


## Webinar: Water Market Fundamentals – how to make it work for you

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## Presentation outline

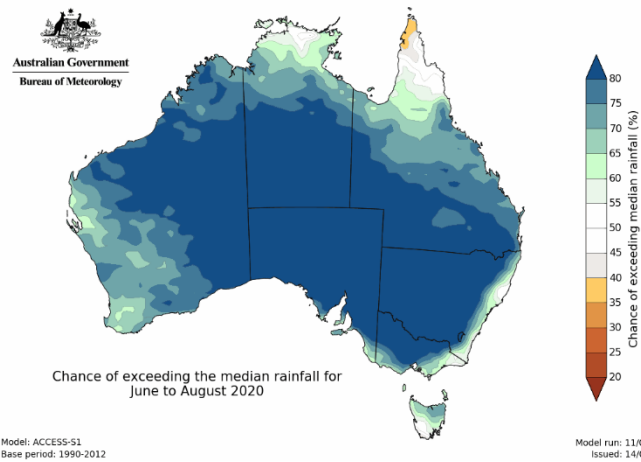
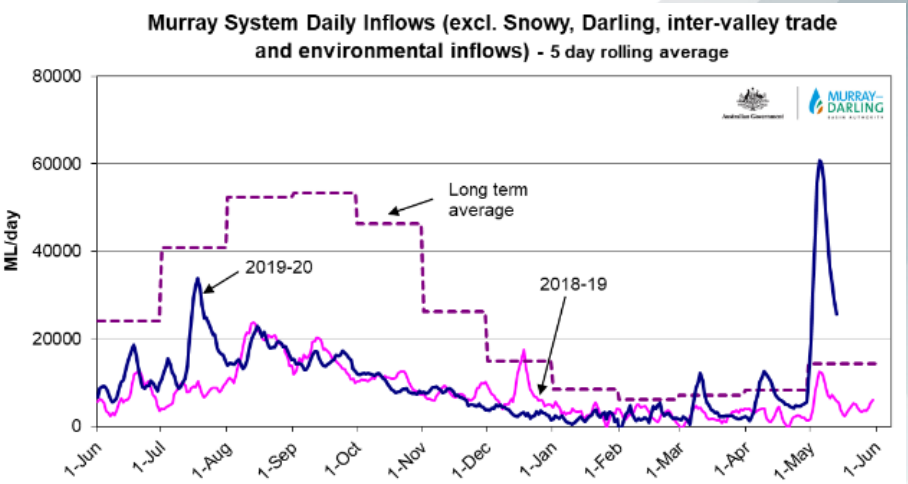
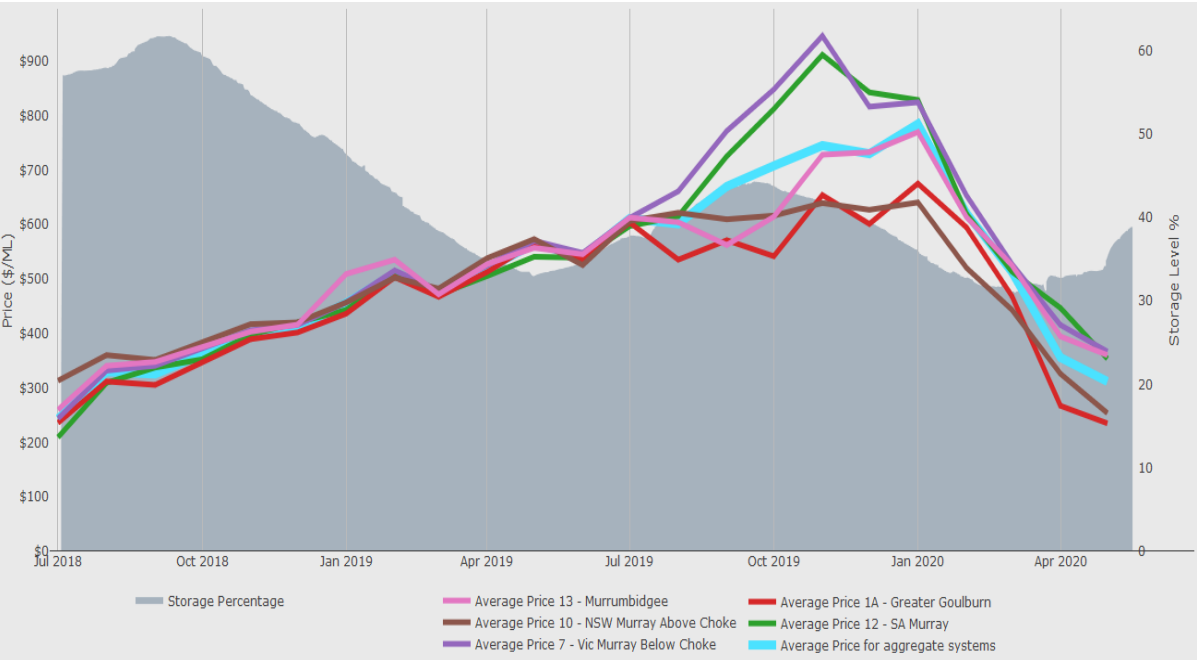
- Market update and outlook to 2020/21 – what has changed since the April webinar?
- South Australian water markets 101 – refresher about the basics
- Intervalley trading opportunities to South Australian irrigators
- Water market products available to manage water requirements



