

Securing your future water needs

Harnessing carryover & other water products

Please note:

- The webinar will start at 1pm
- The webinar will be recorded & distributed
- You are muted
- Technical issues? Use Zoom "Chat" – select "Host." Or contact John.Paulet@agriculture.vic.gov.au
Ph. 0429 158 500



Welcome!

Other housekeeping

- Got a question? Use the Chat function Co-host
- Question break during presentation & at the end
- Questions related to webinar topic prioritised
- Your feedback is used for funding similar future events
- Finish at 2.00pm



Thanks to our supporters



Irrigation webinar series

May webinar

ACCC inquiry into MDB water markets

Late May

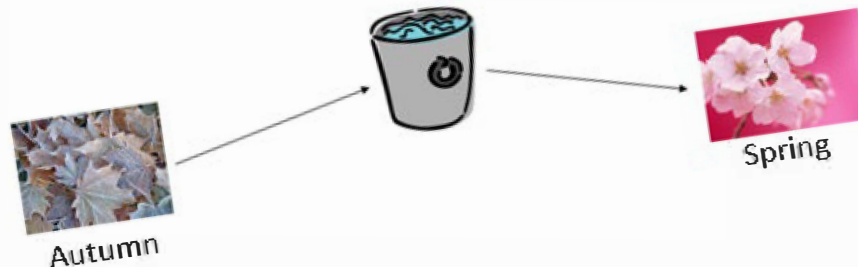


Today's webinar

Securing your future water needs. Harnessing carryover & other water products

Speakers:

- Phil Grahame. General Manager. Ruralco Water.
- Andrew Shields. River Operations Manager. GMW.



Agenda

1. Current availability and allocation outlooks
2. Carryover
3. Securing your future water needs

La Nina was welcome relief....

- La Nina commenced Sept 20 and ended March 21;
- MDBA active storage currently 45% (27% last year);
- Relatively neutral BOM 3 month forecast

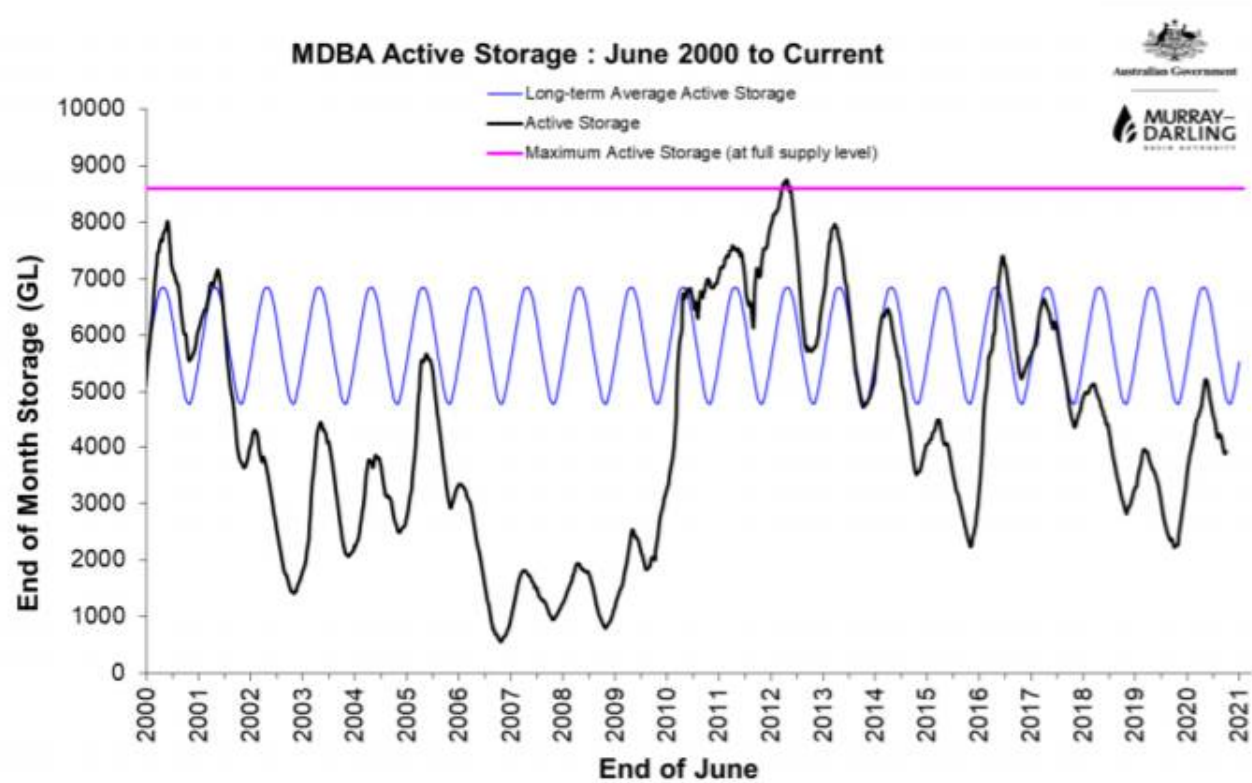
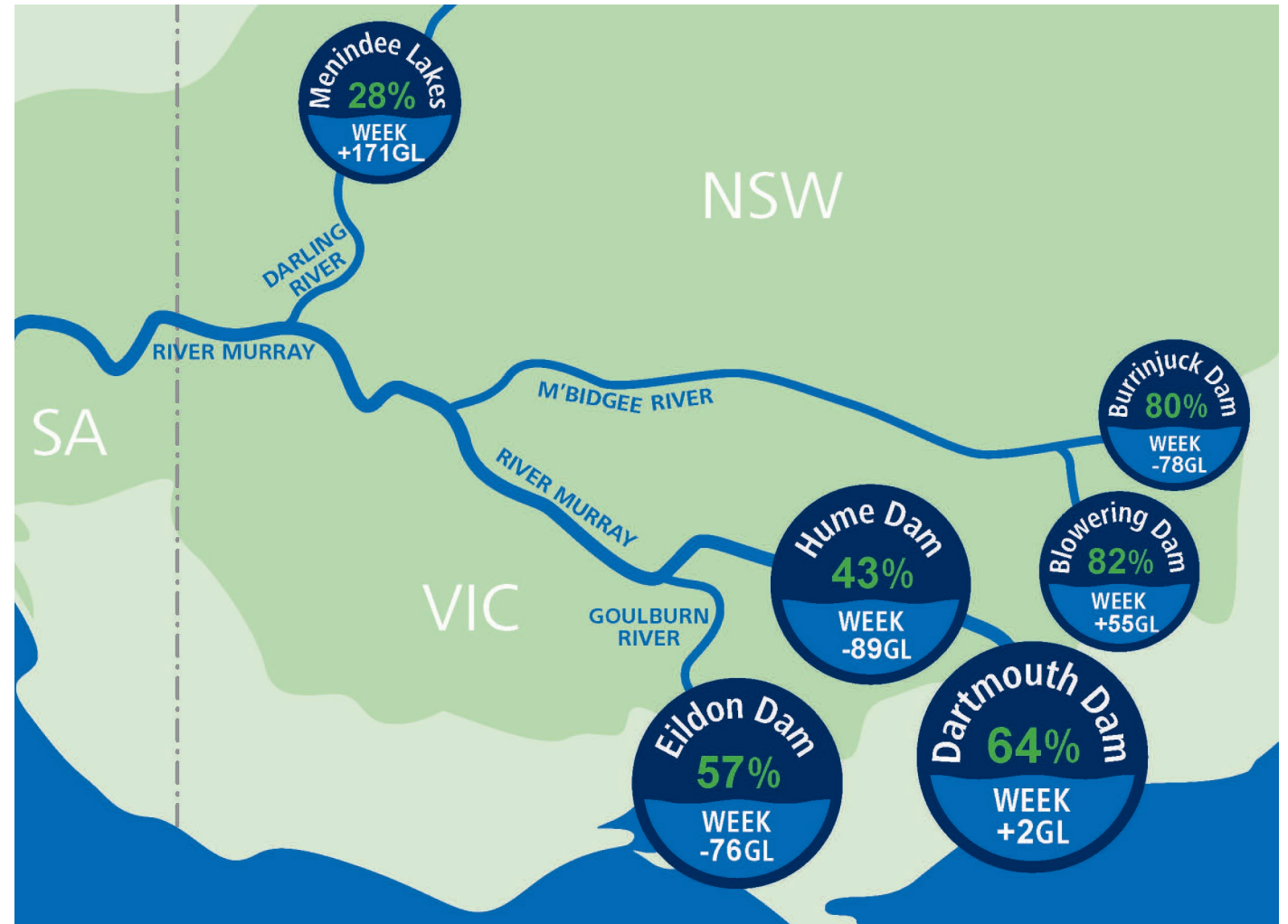


