

Water entitlement market price report – December 2018

Murray-Darling Basin

A Final Report prepared for the Department of Agriculture and
Water Resources

Thursday 17 January 2019

A I T H E R

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Introduction

This water entitlement market price report has been prepared by Aither on behalf of the Australian Government Department of Agriculture and Water Resources.

This report includes details regarding Murray-Darling Basin water entitlement prices and trade activity. The entitlement types included within this report are detailed below:

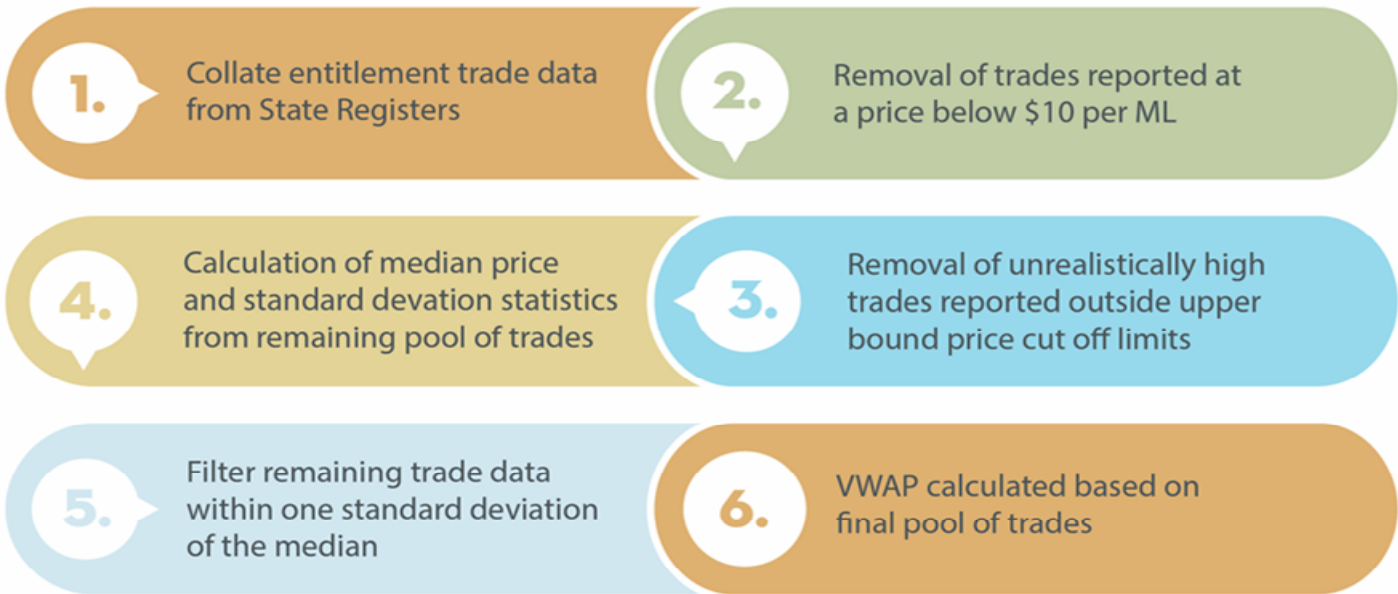
Southern Murray-Darling Basin Entitlements

SA Murray 3A, Vic 6 Murray HRWS, Vic 6 Murray LRWS, Vic 7 Murray HRWS, Vic 7 Murray LRWS, Vic 6B Lower Broken Creek HRWS, Vic 6B Lower Broken Creek LRWS, Vic 1A Greater Goulburn HRWS, Vic 1A Greater Goulburn LRWS, Vic 1B Boort HRWS, Vic 1B Boort LRWS, Vic 3 Lower Goulburn HRWS, Vic 3 Lower Goulburn LRWS, Vic 4C Lower Campaspe HRWS, Vic 4A Campaspe (Eppalock to WWC) HRWS, Vic 4A Campaspe (Eppalock to WWC) LRWS, Vic 5A Loddon HRWS, Vic 5A Loddon LRWS, Vic 5B Bullarook HRWS, Vic 5B Bullarook LRWS, NSW Murray HS, NSW Murray GS, NSW Murray Irrigation Limited GS, NSW Murrumbidgee HS, NSW Murrumbidgee GS, NSW Lower Darling HS, NSW Lower Darling GS.

Northern Murray-Darling Basin Entitlement types

NSW Macquarie GS, NSW Lower Namoi GS, NSW Upper Namoi GS, NSW Gwydir GS, NSW Border Rivers GS A, NSW Border Rivers GS B, NSW Barwon-Darling Unregulated A, NSW Barwon-Darling Unregulated B, NSW Barwon-Darling Unregulated C, NSW Lachlan GS, QLD Condamine-Balonne (St George) Supplemented, Condamine-Balonne QLD Condamine-Balonne (Lower Balonne) Unsupplemented, QLD Condamine-Balonne (Upper Condamine) Unsupplemented, QLD Central Condamine Alluvium Groundwater (1, 2, 3 and 4), QLD Upper Condamine Alluvium Groundwater (Dalrymple Creek) Groundwater, QLD Upper Condamine Alluvium Groundwater (Oakey Creek) Groundwater, QLD Condamine-Balonne Lower Balonne Overland flow, QLD Border Rivers Supplemented (Macintyre Brook), QLD Border Rivers Unsupplemented.

A brief summary has been provided below:



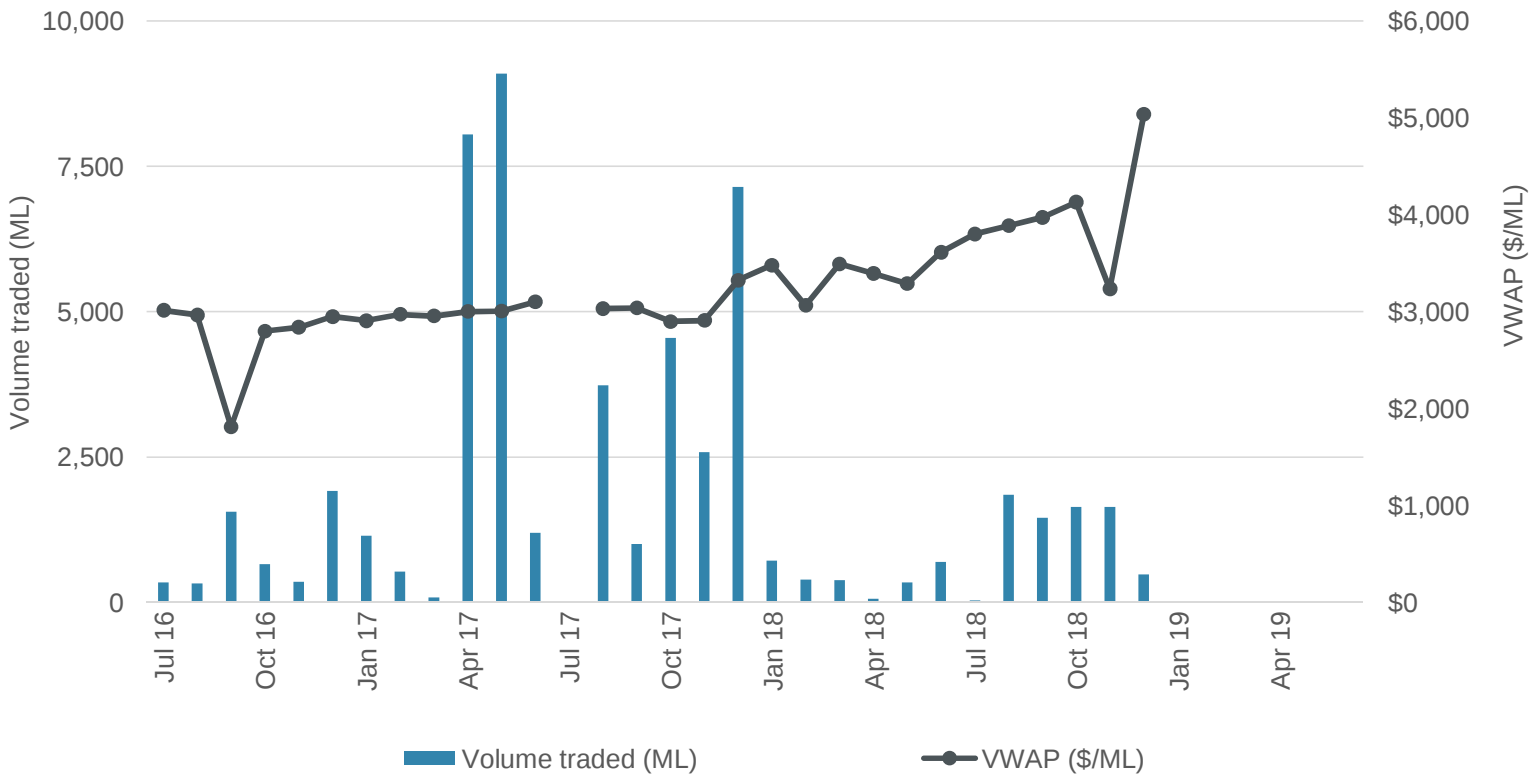
SA Murray

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
SA Murray 3A	\$5,036	\$5,550	17	478	28	\$5,000 - \$5,800

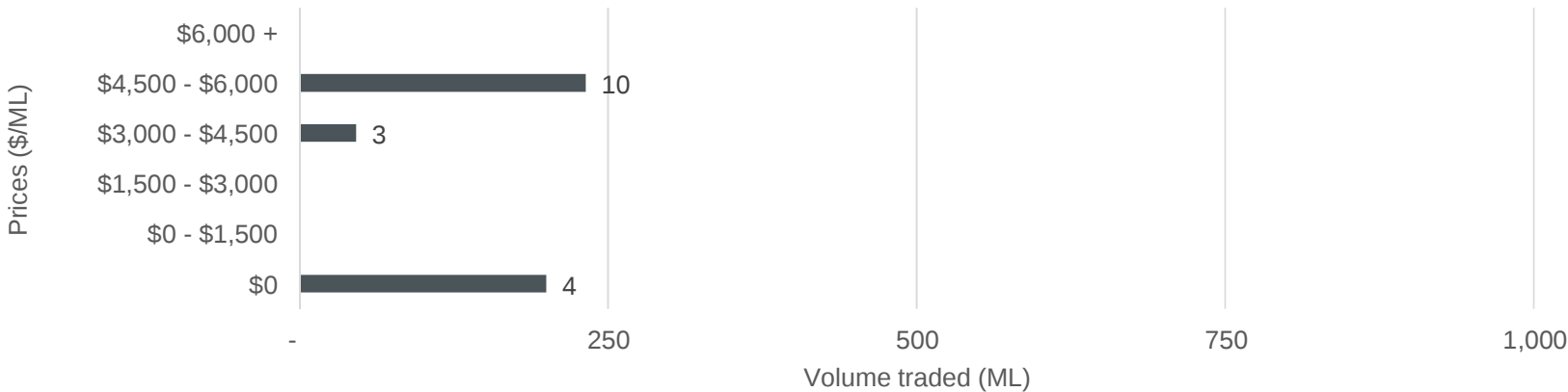
Source: Aither, 2018. Based on the SA Water Register and quotes sourced from water brokers.