# Market update and outlook to 2020/21

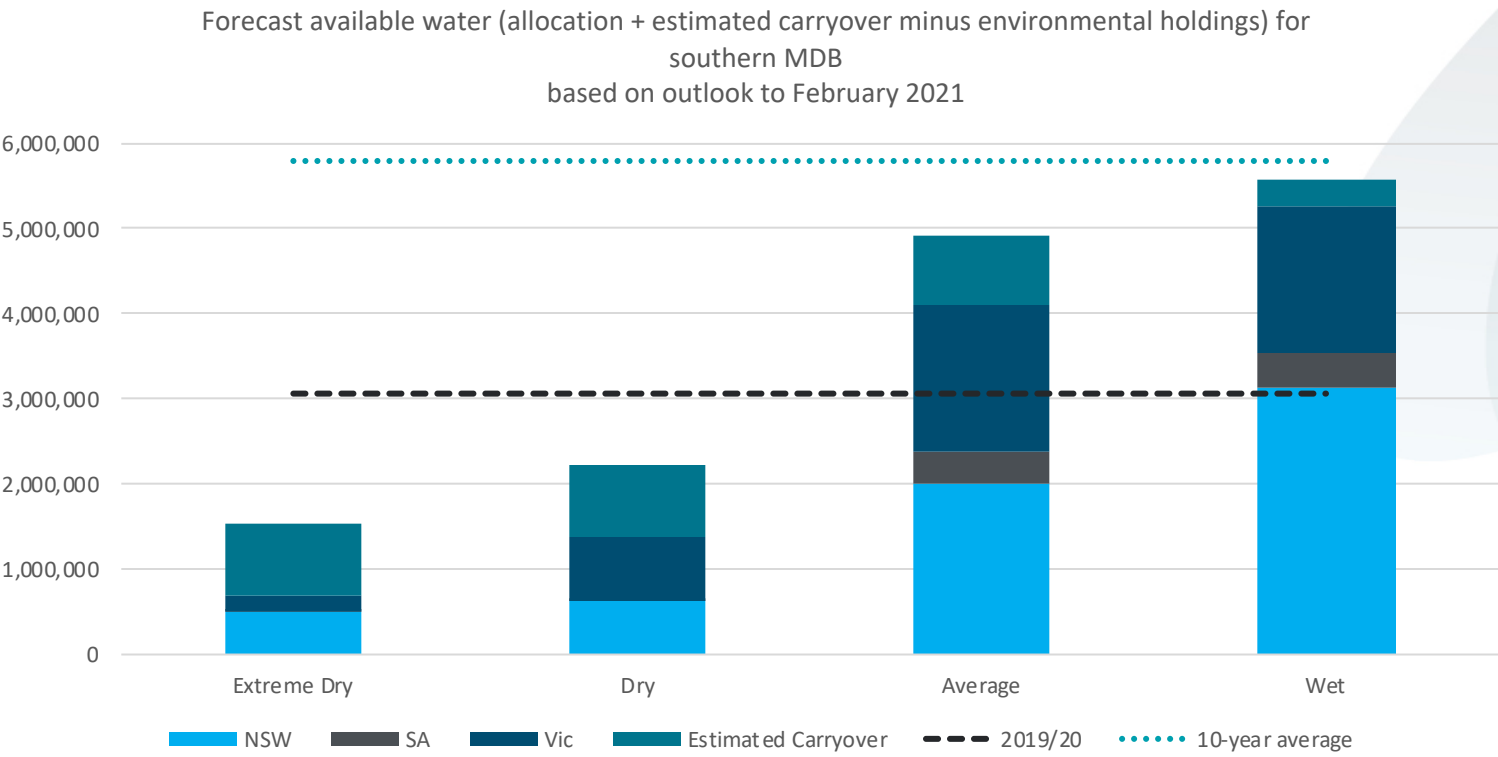
## What has changed since the April webinar?