Figure 1 – MDBA active storage for the period June 2000 to current.

Storages are relatively healthy...

- NSW Bidgee dams are in a strong position;
- Murray / Goulburn dams area about average;
- Bonus of Menindee coming online - shared resource



Seasonal determination outlooks



Victorian Murray – high-reliability water shares

Inflow Conditions	1 July 2021	16 August 2021	15 October 2021	15 February 2022
Wet	49%	78%	100%	100%
Above Average	36%	48%	95%	100%
Average	25%	37%	74%	100%
Below Average	15%	29%	49%	98%
Dry	5%	20%	37%	56%
Very Dry	4%	17%	32%	43%
Extreme Dry	0%	10%	14%	19%

Published 15 February 2021

Next update: 17 May 2021

Seasonal determination outlooks



Goulburn and Loddon – high-reliability water shares

Inflow Conditions	1 July 2021	16 August 2021	15 October 2021	15 February 2022
Wet	56%	100%	100%	100%
Above Average	38%	77%	100%	100%
Average	32%	53%	100%	100%
Below Average	25%	42%	75%	100%
Dry	19%	33%	45%	59%
Very Dry	17%	29%	38%	45%
Extreme Dry	15%	20%	27%	33%

Published 15 February 2021

Next update: 17 May 2021

Outlooks available at <https://nvrn.net.au/outlooks>,
including Campaspe, Broken and Bullarook

Risk of spill outlook

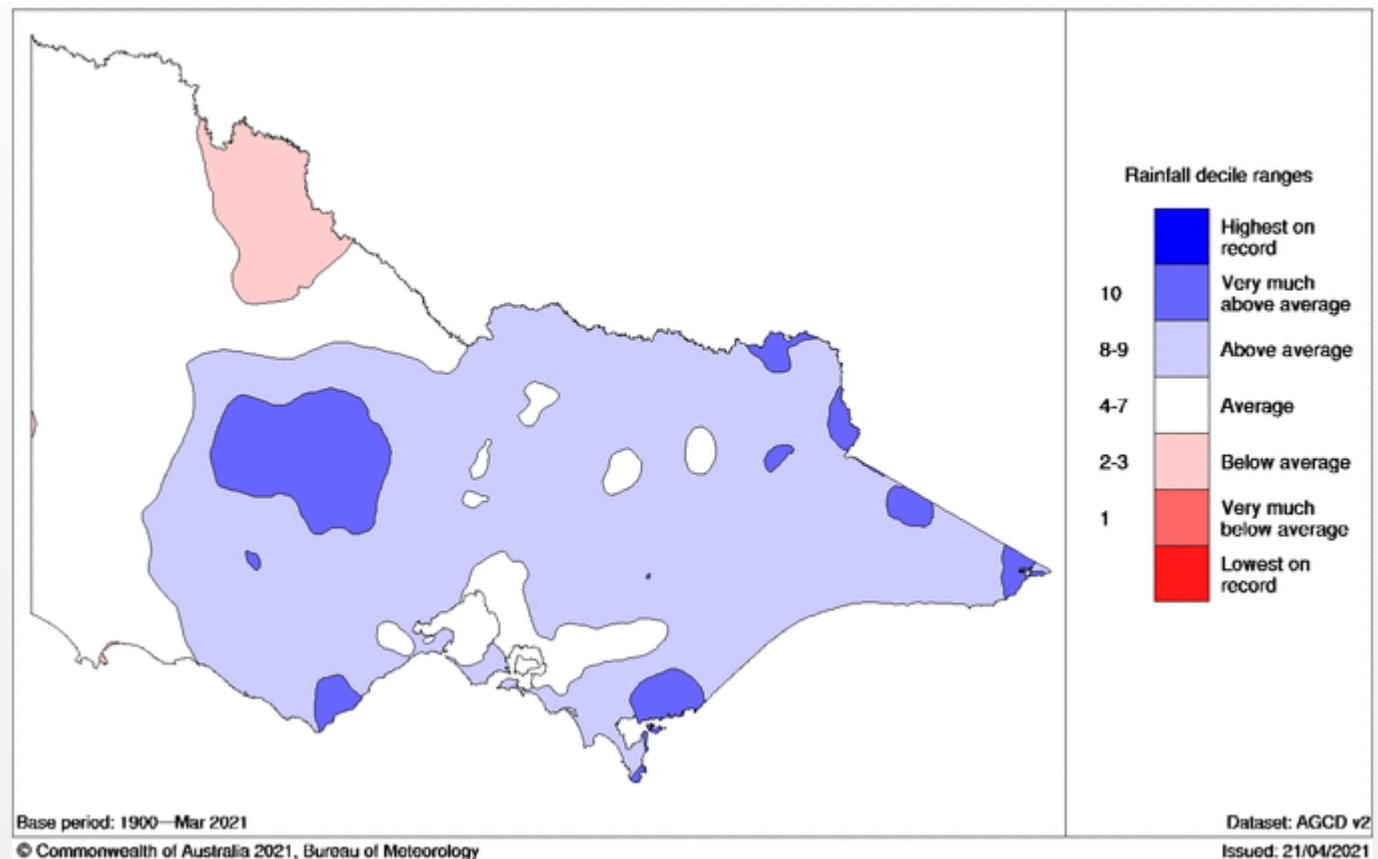


Based on 15 February 2021 analysis, risk of spill in 2021/22 is about:

- 40% in the Murray (Victoria's share of Lake Hume)
- 40% in the Goulburn (Lake Eildon)
- 30% in the Campaspe (Lake Eppalock)

Note: this relates to potential deductions from spillable water accounts, not the risk of flooding.
Spillable water accounts to be discussed later in the webinar