Market prices and volumes, July 2016 to June 2019



Source: Aither, 2018. Based on the SA Water Register.

Market price range, December 2018



Source: Aither, 2018. Based on the SA Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

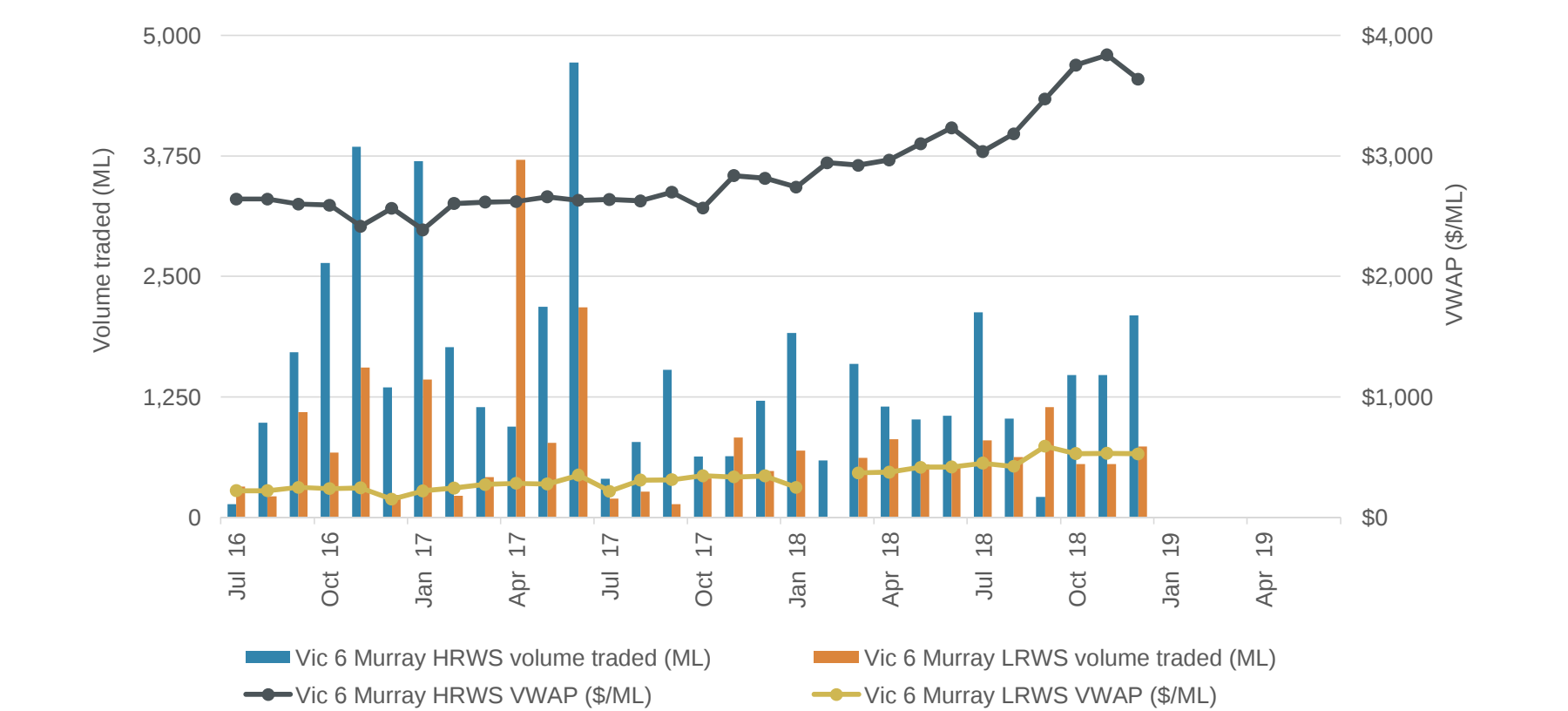
Vic 6 Murray

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
Vic 6 Murray HRWS	\$3,636	\$4,100	29	2,093	72	\$4,000 - \$4,400
Vic 6 Murray LRWS	\$527	\$597	11	738	67	\$500 - \$600

Source: Aither, 2018. Based on the VIC Water Register and quotes sourced from water brokers.

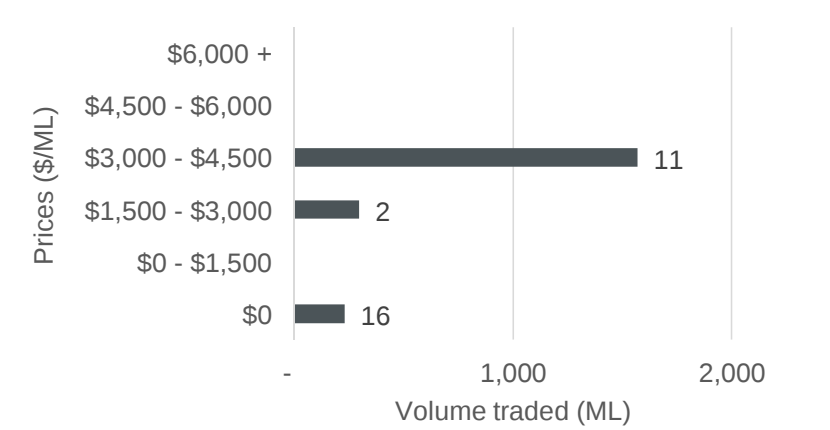
Market prices and volumes, July 2016 to June 2019



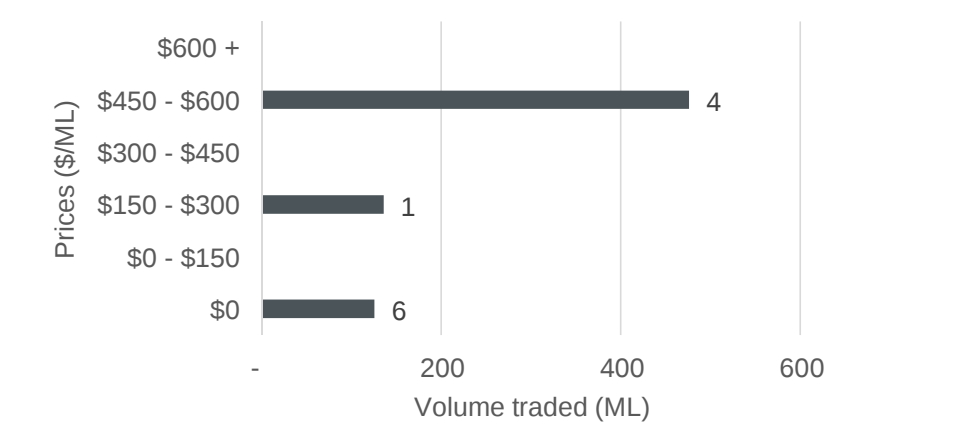
Source: Aither, 2018. Based on the VIC Water Register.

Market price range, December 2018

Vic 6 Murray HRWS



Vic 6 Murray LRWS



Source: Aither, 2018. Based on the VIC Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

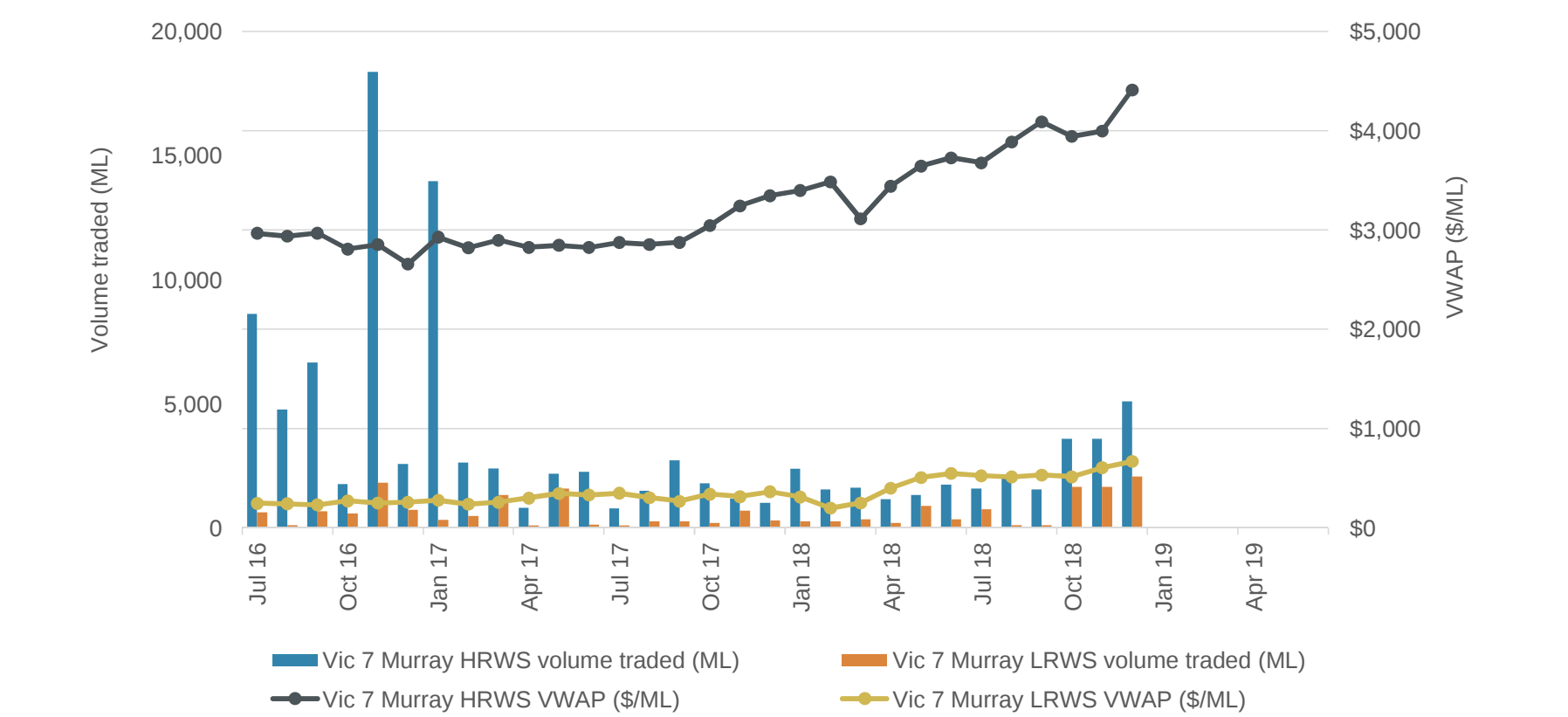
Vic 7 Murray

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
Vic 7 Murray HRWS	\$4,411	\$5,400	89	5,092	57	\$4,800 - \$ 5,100
Vic 7 Murray LRWS	\$668	\$700	16	2,064	129	\$600 - \$650

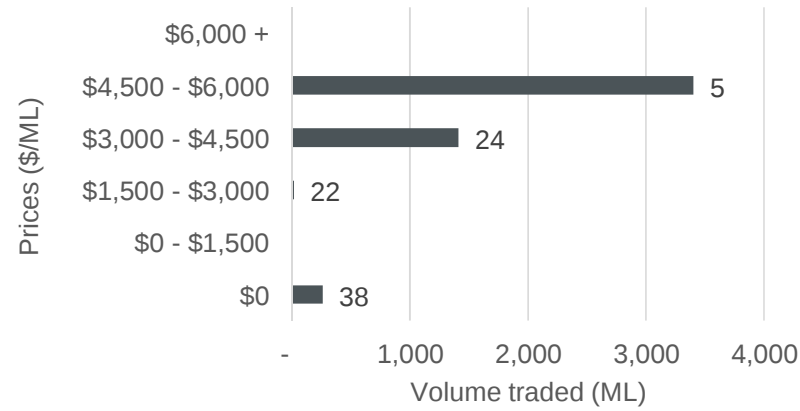
Source: Aither, 2018. Based on the VIC Water Register and quotes sourced from water brokers.

