit changes from Cap to SDL in the 2019-20 year. Accumulated Cap credits were also forfeited, and not carried over into the SDL accounting.



<sup>4</sup> <https://www.mdba.gov.au/publications/mdba-reports/cap-compliance-reports>



## FINDINGS: IS THERE A GAP FOR FURTHER WATER RECOVERY TO BRIDGE? NO.

The recently announced Strategic Water Purchasing Framework states it is about “*Bridging the Gap to the Sustainable Diversion Limits: 49.2 gigalitres total from 7 catchments*”.

However, the SDL Registers of Take (consistent with earlier Cap compliance reports) indicate there is no gap left to bridge in surface water – or at the very least, it is far too early to tell whether, over the long-term, a gap in fact exists.

**This raises questions about whether the “Bridging the Gap” water recovery is actually still required, or whether it is just a legacy of an outdated, modelled estimate from more than a decade ago that is no longer required to achieve SDLs.**

When the proposed further water recovery is contrasted to credits/debits in the relevant valleys, this question of whether further water recovery is in fact required to meet SDLs becomes evident.

Table 3: SDL accounting over/under SDL in GL against proposed further water recovery

SDL resource unit	SDL	2019-20 Over/ Under SDL	2020-21 Over/ Under SDL	Further proposed water recovery	Is further water recovery justified?
NSW Border Rivers	320.1	-33.8	27.4	5.1	No
Namoi	490.3	-39.7	-44.2	9.5	No
Lachlan	578.3	9.88	-32.8	0.9	No
Barwon–Darling*	176.2	57.7*	66.9*	1.9	No*
NSW Murray	1512.2	-117.4	-322.7	10	No

\*Barwon-Darling SDL exceedance due to aforementioned modelling issues, not overextraction.

\* Positive number = credit; Negative number = debit.

To interpret the above table, it shows – for example – water use in the NSW Murray in 2019-20 was 117.4 GL under its SDL, or 8%. In 2020-21, water use in the NSW Murray was 322.7 GL under the SDL, or 21%.

This is consistent with chronic underuse trend in the NSW Murray evident in the Cap accounting reports (above). The underuse persists even though the Cap credits were forfeited and the balance was reset to zero when SDL accounting started in 2019-20.

It is hard to see how an additional 10 GL water recovery can be justified, when NSW Murray is already more than meeting its SDL. **There is, simply, no gap to bridge to meet the NSW Murray SDL.**

Similarly in the Namoi valley, water use in 2019-20 was 39.7 GL under the SDL, or 8%. In 2020-21, water use in the Namoi valley was 44.2 GL under the SDL, or 9%.

It is hard to see how an additional 9.5 GL water recovery can be justified, when the Namoi is already more than meeting its SDL. **There is, simply, no gap to bridge to meet the Namoi SDL.**

In the Lachlan and Border Rivers valleys, the difference between the under and over across the two years is still a net credit in GL (22.9 GL and 6.4GL respectively). This credit compares with the Bridging the Gap 'debit' of 0.9 GL and 5.1 GL respectively. **It is, simply, too early to tell whether there's a gap to bridge in the Lachlan and Border Rivers Valleys.**

# CAN THINGS CHANGE? YES.

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The DCCEEW website states:

*“There are several Water Resource Plans (WRPs) that are still being finalised in NSW. This means water recovered toward the bridging the gap target in NSW is subject to change until all NSW WRPs are independently reviewed and accredited by the Commonwealth Minister.”*

The 2018 Productivity Commission Report review of the Basin Plan states that:

*“As water recovery targets are defined as a long-term average, the overall contribution of the portfolio to meeting the water recovery targets will change if cap factors<sup>5</sup> change. Changes to cap factors may create (or increase the size of) a water recovery gap, reduce the size of a gap, or lead to over-recovery”<sup>6</sup>*

*“While the exact size (and direction) of changes to recovery progress from cap factors is not yet certain, the risk of a shortfall is likely to be manageable within the water already recovered.”<sup>7</sup>*

*“When completed, it is possible that water recovery may exceed the targets established by SDLs, with over-recovery in some surface water areas. Although this cannot be determined until key technical work is finalised, there is not yet a process in place to calculate and address any over-recovery.”<sup>8</sup>*

**Put simply, until that technical work is completed, the size of the gap to bridge is unknown.**

Given the above data on SDL compliance, the balance of probabilities suggests that – at best – the planning assumptions may be *different* to what was initially modelled.

The problem with persevering with water recovery from farmers in the absence of this work is that the impacts are irreversible. As has already been seen in over-recovered valleys such as the Macquarie and Gwydir, over-recovered water is not returned to water users.

This raises serious procedural questions of whether due diligence has been undertaken to complete this technical work, prior to any further water recovery, to avoid potential over-recovery – and to at the very least identify the exact size of the gap to bridge (if any).

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<sup>5</sup> Cap factors “estimate the historic utilisation of each type of entitlement in each area covered by the Basin Plan”<sup>5</sup>. The MDBA says that “the factors are based on historic use patterns, climatic data, and trade information. They will be accredited as a part of the accreditation of water resource plans”.

<sup>6</sup> <https://www.pc.gov.au/inquiries/completed/basin-plan/report/basin-plan.pdf> [P 96].

<sup>7</sup> <https://www.pc.gov.au/inquiries/completed/basin-plan/report/basin-plan.pdf> [P 96].

<sup>8</sup> <https://www.pc.gov.au/inquiries/completed/basin-plan/report/basin-plan.pdf> [P 10].



# CONCLUSION

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## WHAT DOES THIS ALL MEAN?

This report questions whether further water recovery is needed to meet SDLs (i.e. the “Bridging-the-Gap” water).

It suggests that further work is required by government agencies to ensure water recovery targets are based on the best available information on actual water use against diversion limits.

Whilst the drivers of these ‘underusage’ trends are not well understood, the nature

and the extent of underuse is well known.

Without further technical work, there is a real risk that water recovery will go well beyond what is required to achieve long-term SDL compliance in several valleys.

Not only is this a problem for the irrigation industry and Basin communities who suffer from lost water access, but this represents a significant risk of spending more taxpayer funds than required.

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## RECOMMENDATIONS

- DCCCEWW / MDBA to undertake a comparative assessment of SDL compliance under two scenarios:
  - (i) current water recovery levels
  - (ii) proposed further water recovery levels (i.e., additional 49.2 GL)to determine if any further water recovery is needed to meet SDLs.
- To ensure due diligence, halt “Bridging the Gap” water recovery until this technical work is completed to identify the actual extent of the gap (if any).
- Federal Government to commit that any further water recovery will not result in any valley becoming over-recovered against its targets (i.e., that once the gap to bridge is technically identified, water recovery will only go to, and not beyond, that amount). For transparency, a risk assessment should be published identifying the procedures being used to mitigate the over-recovery risk (particularly given the uncertainty about the size of the actual gap).
- The recently announced round of “Strategic Water Purchasing” be referred to the Australian National Audit Office for a comprehensive audit and assurance report, to ensure due diligence and proper process on the expenditure of public funds for this program.