Recent conditions – January to March

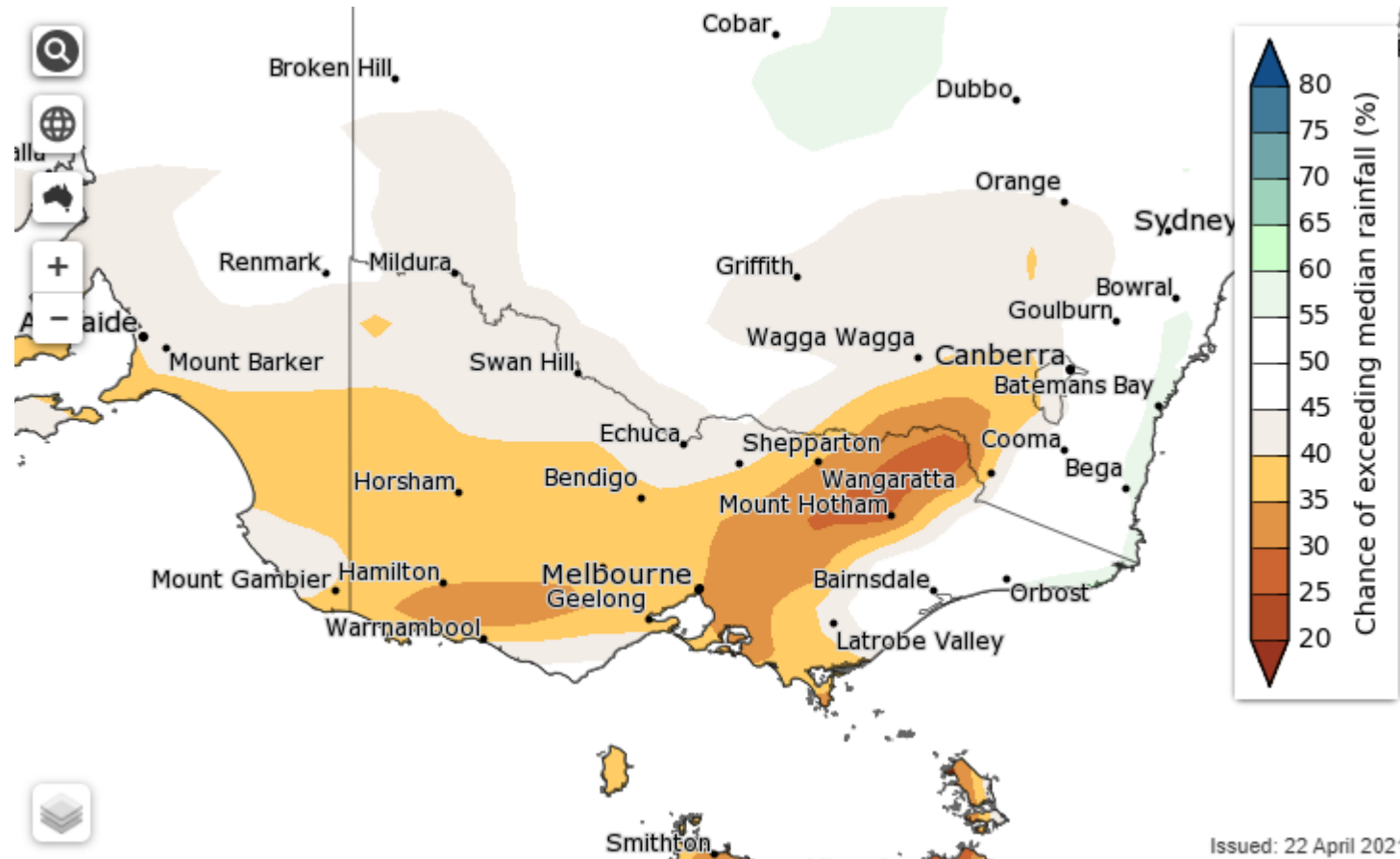


Storage	Inflow	% of average
Eildon	40 GL	63%
Hume	206 GL	103%

Rainfall outlook



- Pacific ocean and Indian Ocean indicators are currently neutral
- May to July outlook favors drier conditions across the catchment areas



Issued: 22 April 2021

Water ownership – Murray



Victorian Murray (GL)

In / credit	Private	Environment	Urban
Carryover	309	195	31
New allocations	890	474	65
Trade in	864	195	2
Return flows	0	386	1
Out / debit			
Trade out	737	721	25
Used	829	252	26
Currently available in allocations accounts	498	277	48

Note: available at <https://nvrn.net.au/resources-and-data/current-water-ownership>

Water ownership – Goulburn



Goulburn (GL)

In / credit	Private	Environment	Urban
Carryover	309	122	45
New allocations	726	435	71
Trade in	456	233	36
Return flows	0	9	0
Out / debit			
Trade out	427	233	81
Used	562	214	17
Currently available in allocations accounts	502	353	49

Note: Loddon, Broken, Campaspe and Bullarook also available at <https://nvrn.net.au/resources-and-data/current-water-ownership>

NSW / SA allocation outlook

Entitlement type	Opening allocation	Future improvement
South Australia		
Class 3A	82% minimum	Likely to be 100%
NSW Murray		
High Security	97%	
General Security	0% or low	0% to 23% by 1 Nov
Carryover	Approx 39% (650GL)	
NSW Murrumbidgee		
High Security	95%	
General Security	25%	35% to 65% by 1 Nov
Carryover	Approx 30% (565GL)	