# Southern Connected System Temporary market



# Allocation outlook in April

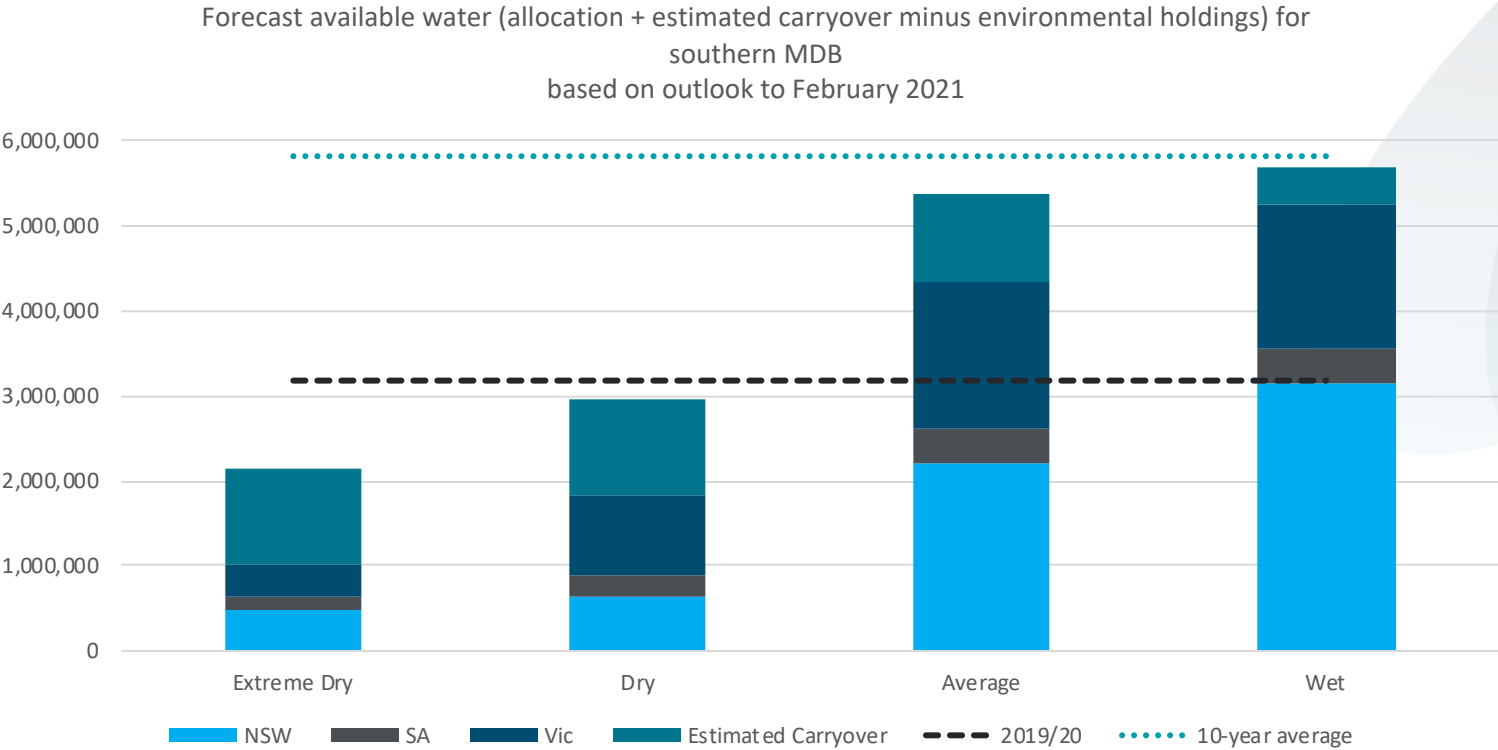
## Indicated low water availability



Source: NSW & Vic Governments, Marsden Jacob estimates

# Allocation outlook now

Still indicates low water availability under driest conditions, but the outlook has improved



Source: NSW & Vic Governments, Marsden Jacob estimates

# South Australian Water Markets 101

## Key concepts and definitions

# Key water market concepts are the same across Australia

However, water trading terminology varies between states:

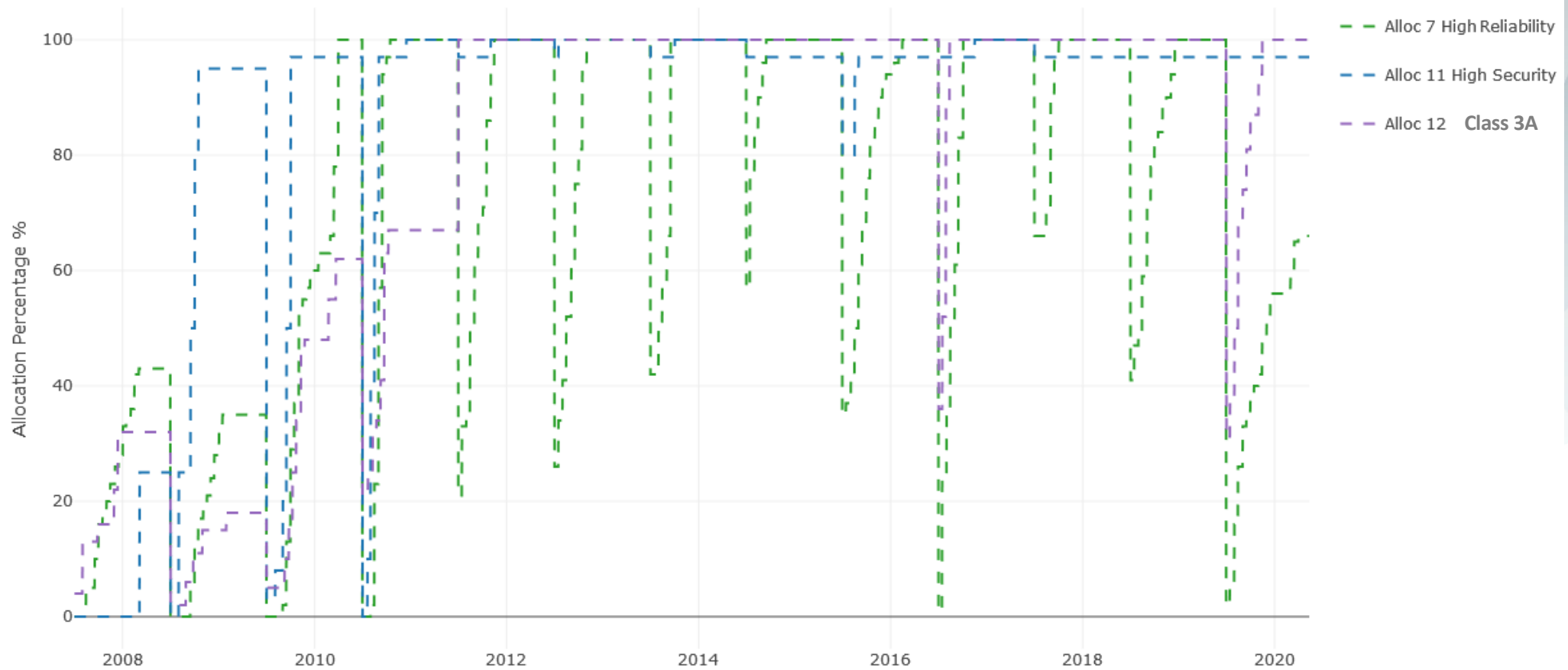
Term	SA	VIC	NSW	QLD
<b>Water Entitlement</b>	Water Access Entitlement	Water Share (WEE)	Water Access Licence (WAL)	Water Allocation (unbundled)/Water Licence (bundled)
<b>Usable Portion</b>	Allocation	Seasonal Determination	Available Water Determination	Announced Allocation/ Announced Entitlement
<b>Permanent Transfer</b>	Water Access Entitlement Transfer	Water Share Transfer	Share Assignment	Water Allocation Transfer/Water Licence Relocation
<b>Temporary Transfer</b>	Water Allocation Transfer	Water Allocation Trade	Water Allocation Assignment	Seasonal Assignment
<b>Regulated Water Source</b>	Prescribed Water Source	Regulated	Regulated	Supplemented
<b>Unregulated Water Source</b>	Prescribed Water Source	Unregulated	Unregulated	Unsupplemented
<b>Regulated Entitlement types</b>	Class 1, Class 3 (High Security), Class 5 etc.	High and Low Reliability	High and General Security	High and Medium Priority



## SA Murray consumptive pool classes and characteristics

Consumptive Pool & Class	Characteristics				
	EOI (GL)	CHWN	Tradeable	Eligible for Carryover	Specific Purpose on Use
All Purpose Consumptive Pool (Class 1)	8.4	Yes	Yes	No	No
All Purpose Consumptive Pool (Class 2)	50	Yes	Yes	No	No
All Purpose Consumptive Pool (Class 3 – High Security)	607.8	No	Yes	Yes	No
All Purpose Consumptive Pool (Class 5)	5.6	Yes	Yes	No	No
Metropolitan Adelaide Consumptive Pool (Class 6)	130	Yes	No (pursuant to Schedule E of the MDB Agreement)	No	Yes - Water supply purposes to metropolitan Adelaide and associated country areas
All Purpose Consumptive Pool (Class 8)	22.2	No	No (pursuant to Schedule E of the MDB Agreement)	No	To be used for protecting environmental land assets in the Lower Murray Reclaimed Irrigation Area
Wetland Consumptive Pool (Class 9)	39	No	Yes (but must be used for specified purpose)	No	Yes - Management of wetlands within the 1956 flood boundary that can be managed through a wetting and drying regime
Environmental Consumptive Pool (Class 9)	7.2	No	Yes (but must be used for specified purpose)	No	Yes - Environmental purposes as specified by the Water Act 2007 (Cth)