Market prices and volumes, July 2016 to June 2019

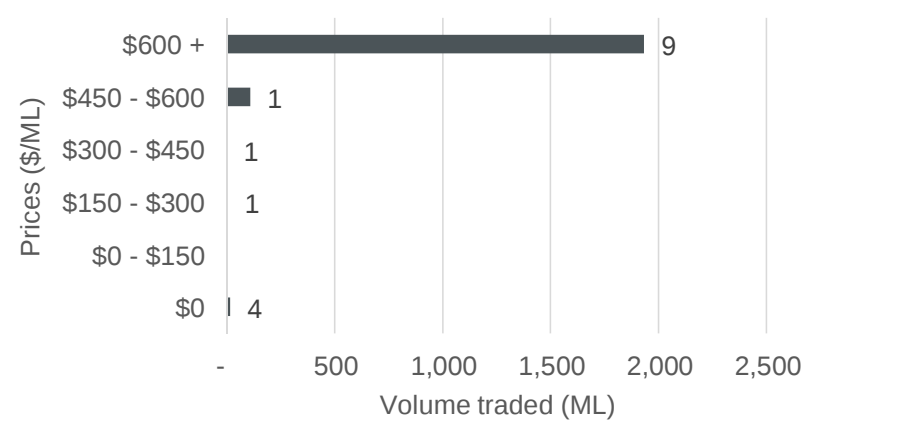


Source: Aither, 2018. Based on the VIC Water Register.

Market price range, December 2018 Vic 7 Murray HRWS



Vic 7 Murray LRWS



Source: Aither, 2018. Based on the VIC Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

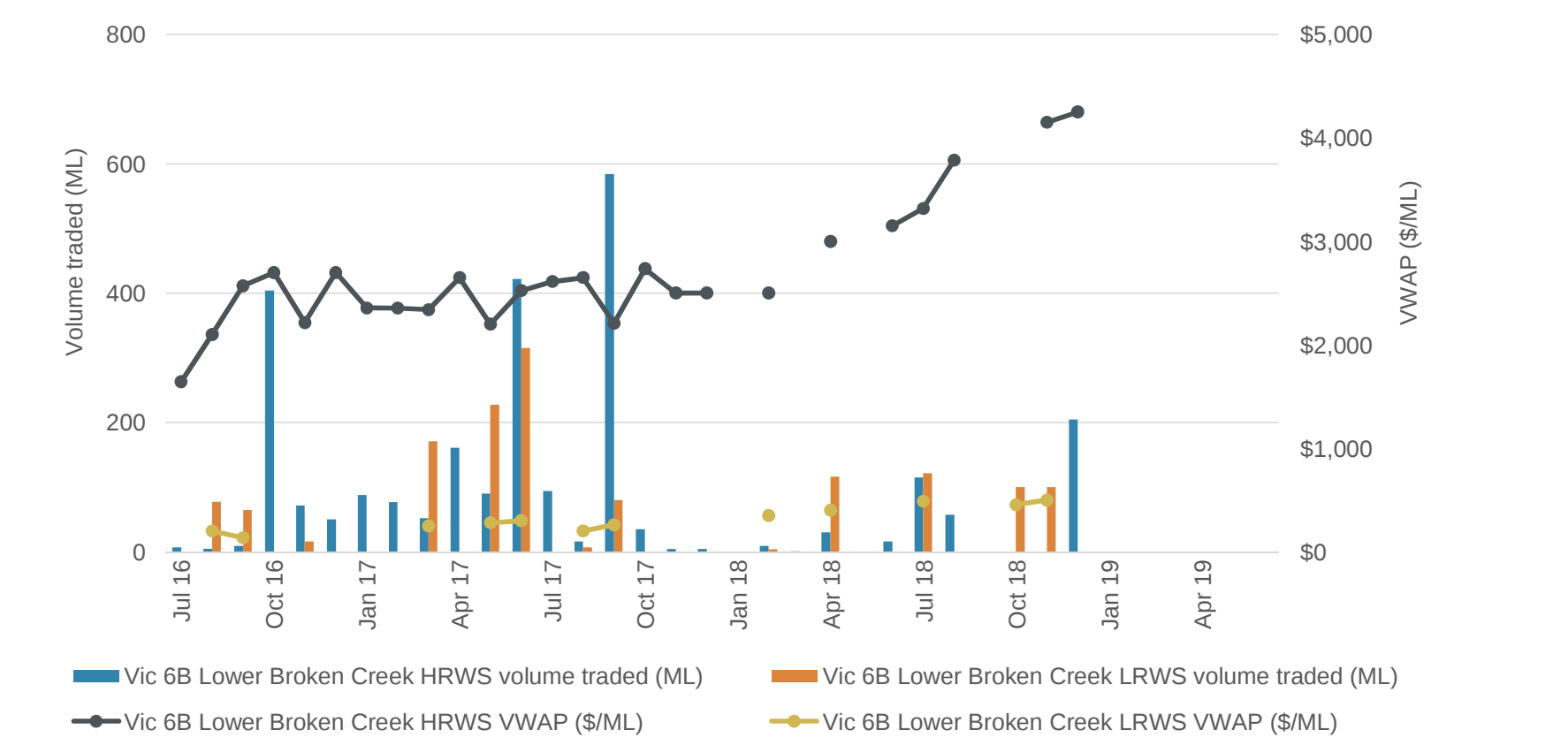
Vic 6B Lower Broken Creek

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
Vic 6B Lower Broken Creek HRWS	\$4,250	\$4,250	1	204	204	-
Vic 6B Lower Broken Creek LRWS	-	-	-	-	-	-

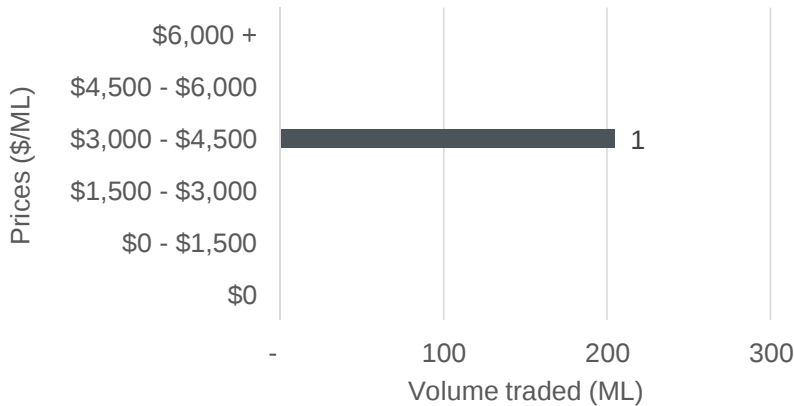
Source: Aither, 2018. Based on the VIC Water Register and quotes sourced from water brokers.

Market prices and volumes, July 2016 to June 2019

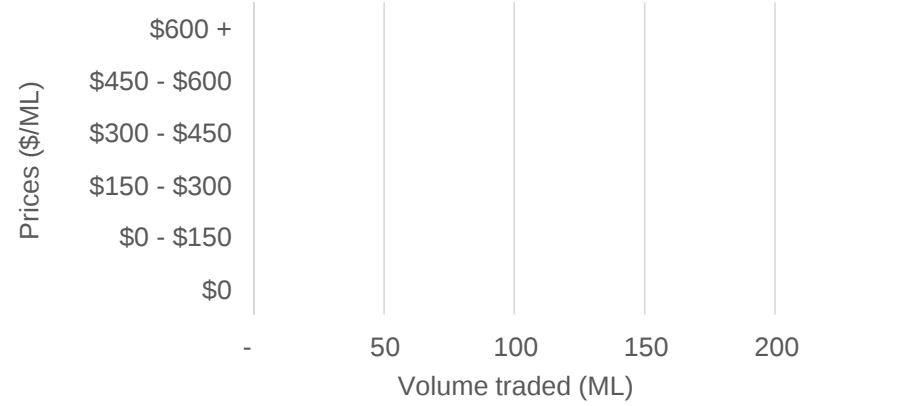


Source: Aither, 2018. Based on the VIC Water Registers.