2021 – 22 Temporary allocation market outlook

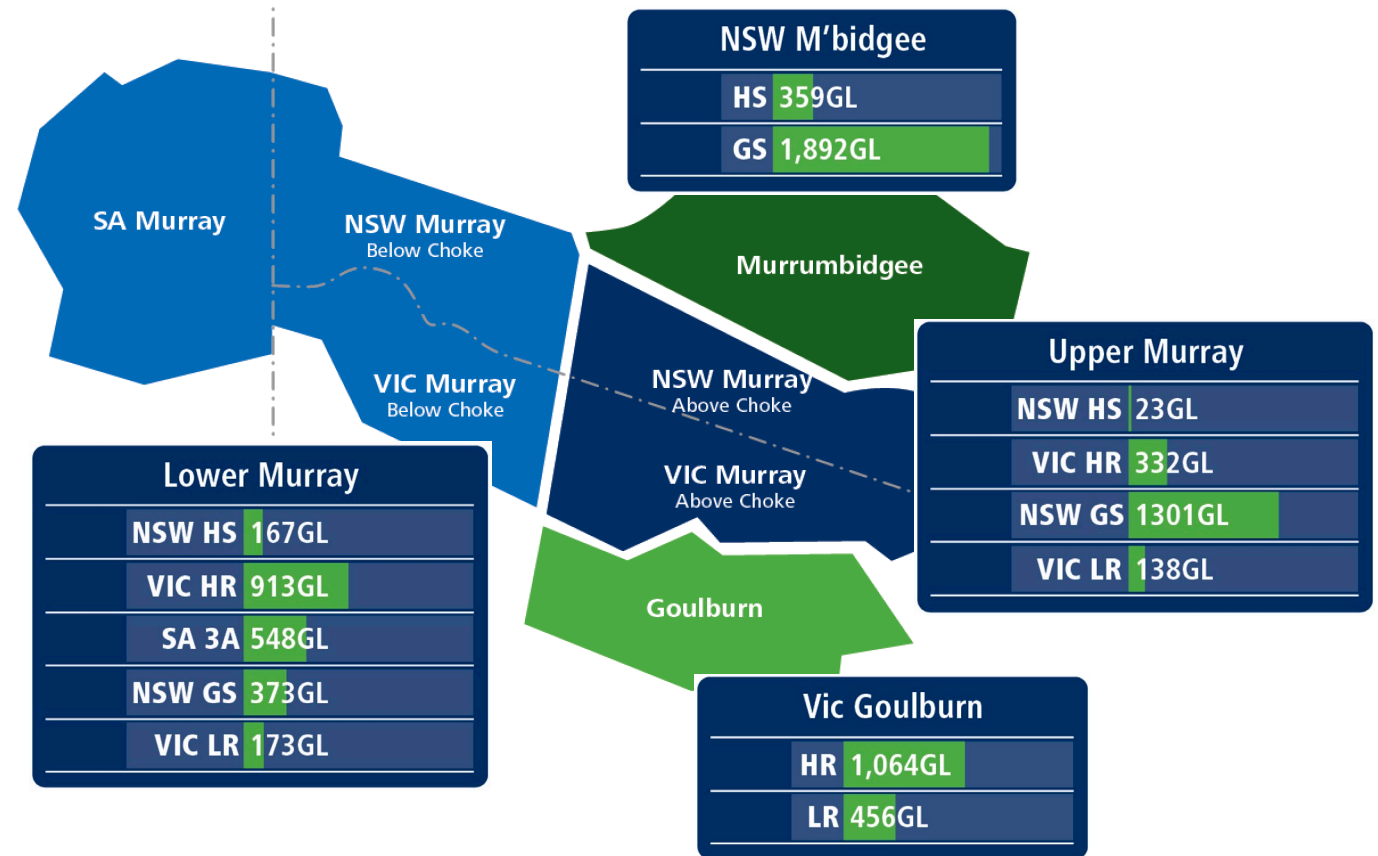
IVT trade restrictions will be back in play = fragmented markets;

Supply:

- Allocations likely be good (NSW Murray GS will be important)
- Carryover will be high

Demand:

- Permanent plantings demand increasing
- Rice / Cotton acreage to increase
- Dairy to remain steady



Agenda

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2. Carryover
3. Securing your future water needs

Carryover becoming increasingly important...

- Positive account rules have brought forward demand to first half of the water year – lower temporary allocation price in the second half;
- Growing demand from new permanent plantings not covered by entitlement – increasing awareness of risk management tools;
- Emergence of selling carryover capacity to generate revenue for entitlement holders.

Carryover NSW Murrumbidgee

- General Security limited to no more than **30%** of entitlement volume;
- Carry over (midnight 30 June) and new season allocation cannot be more than 100% of entitlement volume;
- Once carry over and new season allocation = 100% of entitlement volume licence holder misses out on any future allocation increases;
- Calculated on balances and allocation % - does not matter if allocation traded in our about in the new year;

Carryover NSW Murray

- General Security limited to no more than **50%** of entitlement volume;
- Carry over (midnight 30 June) and new season allocation cannot be more than 110% of entitlement volume;
- Once carry over and new season allocation = 110% of entitlement volume licence holder misses out on any future allocation increases;
- Calculated on balances and allocation % - does not matter if allocation traded in our about in the new year;

Carryover - principles



- Must have water shares
- Water allocated belongs to the entitlement holder
- When storage capacity is available should have ability to carry over water to use when most valuable
- If water is carried over, cannot prevent inflows being harvested to support allocations to others, hence need for Spillable Water Accounts (SWAs)
- 5% reduction for evaporation losses


Carryover – Murray, Goulburn and Campaspe rules




- Limited to 100% of HRWS and LRWS
- Volumes credited to ABA above 100% HRWS and LRWS quarantined in SWAs
- When 'spills' or pre-releases occur from storage, the volume in SWAs is reduced
 - Victoria's share of Hume in the Murray
 - Lake Eildon in the Goulburn
 - Lake Eppalock in the Campaspe
- Volume in SWA returned to ABA when risk of spill is low (less than 10%) as determined by Resource Manager
 - Timing depends on seasonal conditions

Carryover example – Murray/Goulburn/Campaspe



Victorian Water Register 
Carryover Calculator 2017-18

1 Entitlements & carryover **2** New season Events

 Enter your water share and carryover details.

☒ Water System ▼

☒ Water Share Volumes ▼

☒ Carryover Volumes ▼

Enter the amount of unused allocation in your account to carry over.

Carryover ML

Opening Allocations ▼

[START OVER](#) Clear all inputs


Water Allocated to My Entitlements **ABA Summary** [Close](#)


■ 45.00 ML ■ 50.00 ML

Carried Over Carried Over

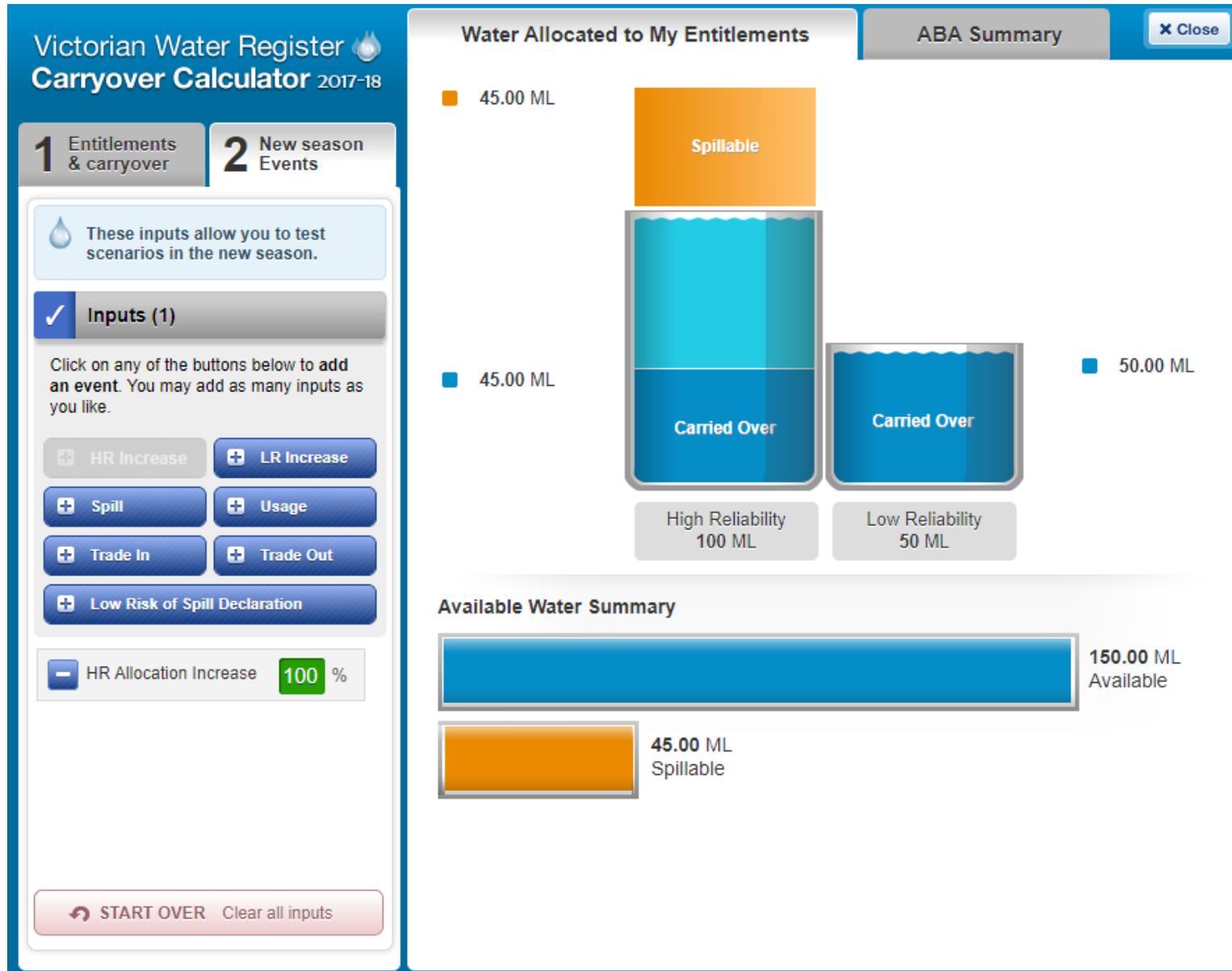
High Reliability 100 ML Low Reliability 50 ML