## Historical allocations – SA Class 3 vs. NSW 11 HS and Vic 7 HR



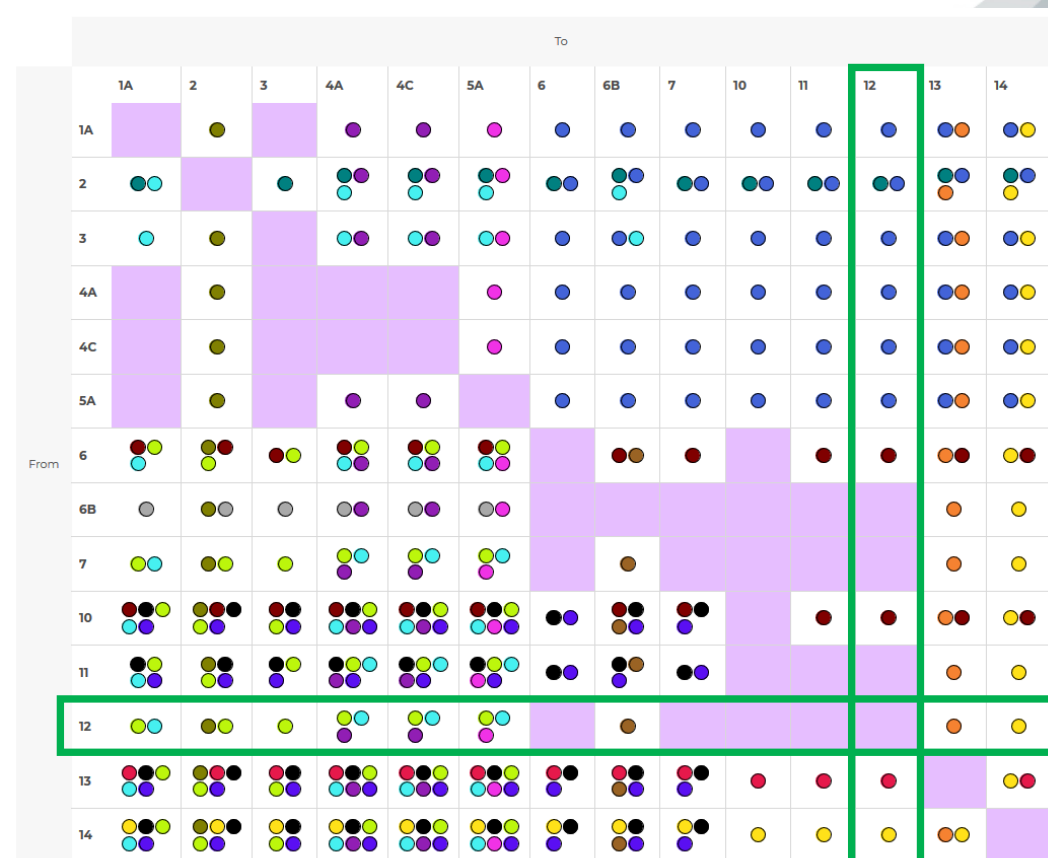
## Intervalley trading

What opportunities can interstate entitlements offer?

# Market connectivity in the SCMDB

- Allocation can be traded across catchments and state boundaries subject to trading rules and limits
- This increases the market size, and gives e.g. SA irrigators access to interstate entitlements and allocation
- For comparison:
  - SA Class 3 EOI: 608GL
  - Vic 7 HR EOI: 938GL
  - NSW 11 HS EOI: 164GL
  - NSW 13 GS EOI: 1,892GL

Underpinned by legislation (Schedule D of Schedule 1 of the *Cwth Water Act 2007*)



## Limit Legend

- Barmah Choke limit
- Lower Broken Creek back-trade limit
- Broken back-trade limit
- Broken out trade limit
- Goulburn to Murray IVT limit
- NSW to VIC annual trade limit
- Murrumbidgee IVT Out limit
- Murrumbidgee IVT In limit
- Lower Darling out/in trade limit
- Goulburn back-trade limit
- Upper Goulburn back-trade limit
- Campaspe back-trade limit
- Loddon back-trade limit
- Upper Goulburn - Lower Broken back-trade limit
- Always Allowed
- NSW to VIC spill-risk trade limit

# Access to interstate water is a significant benefit

## Variability in entitlement characteristics can be an advantage

- Carryover capacity for Vic HR/LR and NSW GS entitlements is greater than in SA
  - NSW HS entitlements will receive a 95/97% allocation on 1 July in all but extreme dry years (Millennium Drought)
- > opportunities for SA irrigators to access carryover capacity or allocation water from interstate

	Class			
Zone		High Security / Reliability	Low Reliability	General Security
	1A Greater Goulburn	100%	100%	-
	2 Broken	50%	-	-
	3 Lower Goulburn	100%	100%	-
	4A Campaspe	100%	100%	-
	4C Lower Campaspe	100%	100%	-
	5A Loddon	50%	50%	-
	6 Vic Murray Above Choke	100%	100%	-
	6B Lower Broken Creek	100%	100%	-
	7 Vic Murray Below Choke	100%	100%	-
	10 NSW Murray Above Choke	0%	-	50%
	11 NSW Murray Below Choke	0%	-	50%
	12 SA Murray	20%	-	-
	13 Murrumbidgee	0%	-	30%
14 Lower Darling	0%	-	50%	

# Connectivity underpins water delivery to South Australia

Under the current trading rules, temporary water can be *always* traded to SA Murray from Victorian zones 6B & 7 and NSW zone 11 without limits