Market price range, December 2018 Vic 6B Lower Broken Creek HRWS



Vic 6B Lower Broken Creek LRWS



Source: Aither, 2018. Based on the VIC Water Registers.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

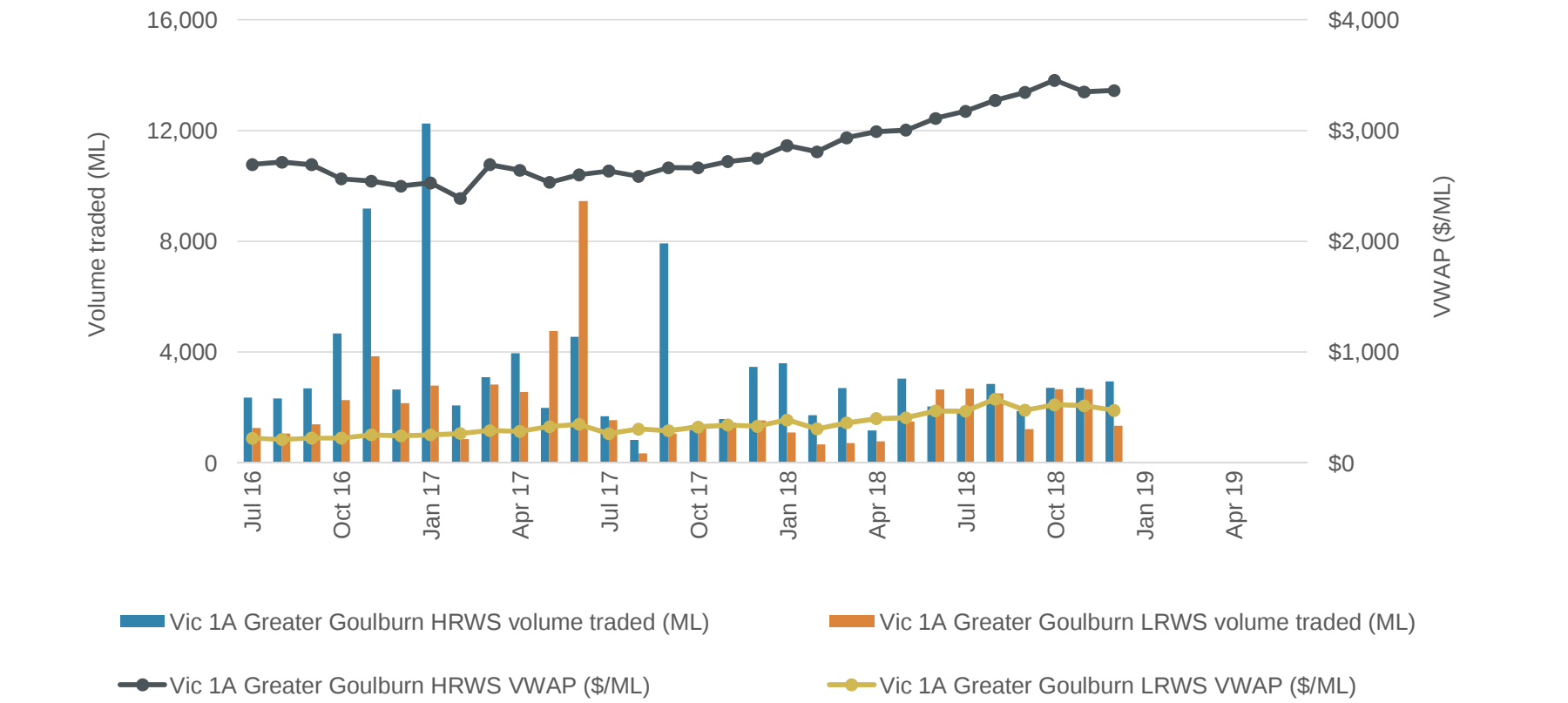
Vic 1A Greater Goulburn

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
Vic 1A Greater Goulburn HRWS	\$3,361	\$4,500	43	2,934	68	\$3,800 - \$4,100
Vic 1A Greater Goulburn LRWS	\$473	\$550	18	1,328	74	\$450 - \$550

Source: Aither, 2018. Based on the VIC Water Register and quotes sourced from water brokers.

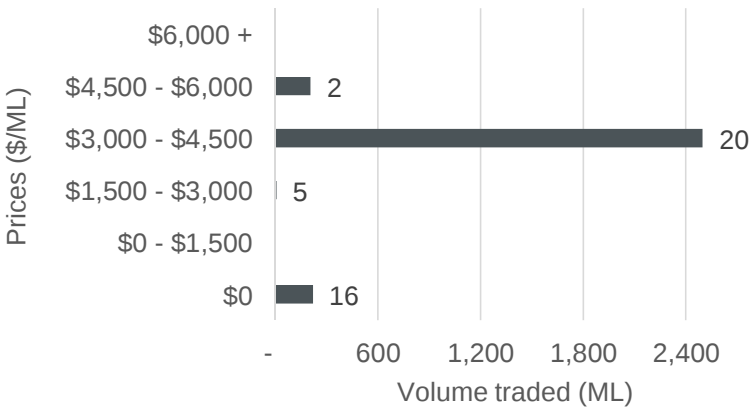
Market prices and volumes, July 2016 to June 2019



Source: Aither, 2018. Based on the VIC Water Register.

Market price range, December 2018

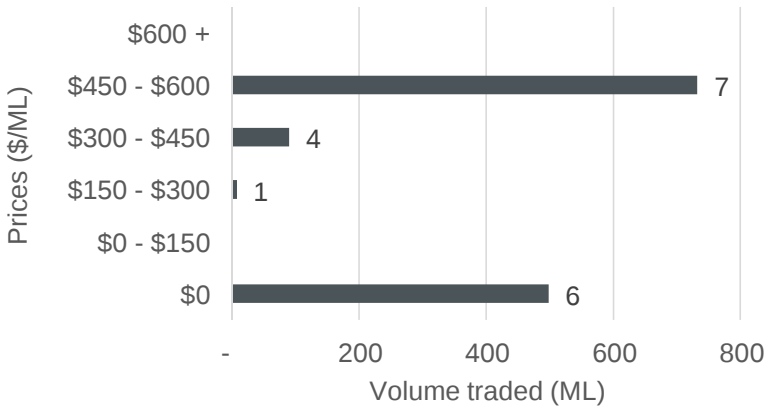
Vic 1A Greater Goulburn HRWS



Source: Aither, 2018. Based on the VIC Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

Vic 1A Greater Goulburn LRWS



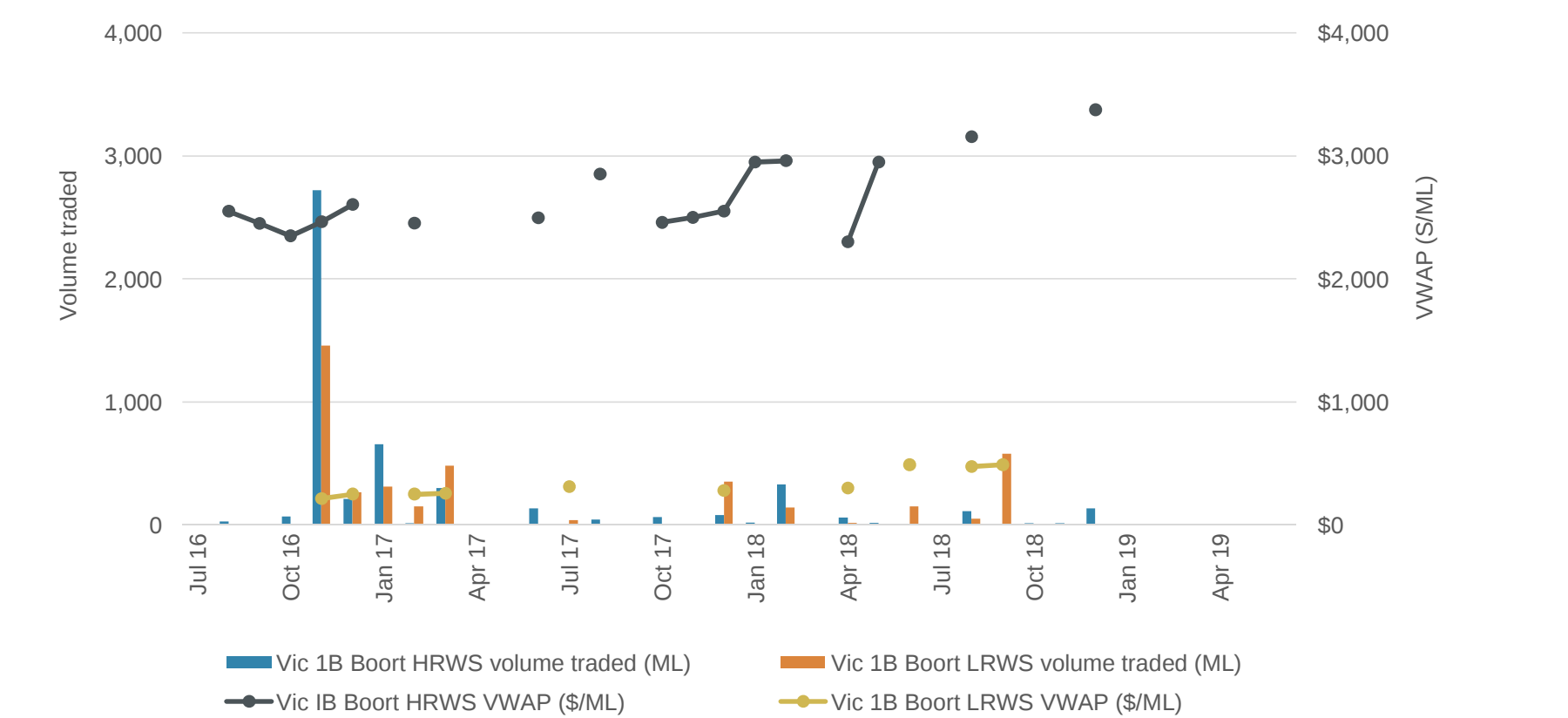
Vic 1B Boort

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
Vic 1B Boort HRWS	\$3,372	\$3,500	2	136	68	-
Vic 1B Boort LRWS	-	-	-	-	-	-

Source: Aither, 2018. Based on the VIC Water Register and quotes sourced from water brokers.

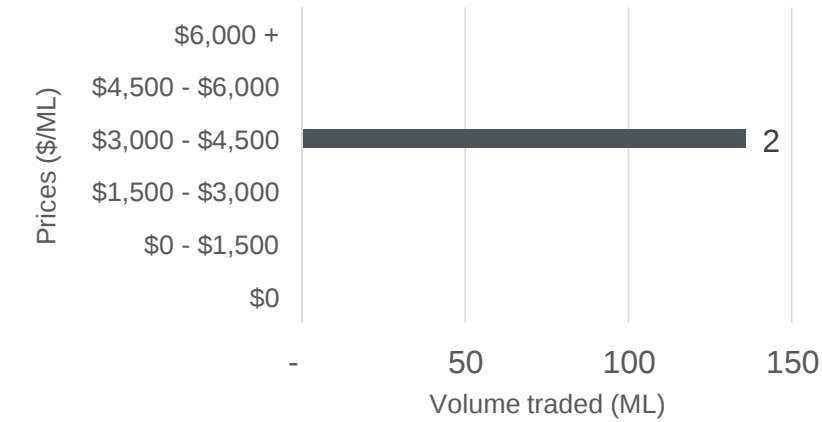
Market prices and volumes, July 2016 to June 2019



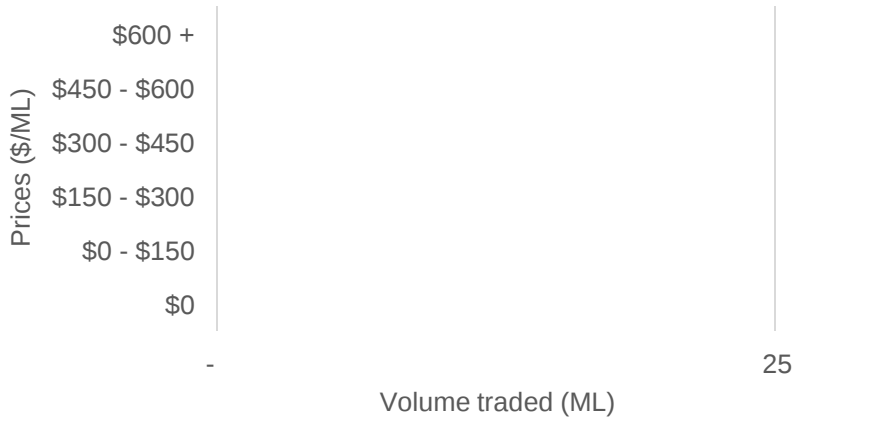
Source: Aither, 2018. Based on the VIC Water Register.