Available Water Summary

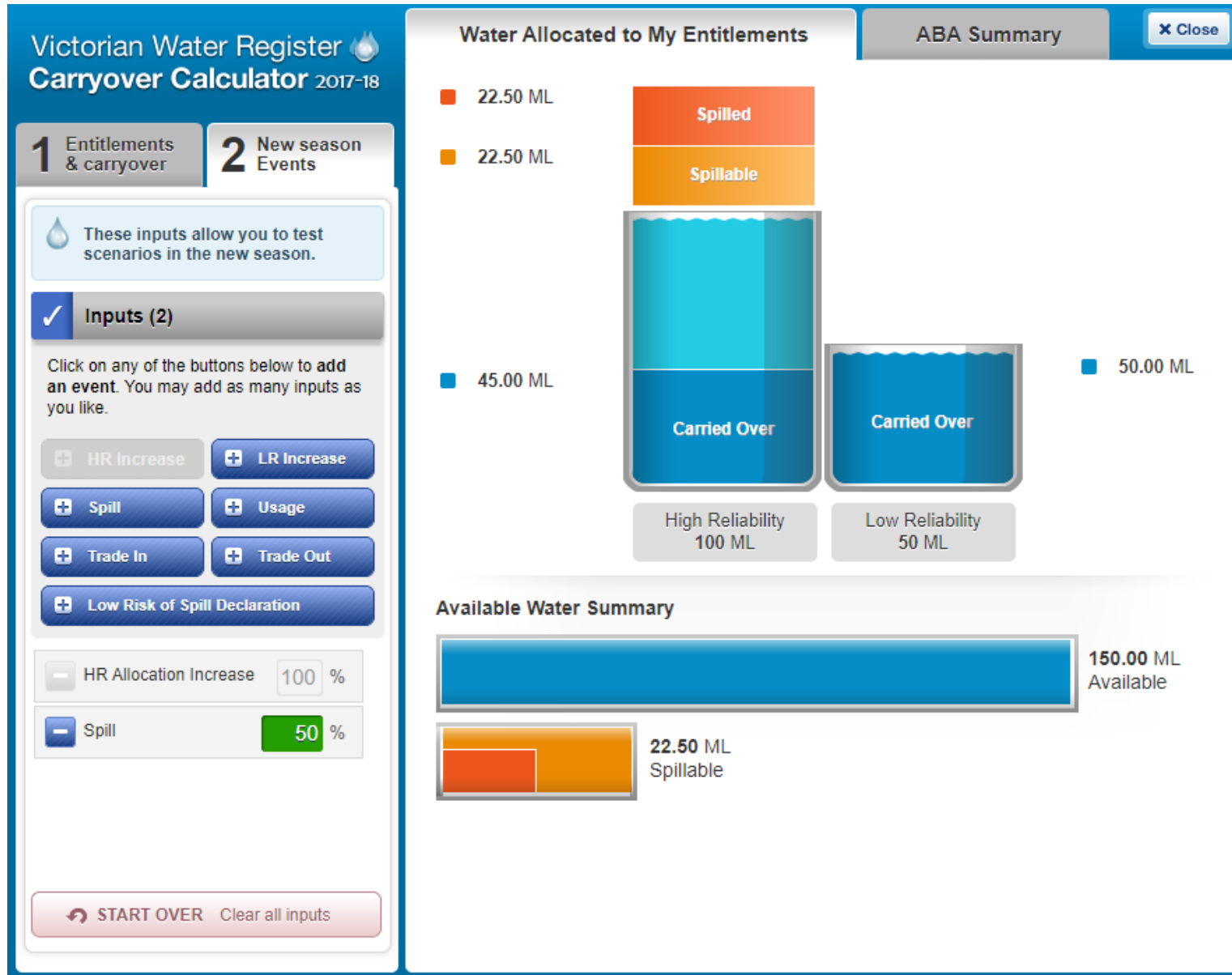
 **95.00 ML Available**

 **0.00 ML Spillable**

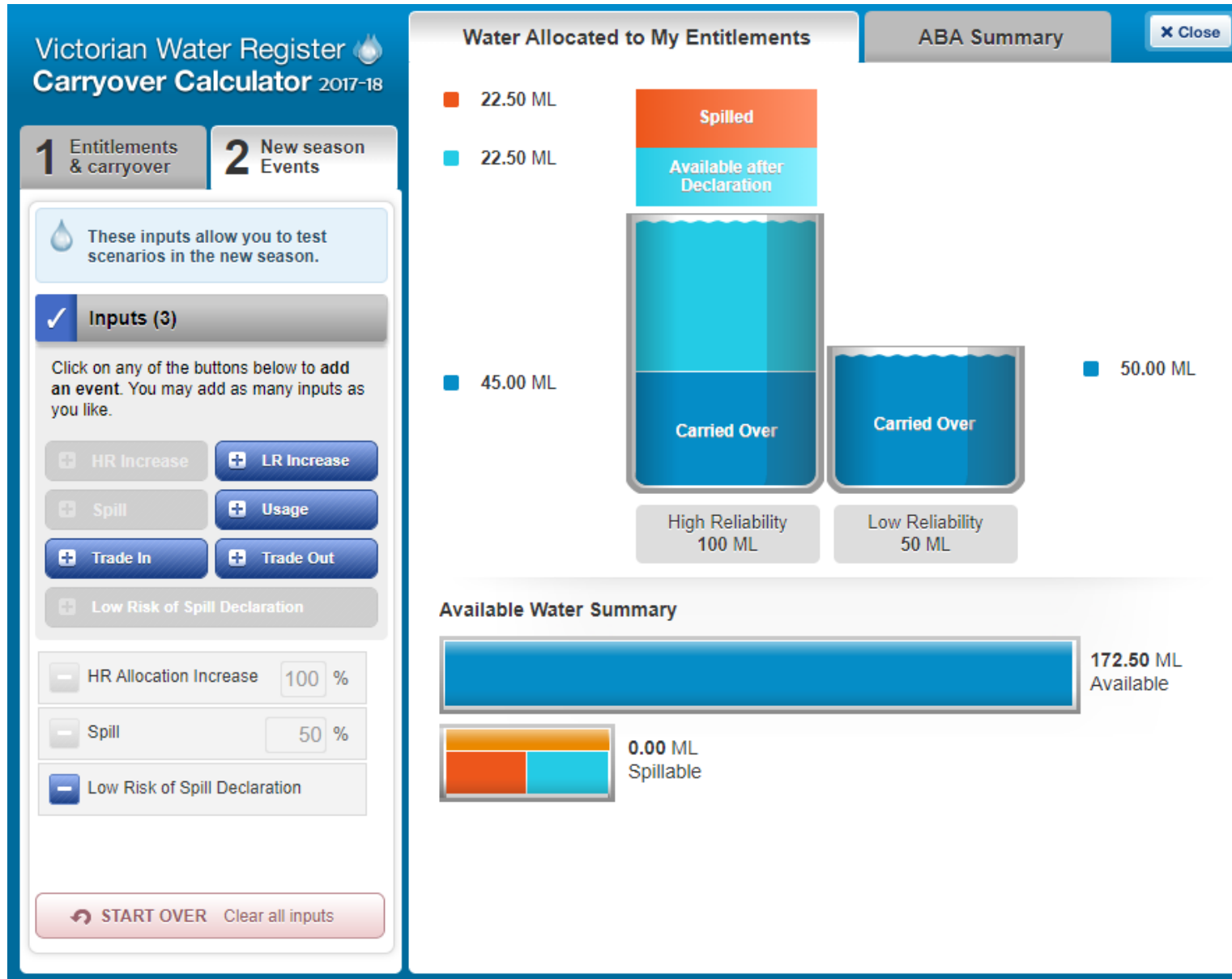
Carryover example – Murray/Goulburn/Campaspe



Carryover example – Murray/Goulburn/Campaspe



Carryover example – Murray/Goulburn/Campaspe



Carryover example – Murray/Goulburn/Campaspe



Victorian Water Register
Carryover Calculator 2017-18

1 Entitlements & carryover

2 New season Events

These inputs allow you to test scenarios in the new season.

✓ Inputs (3)

Click on any of the buttons below to **add an event**. You may add as many inputs as you like.

HR Increase

LR Increase

Spill

Usage

Trade In

Trade Out

Low Risk of Spill Declaration

HR Allocation Increase

100 %

Spill

50 %

Low Risk of Spill Declaration

START OVER

Clear all inputs

Water Allocated to My Entitlements

ABA Summary

Close

This is a detailed breakdown of your allocation account balance, based on the information provided.

Allocation Account Summary

Inflows	Vol (ML)	Outflows	Vol (ML)
Net carryover at July 1	95.00	Trade out	0.00
Seasonal allocation issued	100.00	Water use	0.00
Trade in	0.00	Write-off	- 22.50
Total Inflows	195.00	Total Outflows	- 22.50
ABA Balance	172.50		

Spillable Account

In	Vol (ML)	Out	Vol (ML)
Transferred to spillable	45.00	Returned to available	- 22.50
		Write-off due to spill	- 22.50
Total In	45.00	Total Out	- 45.00
Spillable Balance	0.00		

Available Balance	172.50
Orders	0.00
Tradable Balance	172.5