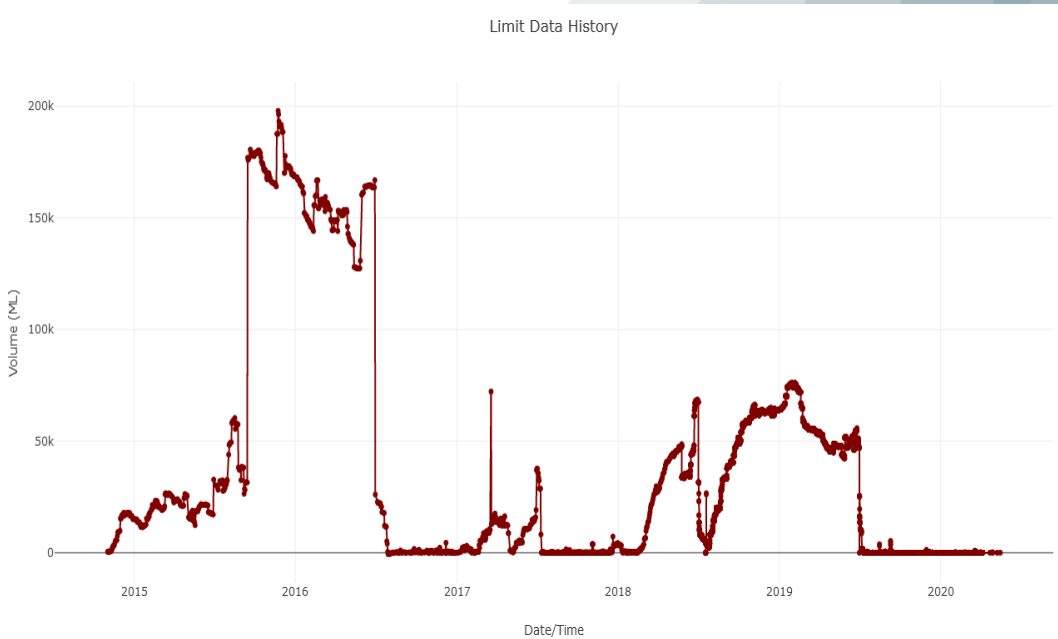
- This means that contracting carryover space or forward water from these zones comes without delivery risk
- From other zones trade may be restricted
- Main trade limits are
  - Barmah Choke
  - Goulburn IVT
  - Murrumbidgee IVT (In or Out)