Market price range, December 2018

Vic 1B Boort HRWS



Vic 1B Boort LRWS



Source: Aither, 2018. Based on the VIC Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

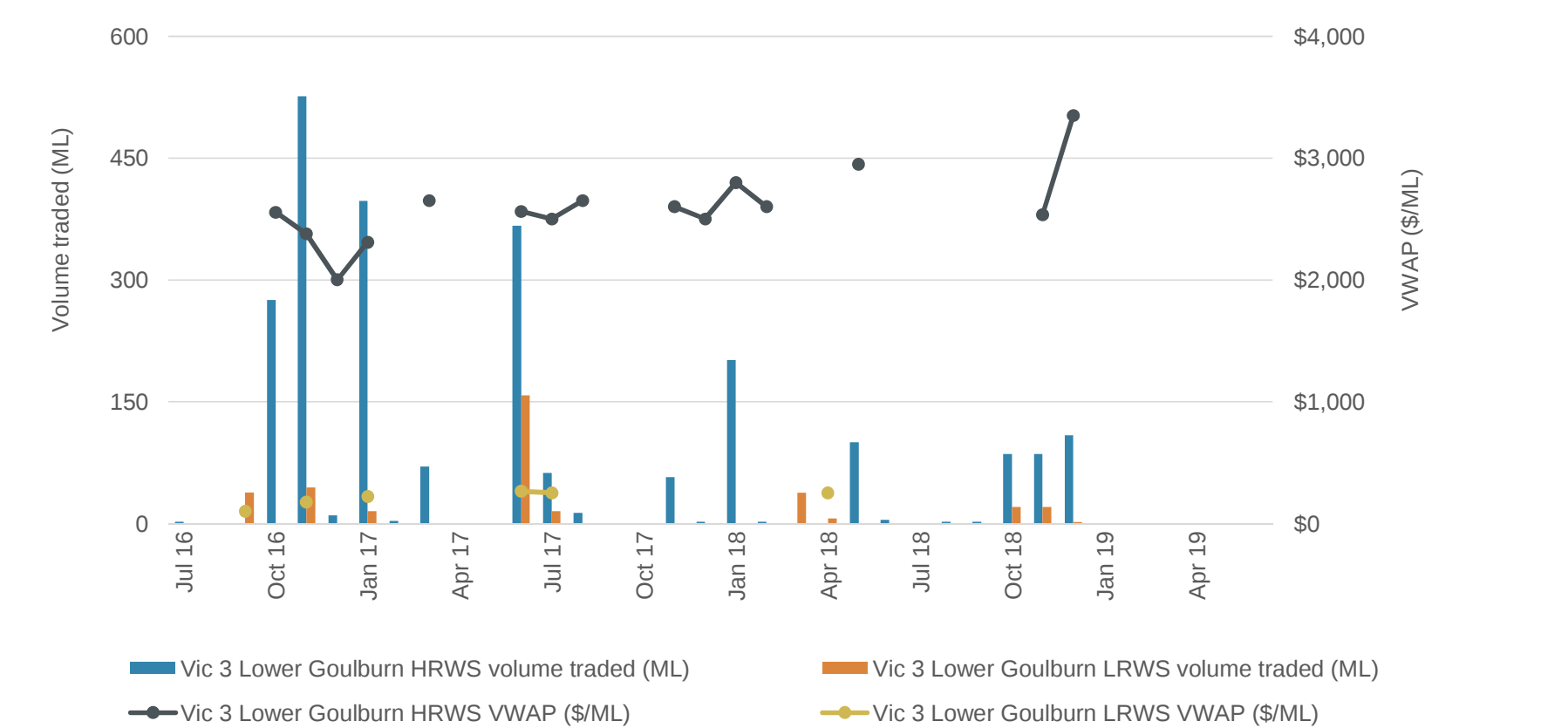
Vic 3 Lower Goulburn

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
Vic 3 Lower Goulburn HRWS	\$3,350	\$3,350	7	109	16	-
Vic 3 Lower Goulburn LRWS	-	-	1	2	2	-

Source: Aither, 2018. Based on the VIC Water Register and quotes sourced from water brokers.

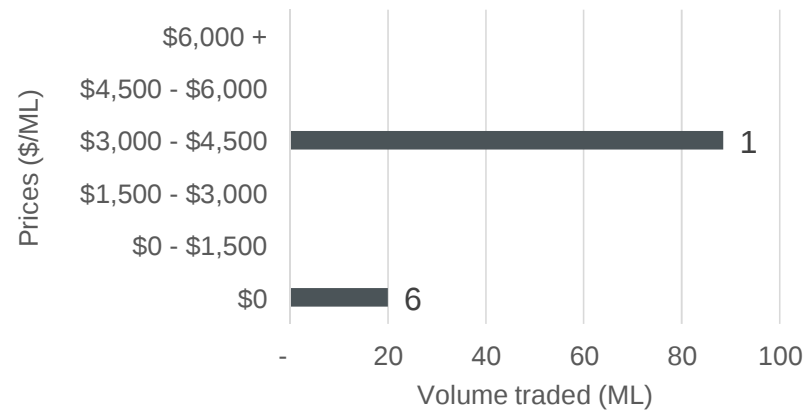
Market prices and volumes, July 2016 to June 2019



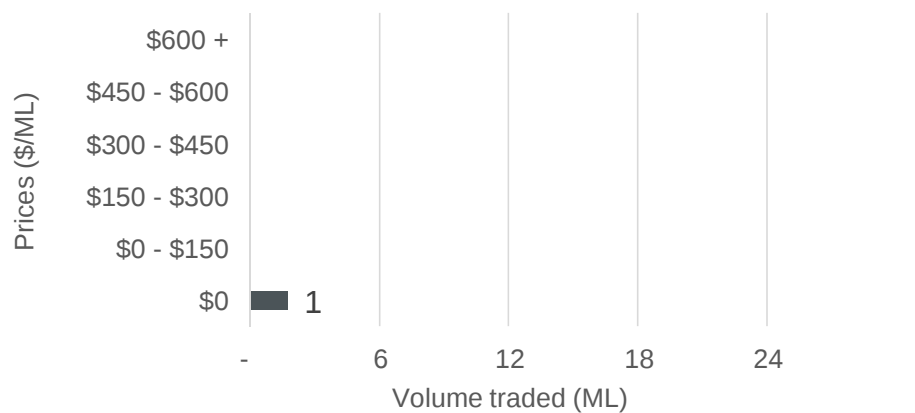
Source: Aither, 2018. Based on the VIC Water Register.

Market price range, December 2018

Vic 3 Lower Goulburn HRWS



Vic 3 Lower Goulburn LRWS



Source: Aither, 2018. Based on the VIC Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

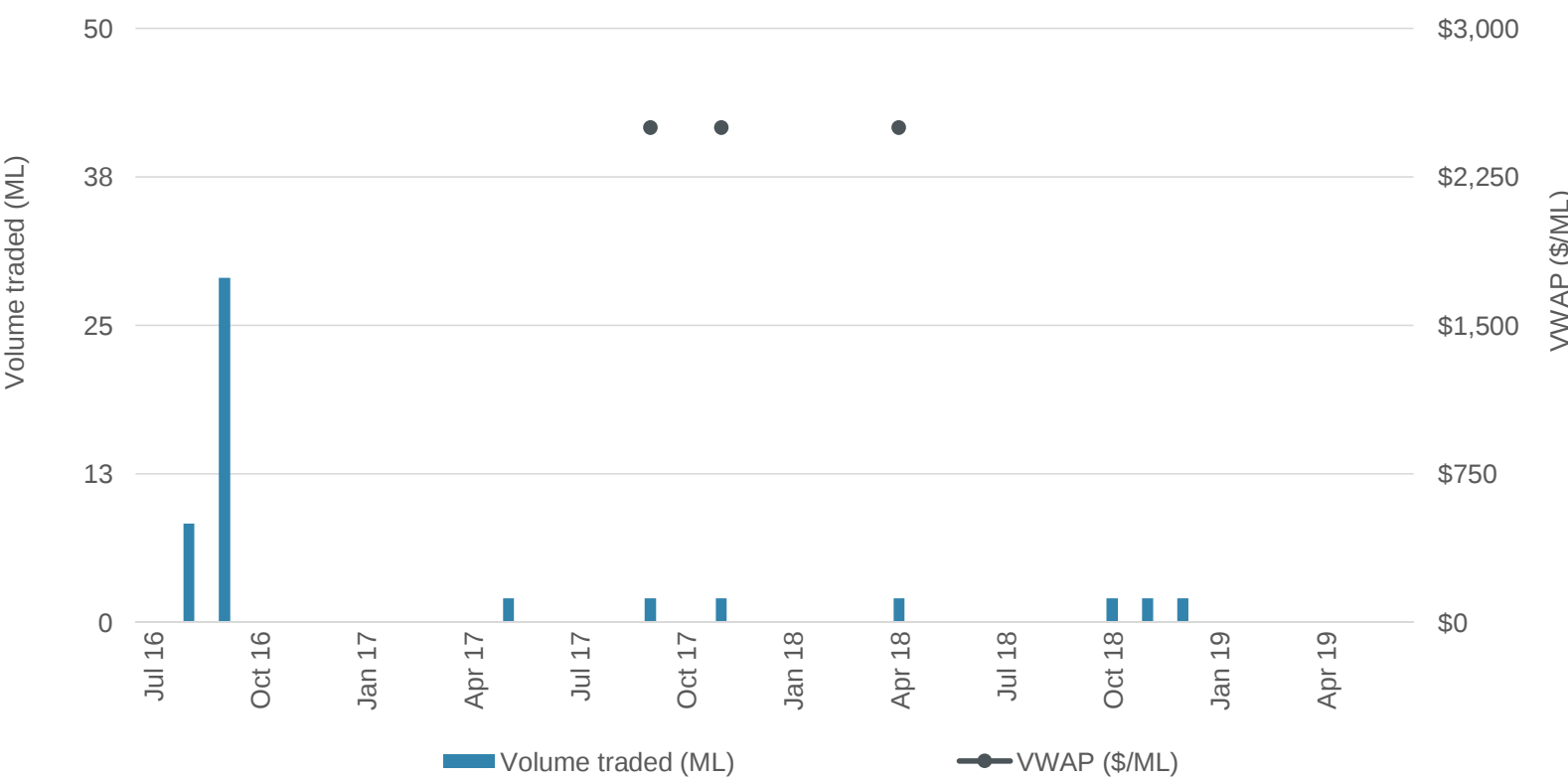
Vic 4C Lower Campaspe

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
Vic 4C Lower Campaspe HRWS	-	-	1	2	2	-