Based on the currently entered data, you have 172.5 ML available to use or trade.

Carryover – additional information



- <https://www.g-mwater.com.au/customer-services/end-of-season/carrying-over-unused-allocation>
 - Includes information about carryover rules for Loddon, Bullarook and Broken systems
 - Groundwater carryover rules
 - Link to the carryover calculator
(<https://waterregister.vic.gov.au/CarryoverCalculator2014/index.html>)

Key dates



- Water share applications – 17 June 2021
- Manual allocation applications – 24 June 2021
- Broker portal and online applications – 5pm 30 June 2021

Carryover Summary

Entitlement type	Carryover highlights
Vic High Reliability	up to 100%, 5% loss, subject to spill risk, returned after declaration
Vic Low Reliability	up to 100%, 5% loss, not subject to spill risk
NSW Murray General Security	up to 50%, no loss, forfeit future allocation above 110%
NSW M'bidgee General Security	up to 30%, no loss, forfeit future allocation above 100%

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2. Carryover
- 3. **Securing your future water needs**

What is your water strategy?

- Lowest cost input to support gross margins to grow annual crops?
- Risk management against potential temporary allocation price volatility?
- Ensure water security for the property in times of extreme dry?



There are options / products available...

- Permanent entitlements;
- Temporary allocation in the spot market;
- Forward allocation contracts;
- Entitlement leases.
- Carryover capacity;