Source: Waterflow™ by Marsden Jacob

# Main trade limits

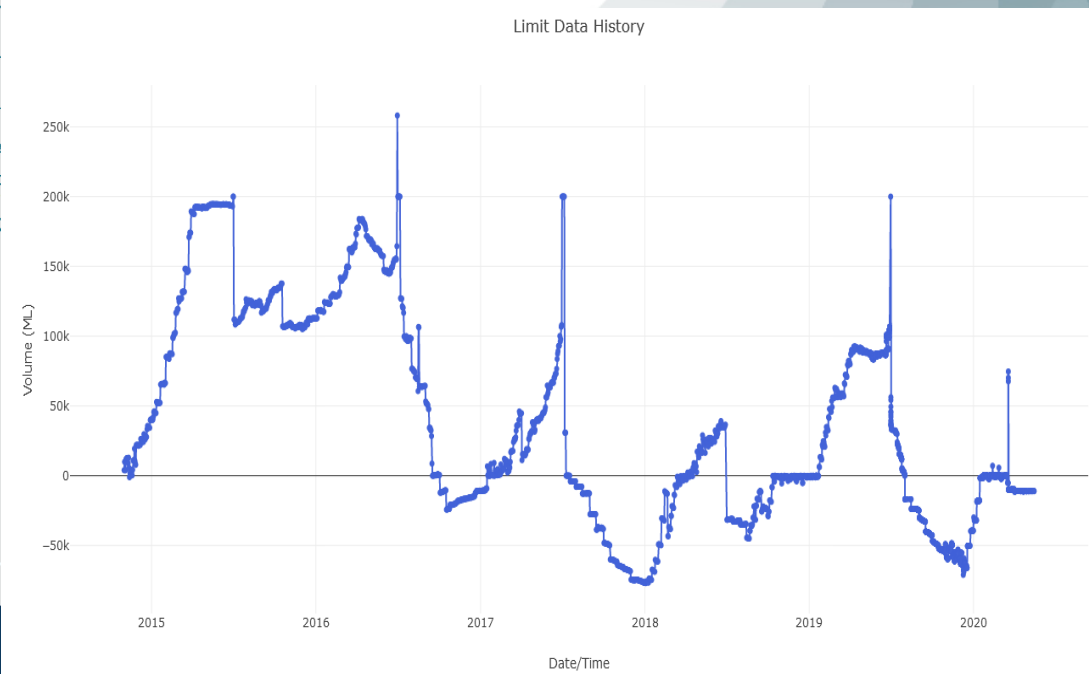
## Barmah Choke



Source: Waterflow™ by Marsden Jacob

# Main trade limits

## Goulburn IVT

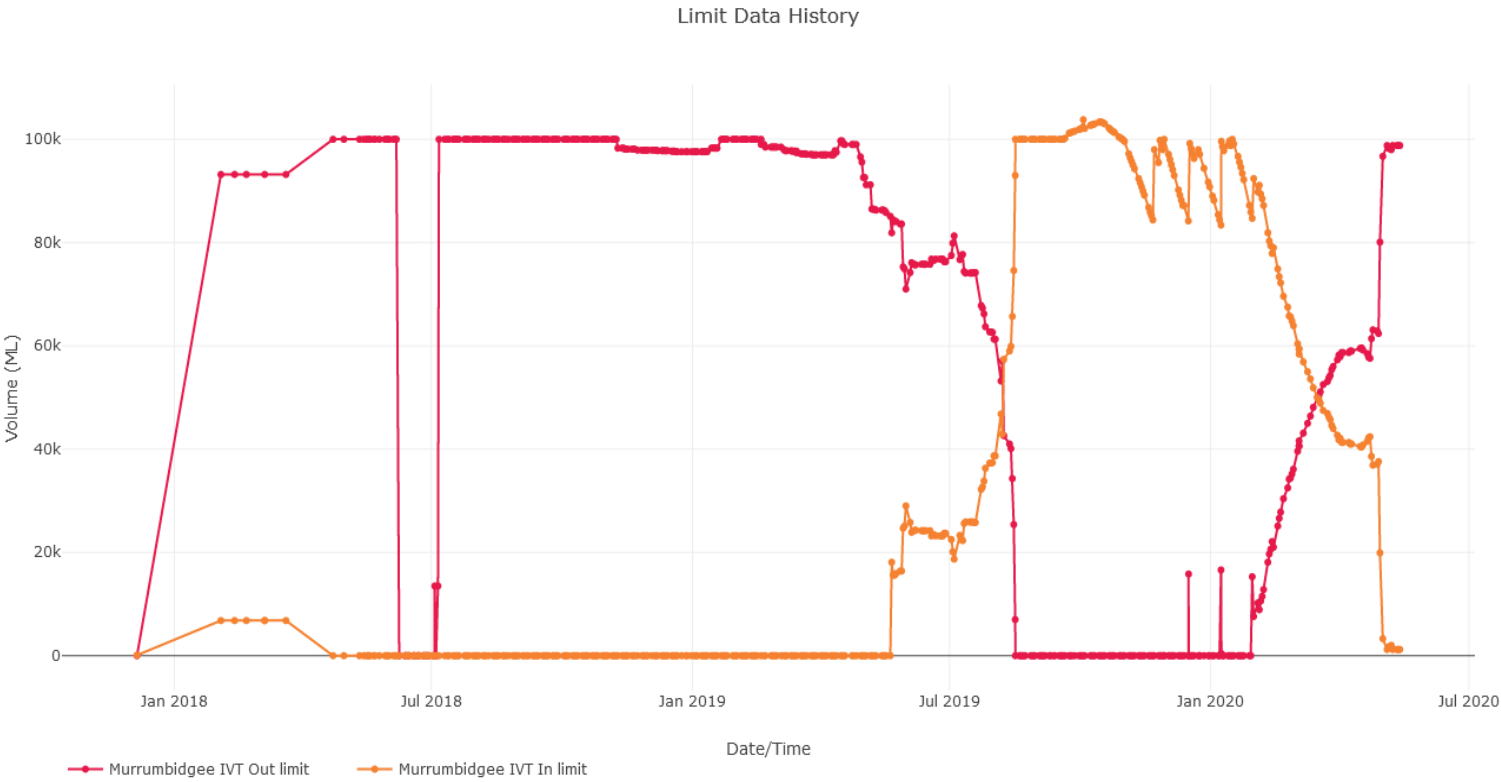


Source: Waterflow™ by Marsden Jacob



# Main trade limits

## Murrumbidgee IVT (In or Out)



Source: Waterflow™ by Marsden Jacob

## Lots of great resource available to help

Barmah Choke

<https://www.mdba.gov.au/managing-water/water-markets-trade/barmah-choke>

**Goulburn Murray Trade Review:** DELWP have released two new documents to help people understand the difference between the options in our consultation paper and how trade could work under each one:  
<https://waterregister.vic.gov.au/about/news/310-consultation-extended-on-goulburn-to-murray-trade-review>

Victorian Trade rules

<https://waterregister.vic.gov.au/TradingRules2019/>

New South Wales register

<https://www.industry.nsw.gov.au/water/licensing-trade/nsw-water-register>

## Managing risks

How can water markets help you to manage  
for risk?

## What risks are you managing for?



1. **Water availability** – rainfall and allocation yield not sufficient for watering requirements
2. **Temperature** – high temperatures increasing your water requirement
3. **Price** – costs of entering the temporary or permanent water market to meet your watering requirements.