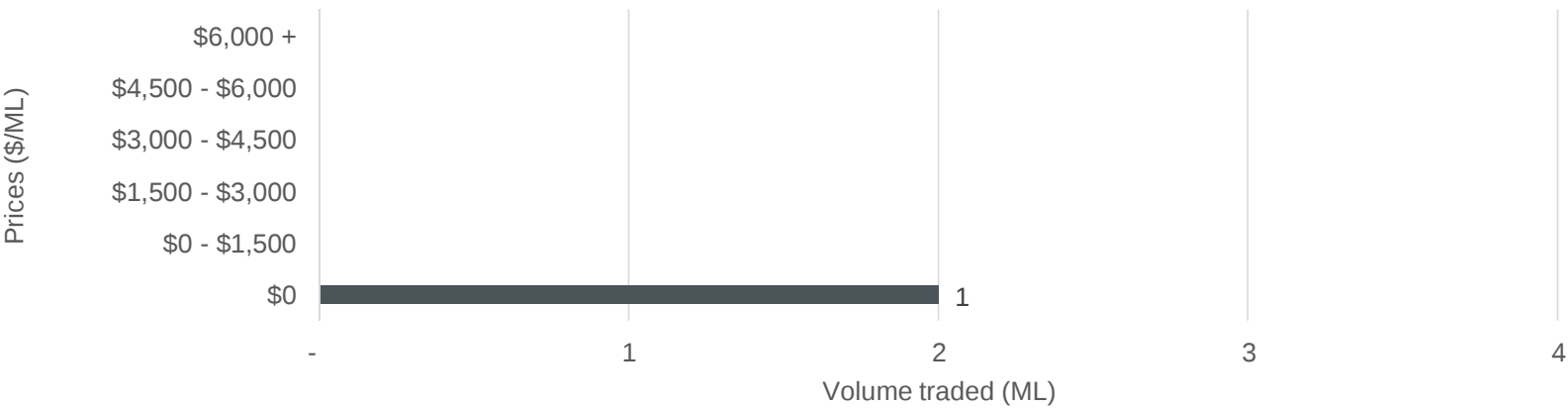
Source: Aither, 2018. Based on the VIC Water Register and quotes sourced from water brokers.

Market prices and volumes, July 2016 to June 2019



Source: Aither, 2018. Based on the VIC Water Register.

Market price range, December 2018



Source: Aither, 2018. Based on the VIC Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

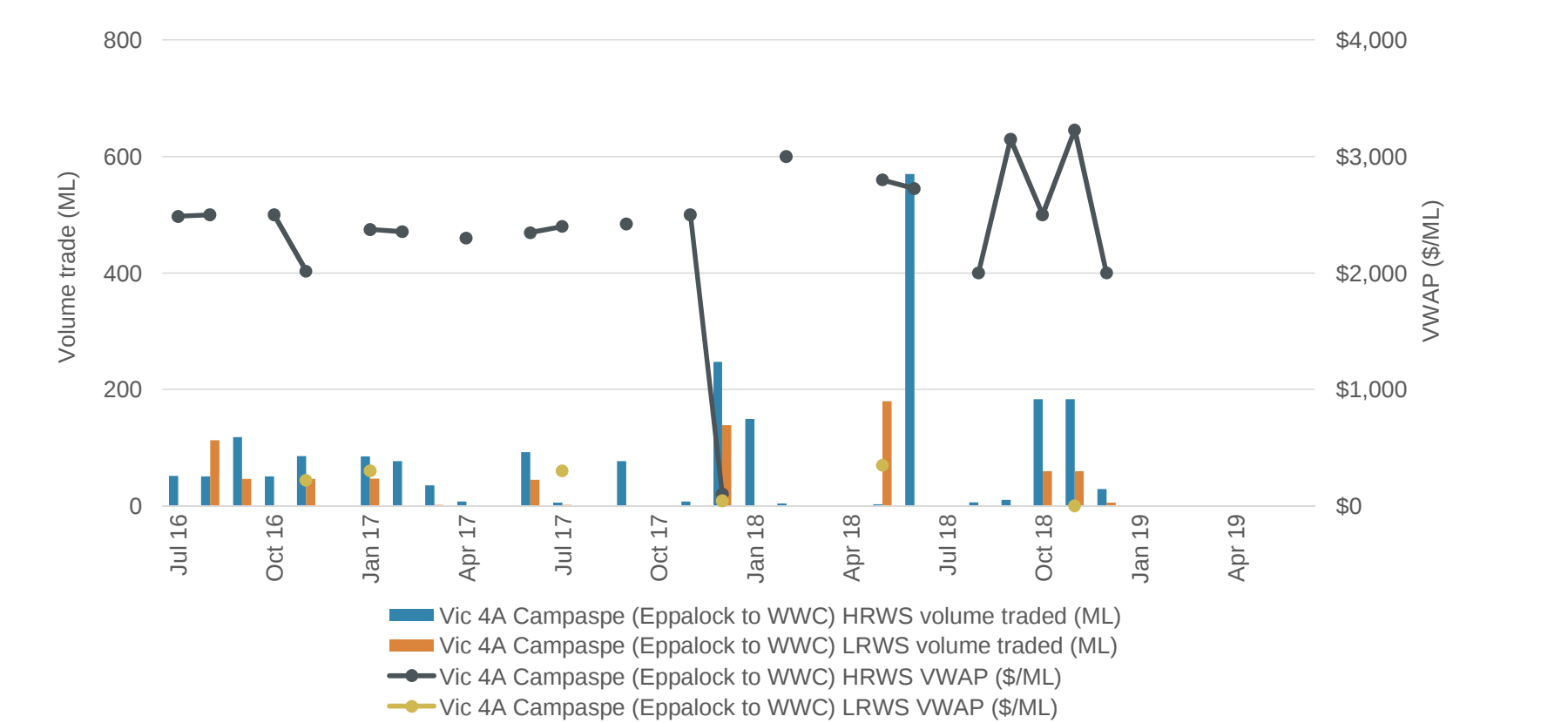
Vic 4A Campaspe (Eppalock to WWC)

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
Vic 4A Campaspe (Eppalock to WWC) HRWS	\$2,000	\$2,000	9	29	3	-
Vic 4A Campaspe (Eppalock to WWC) LRWS	-	-	2	6	3	-

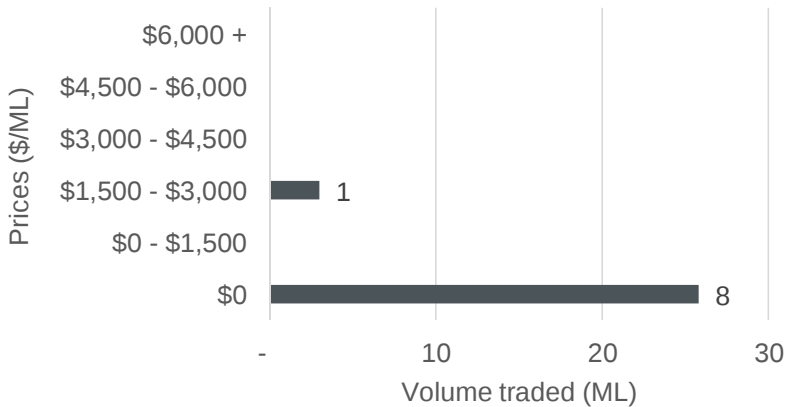
Source: Aither, 2018. Based on the VIC Water Register and quotes sourced from water brokers.

Market prices and volumes, July 2016 to June 2019

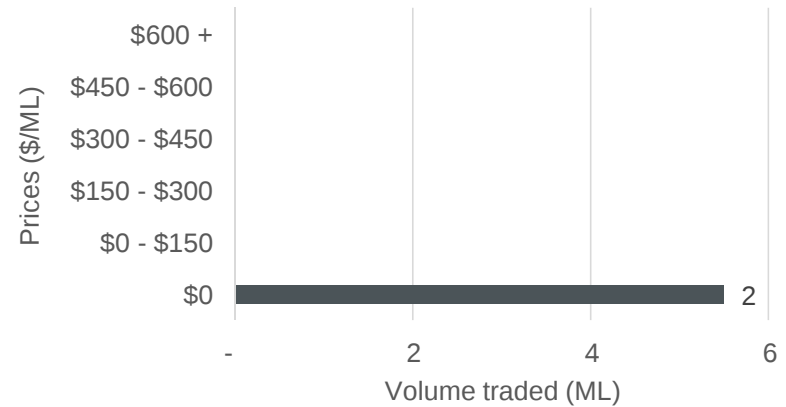


Source: Aither, 2018. Based on the VIC Water Register.

Market price range, December 2018 Vic 4A Campaspe (Eppalock to WWC) HRWS



Vic 4A Campaspe (Eppalock to WWC) LRWS



Source: Aither, 2018. Based on the VIC Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