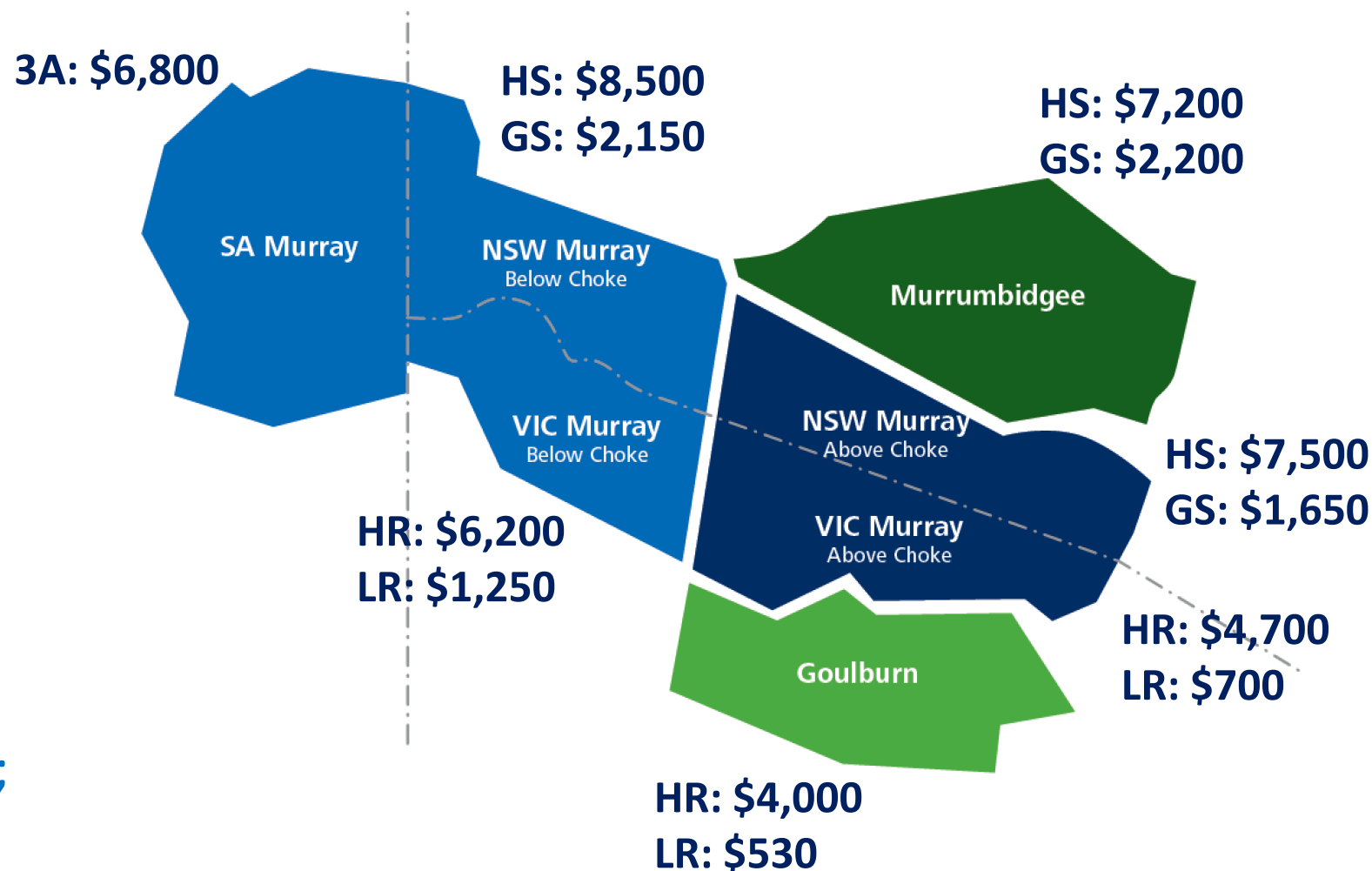
Purchasing permanent entitlements

Benefits:

- Fixed known cost;
- Capital appreciation;
- Ease of management;
- Option to sell excess;

Risks:

- Subject to allocation risk;
- Capital intensive;
- IVT risk for return delivery;
- Regulatory risk.



Purchasing temporary allocation

Benefits:

- What you buy is what you get;
- Flexibility (annual croppers);
- Cash flow friendly;

Risks:

- Price is highly volatile (climate, IVT);
- Shortfall / availability in extreme dry (permanent plantings).



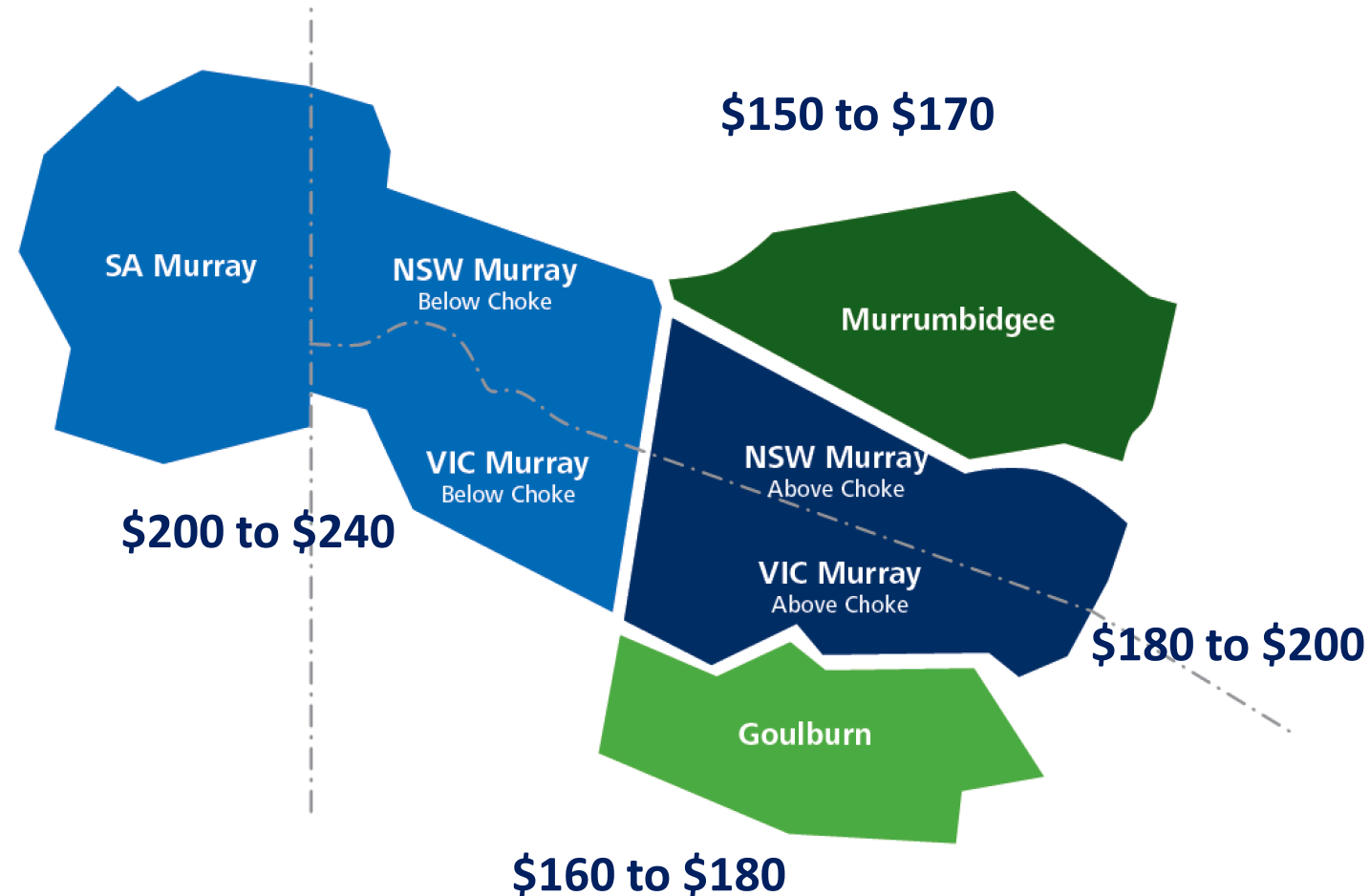
Purchasing forward allocation

Benefits:

- What you buy is what you get;
- Known fixed cost;
- Cash flow friendly;

Risks:

- Spot price significantly lower than forward price at delivery;
- Counterparty risk.