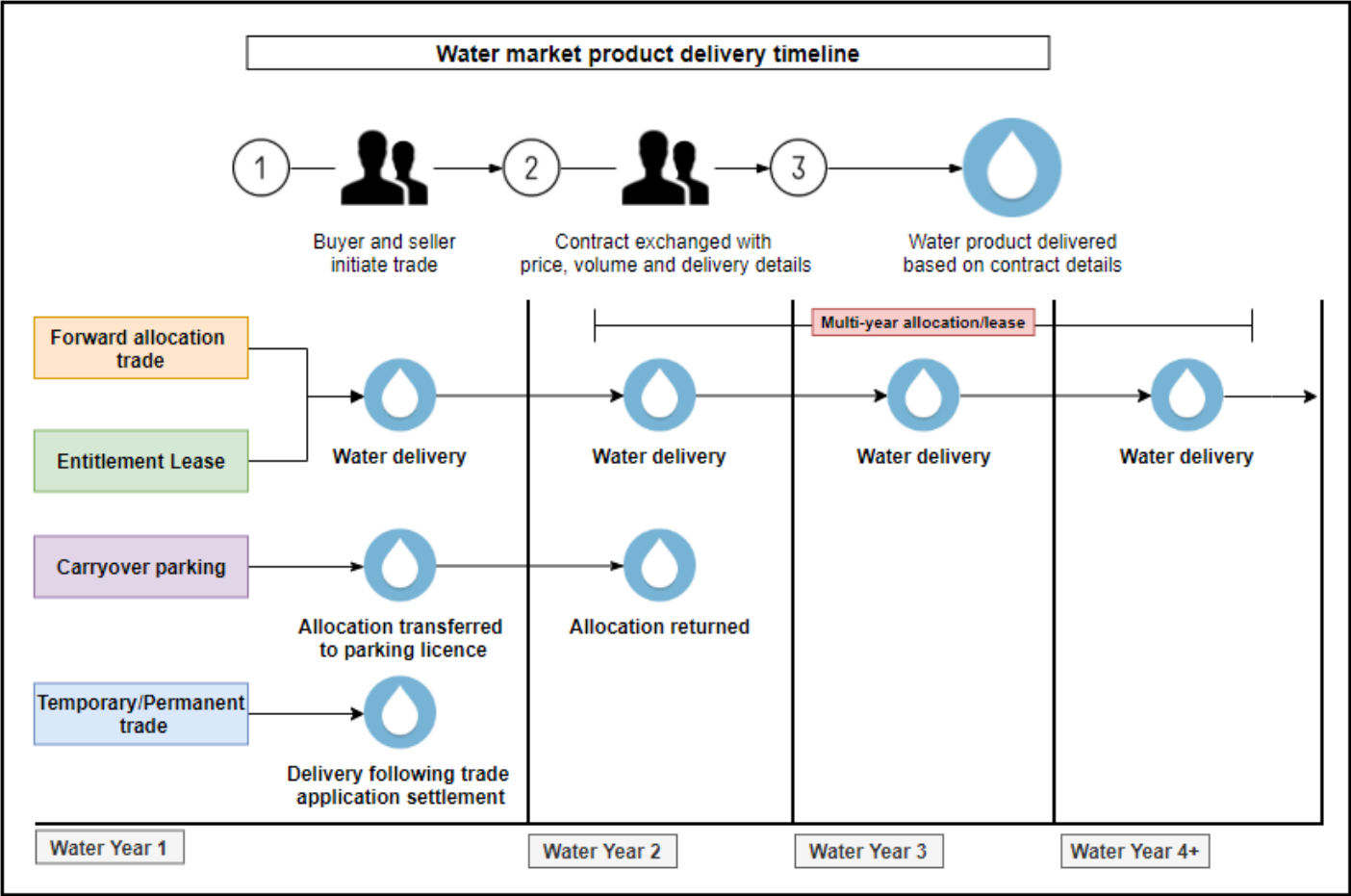
## Several options available

- **Mature products**
  - Temporary water
  - Permanent entitlements
- **Emerging, secondary products**
  - Lease
  - Forward
  - Carryover

## Secondary products may be a beneficial option to secure water

Product	Product Definition
<b>Entitlement Lease</b>	An Entitlement Holder ( <b>Lessor</b> ) transfers complete access to the Entitlement to a second party ( <b>Lessee</b> ) for a specified period of time - one or more water years. At the end of that period, the access to the Entitlement returns to the Lessor.
<b>Forward Allocation Trade</b>	Allocation water is traded with a future delivery date at an agreed price. The date of delivery may be in the current water year or over multiple water years.
<b>Carryover Parking</b>	Certain types of Entitlements can allow unused Allocation water to be 'carried over' from one water year to another. In a Carryover Parking contract a party with excess Allocation water ( <b>'Placer'</b> ) rents carryover space from an Entitlement <b>Holder</b> to carry water over. The 'parked' Allocation water is returned to the Placer in the following water year.

# Secondary products timeline considerations



# Breakout Sessions

## Emerging water market products

- Taking a closer look at three different products and their characteristics, and how these can help in managing risk:
  - Forwards
  - Leases
  - Parking

## Risk management strategies

- We'll go through a series of case studies that illustrate the options to utilise market products:
  - Talk through a range of options that you have available – depending on your circumstances
  - Illustrative examples regarding how much the options might cost



# Case study # 1 - Citrus grower looking to carry water over to next year

500ML Class 3 entitlement, 100ML allocation left on the account which they want to carry over to 2020/21

Indicative cost estimates\*:

## Option 2: Park in Vic

Transfer Out (SA)	\$272.00
Transfer In (Vic)	\$47.50
Parking Cost: \$60 x 100ML	\$6,000.00
Transfer Out (Vic)~	\$47.50
Transfer In (SA)~	\$272.00
Total cost	\$6,639.00
<b>Total per ML (based on 95ML returned)</b>	<b>\$69.88</b>

## Option 2: Park in NSW

Transfer Out (SA)	\$272.00
Transfer In (NSW)	\$49.94
Parking Cost: \$60 x 100ML	\$6,000.00
Transfer Out (NSW)~ (includes trade out fee from NSW to interstate)	\$524.94
Transfer In (SA)~	\$272.00
Total cost	\$7,118.88
<b>Total per ML (based on 100ML returned)</b>	<b>\$71.19</b>

## Option 3: Sell Allocation & purchase Forward

Sell remaining water now: \$250 x 100ML	-\$25,000.00
Contract Forward water from Zone 7: \$500 x 100ML	\$50,000.00
Transfer fees Vic +(SA)~	\$319.50
Total cost	\$25,319.50
<b>Total per ML (based on 100ML "returned")</b>	<b>\$253.20</b>

# End – Water Market Fundamentals Session

## Let's talk more



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