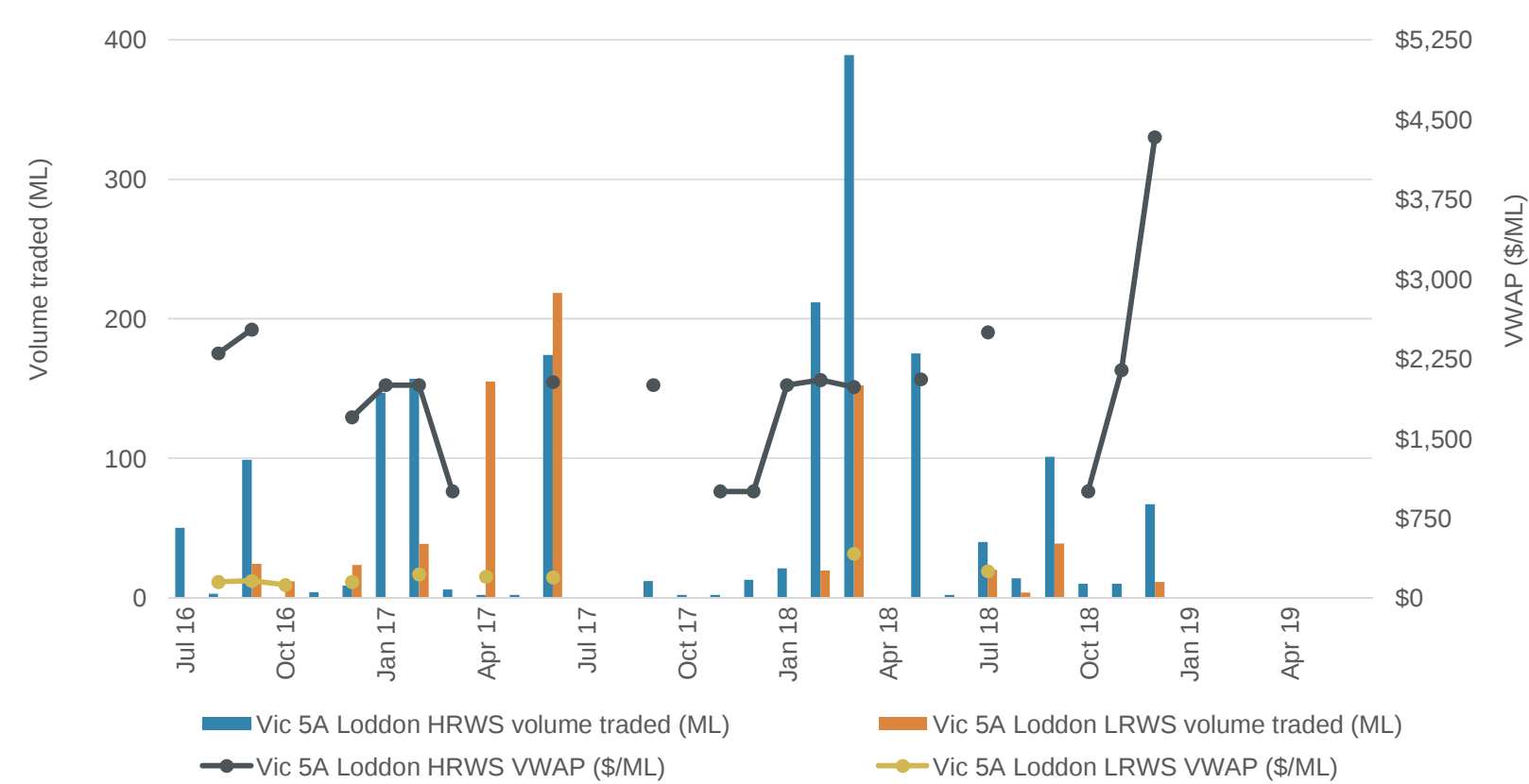
Vic 5A Loddon

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
Vic 5A Loddon HRWS	\$4,334	\$4,400	4	67	17	-
Vic 5A Loddon LRWS	-	-	2	12	6	-

Source: Aither, 2018. Based on the VIC Water Register and quotes sourced from water brokers.

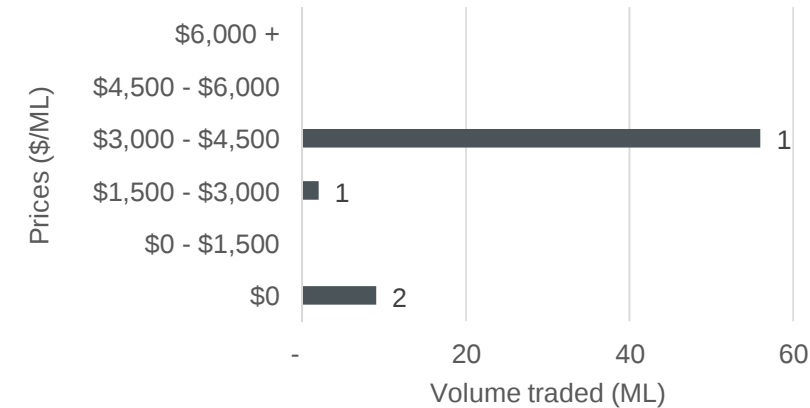
Market prices and volumes, July 2016 to June 2019



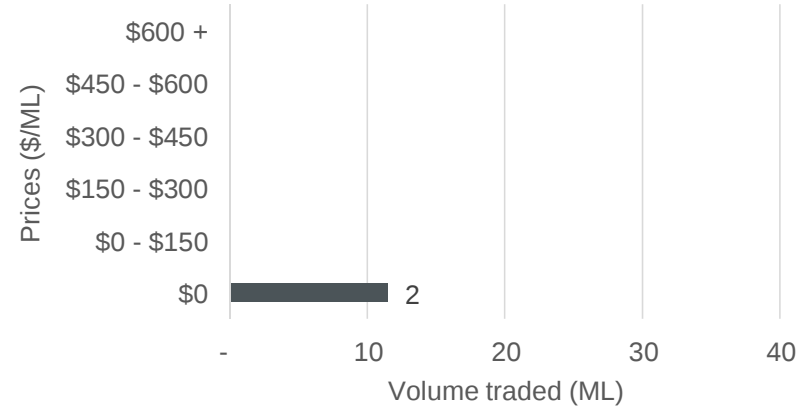
Source: Aither, 2018. Based on the VIC Water Register.

Market price range, December 2018

Vic 5A Loddon HRWS



Vic 5A Loddon LRWS



Source: Aither, 2018. Based on the VIC Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

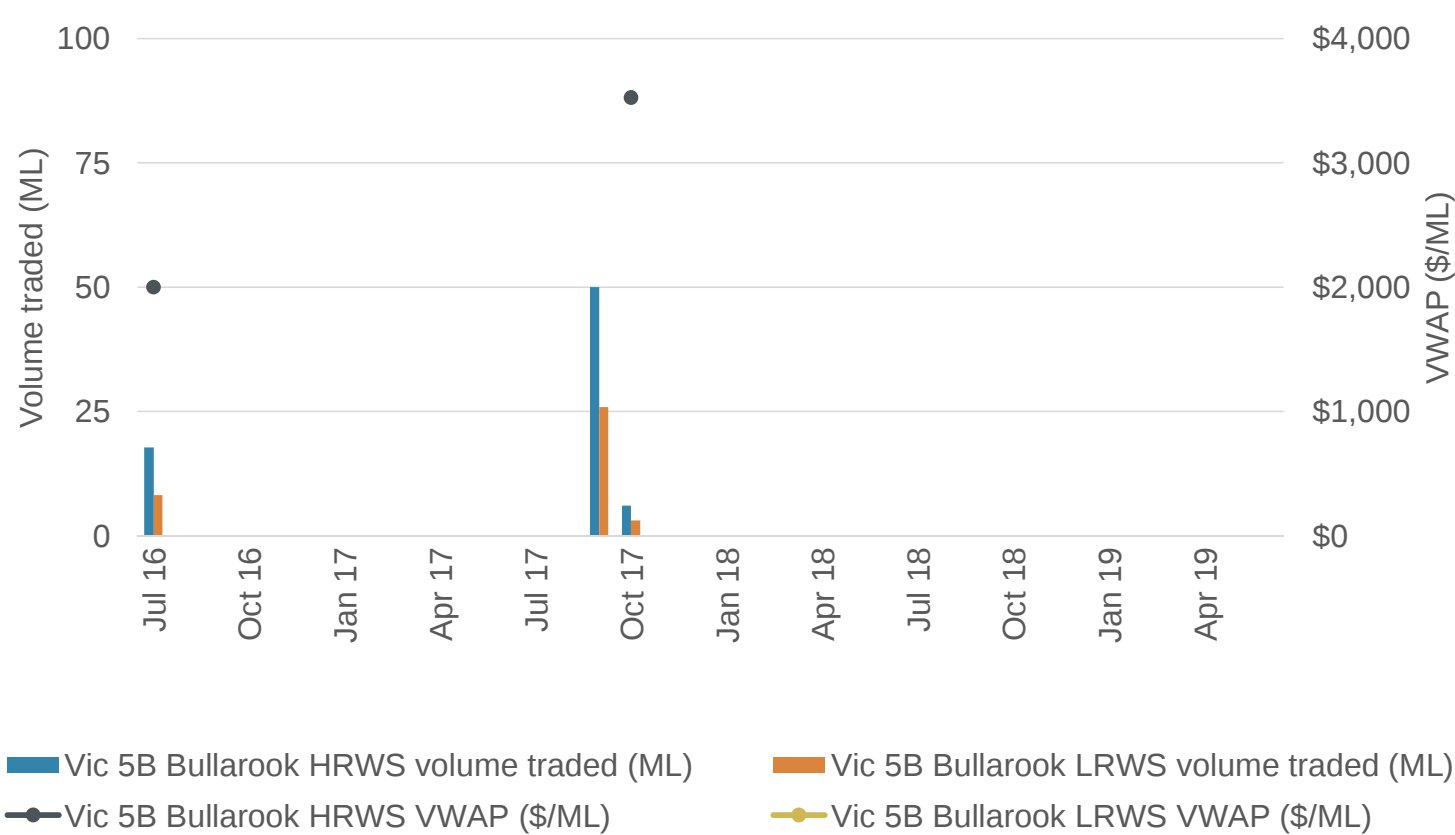
Vic 5B Bullarook

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
Vic 5B Bullarook HRWS	-	-	-	-	-	-
Vic 5B Bullarook LRWS	-	-	-	-	-	-

Source: Aither, 2018. Based on the VIC Water Register and quotes sourced from water brokers.

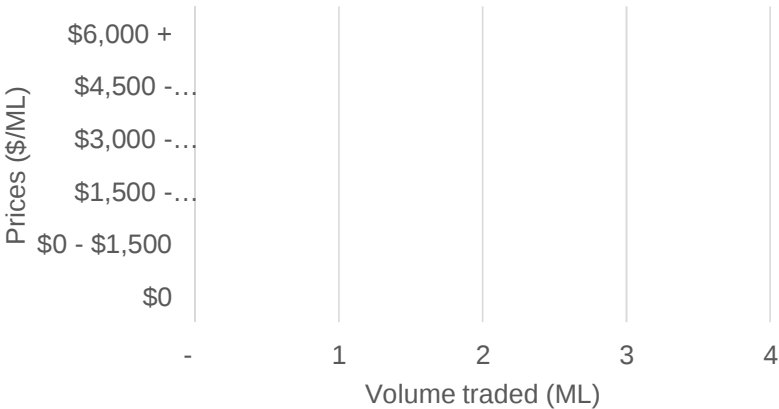
Market prices and volumes, July 2016 to June 2019



Source: Aither, 2018. Based on the VIC Water Register.