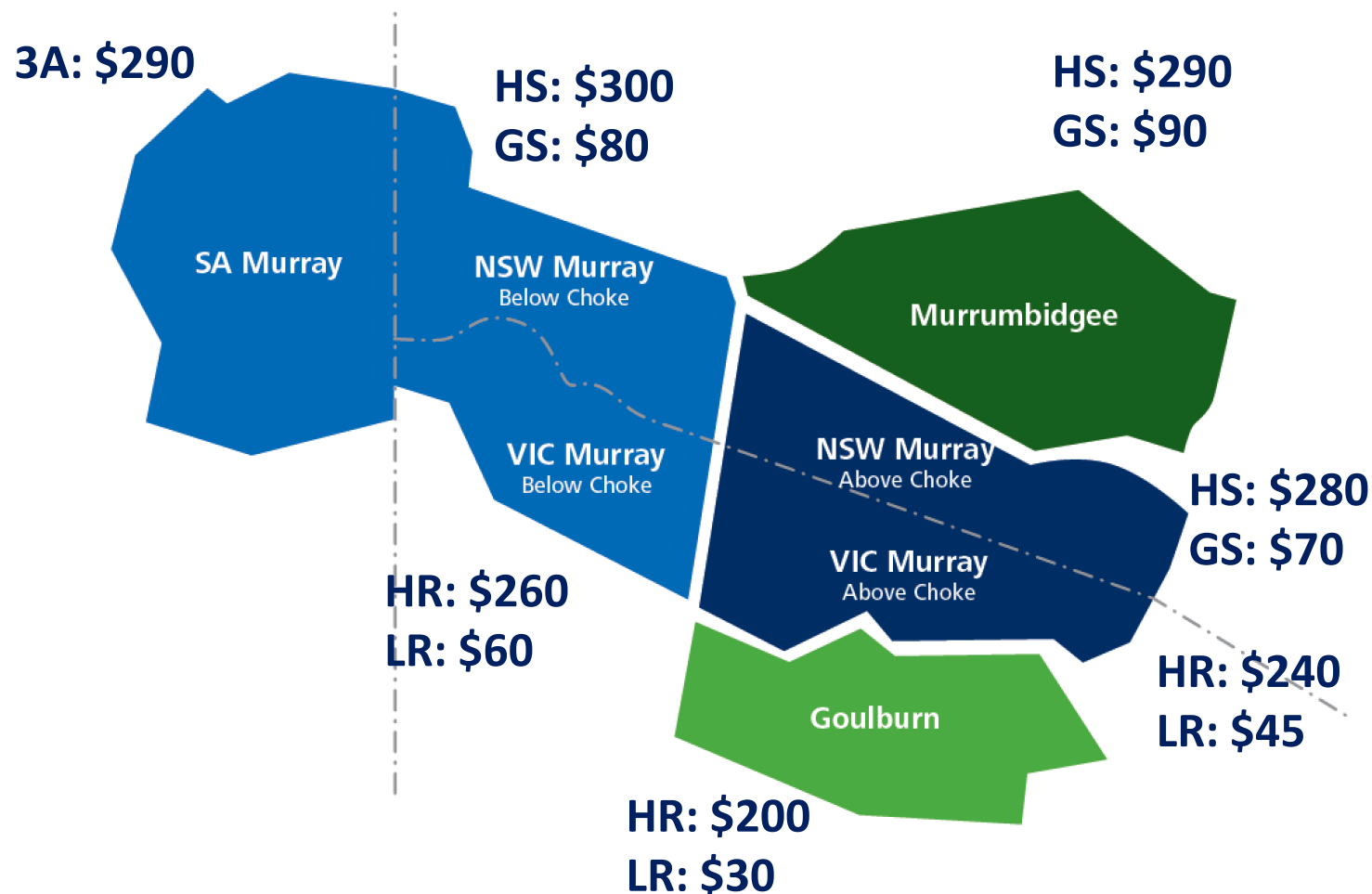
Purchasing permanent entitlements leases

Benefits:

- Longer term security;
- Low capital requirement;
- Fixed payment terms;

Risks:

- Subject to allocation risk;
- IVT delivery risk;
- Counterparty risk.



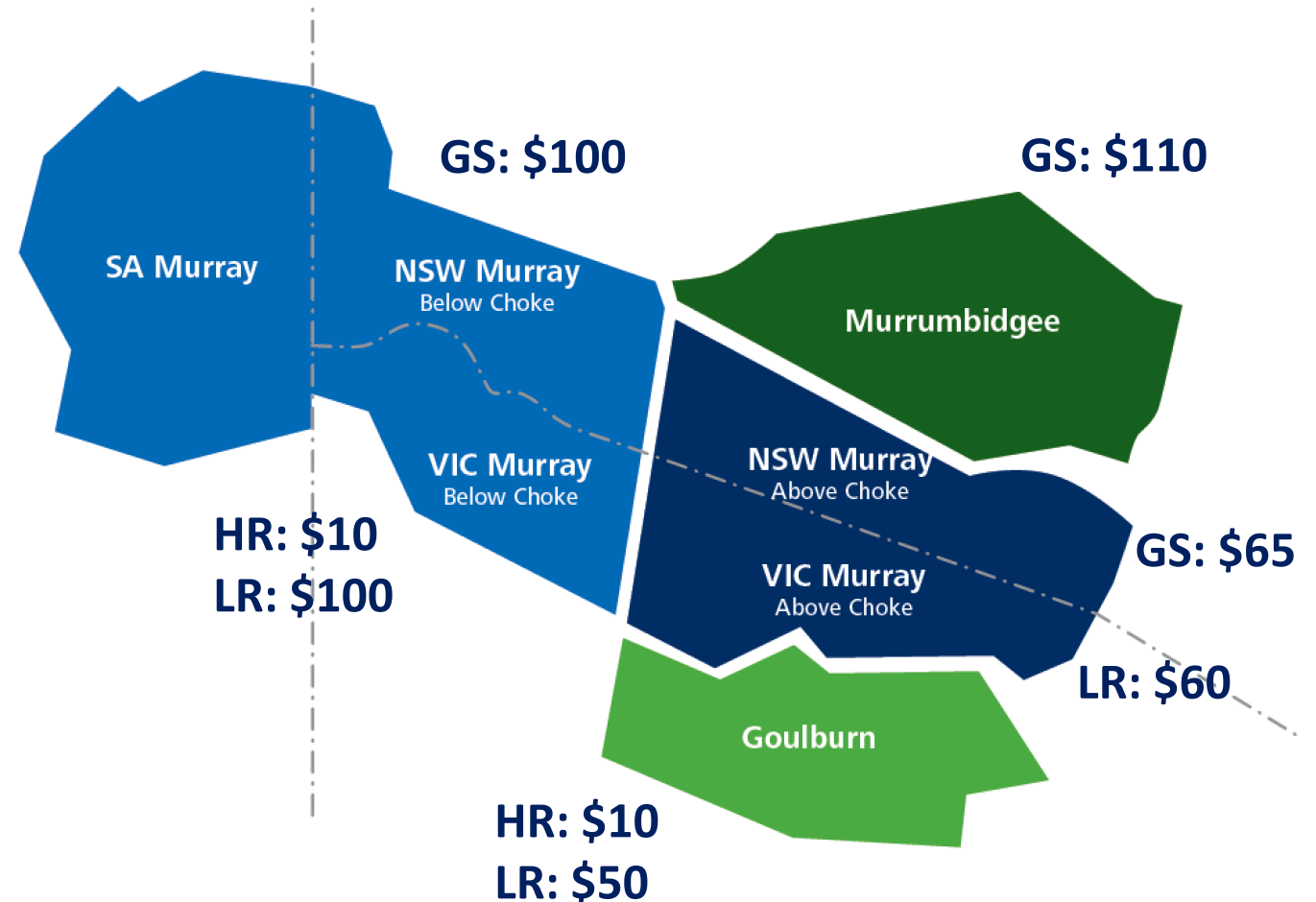
Purchasing carry over capacity (parking)

Benefits:

- Take advantage of low temporary allocation prices;

Risks:

- Spill risk for HR;
- IVT risk for return delivery.



Often a sensible mix is the best strategy

Balance between capital required and minimising risk



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