Market price range, December 2018

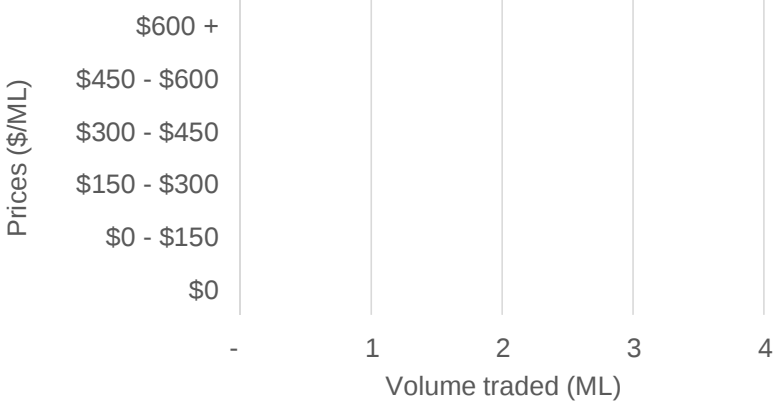
Vic 5B Bullarook HRWS



Source: Aither, 2018. Based on the VIC Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

Vic 5B Bullarook LRWS



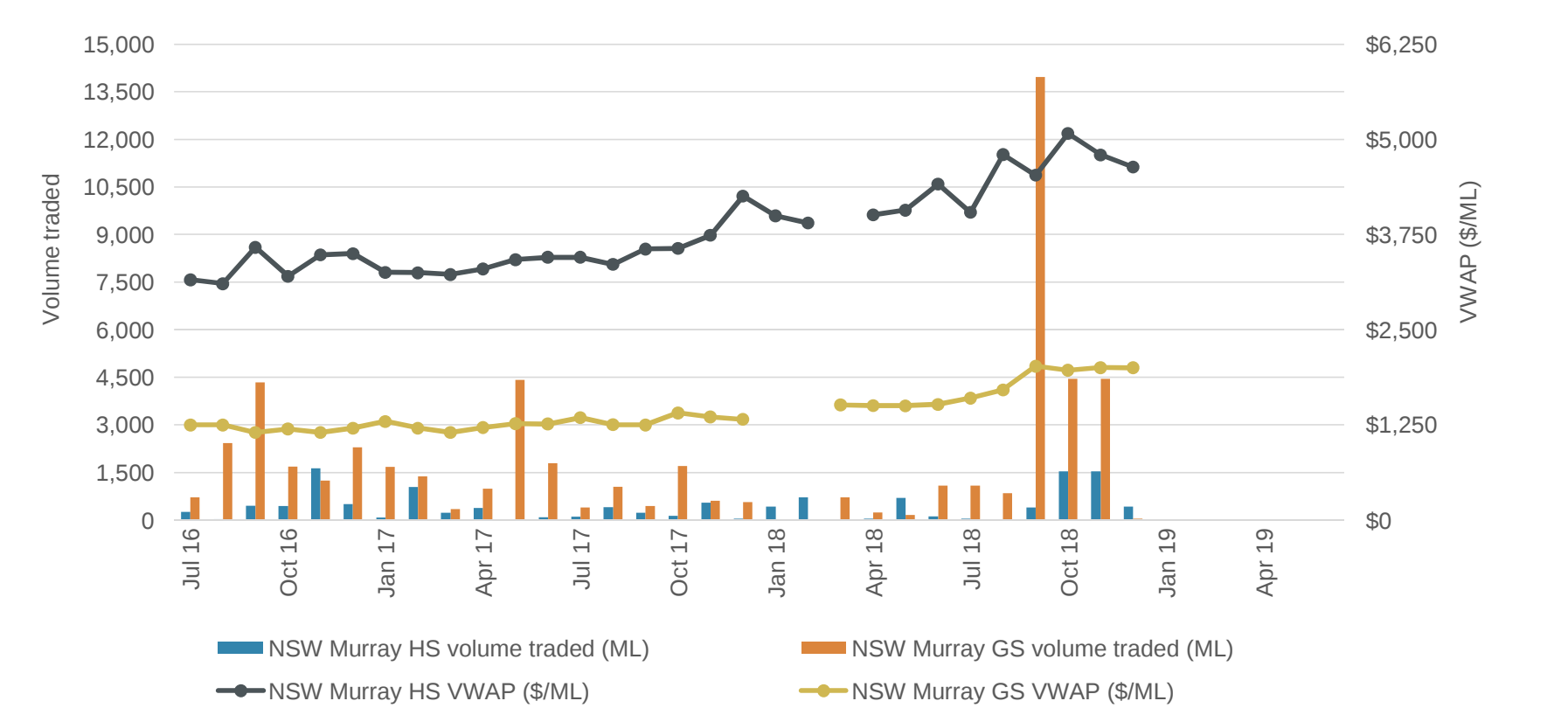
NSW Murray

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
NSW Murray HS	\$4,636	\$4,800	4	427	107	\$4,600 - \$6,050
NSW Murray GS	\$1,560	\$2,000	4	305	25	\$1,700 - \$2,200

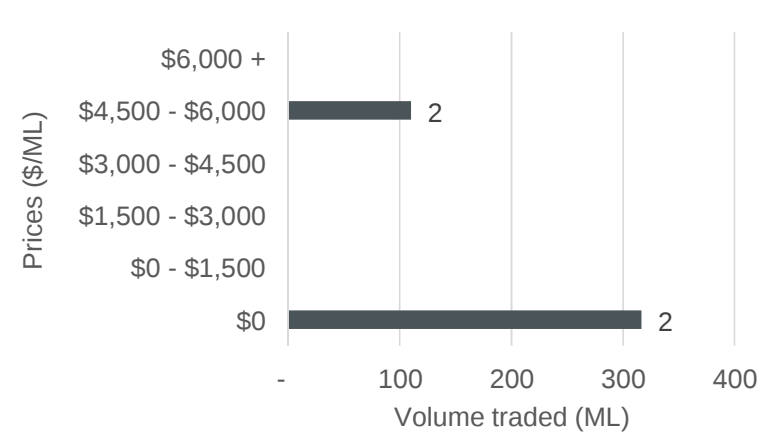
Source: Aither, 2018. Based on the NSW Water Register, and quotes sourced from water brokers.

Market prices and volumes, July 2016 to June 2019

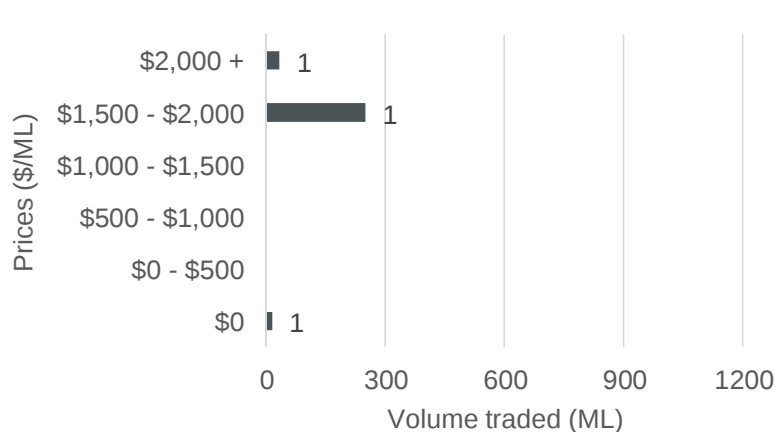


Source: Aither, 2018. Based on the NSW Water Registers.

Market price range, December 2018 NSW Murray HS



NSW Murray GS



Source: Aither, 2018. Based on the NSW Water Registers.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

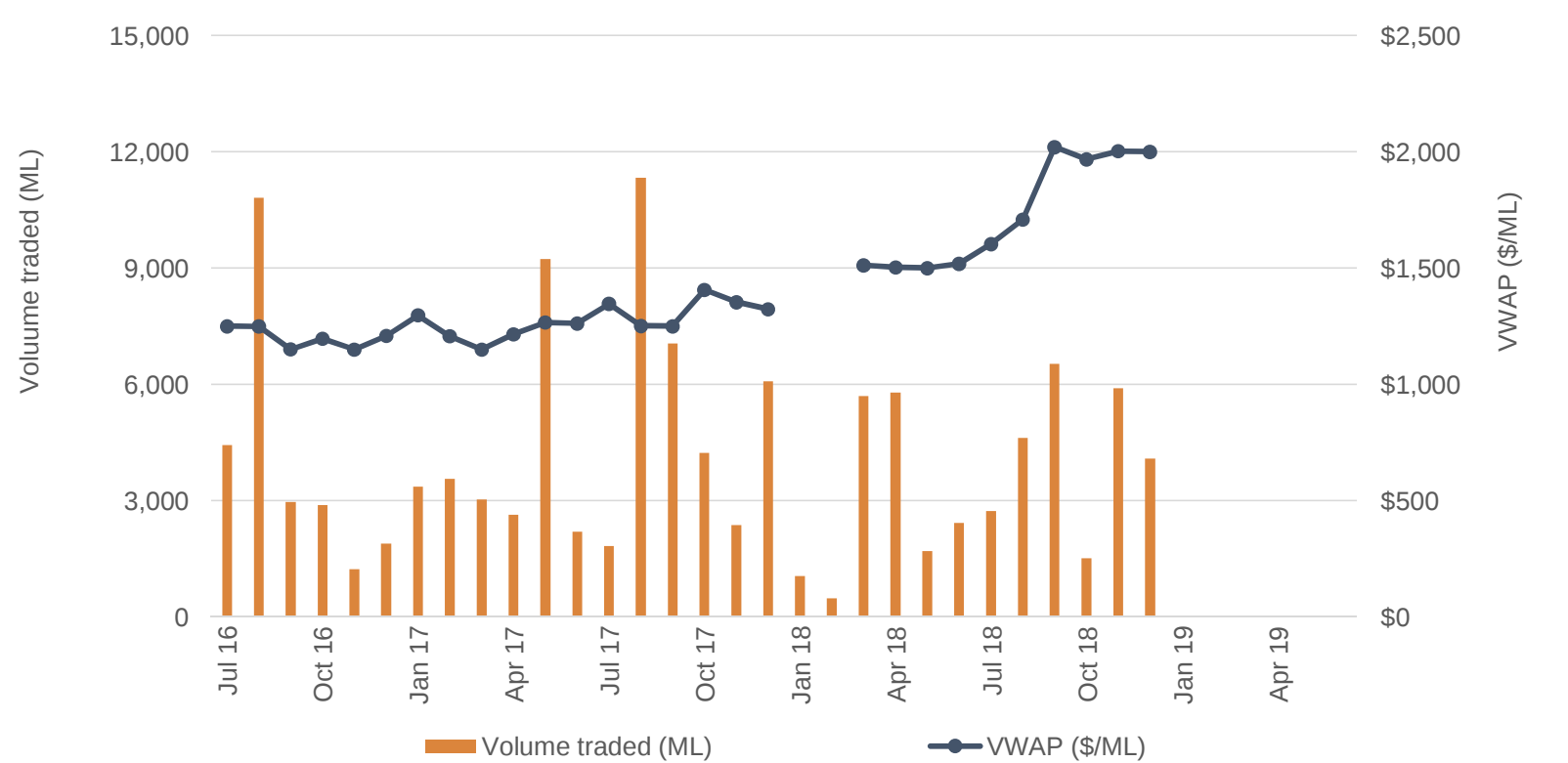
NSW Murray Irrigation Limited

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
NSW Murray Irrigation Limited GS	\$1,560	\$2,000	12	4,086	341	-

Source: Aither, 2018. Based on the NSW Water Register and quotes sourced from water brokers.
Note: As trade prices within NSW Murray Irrigation GS are not reported Aither has presented NSW Murray GS on river prices instead given the common characteristics that these entitlements share.

Market prices and volumes, July 2016 to June 2019



Source: Aither, 2018. Based on the NSW Water Register.

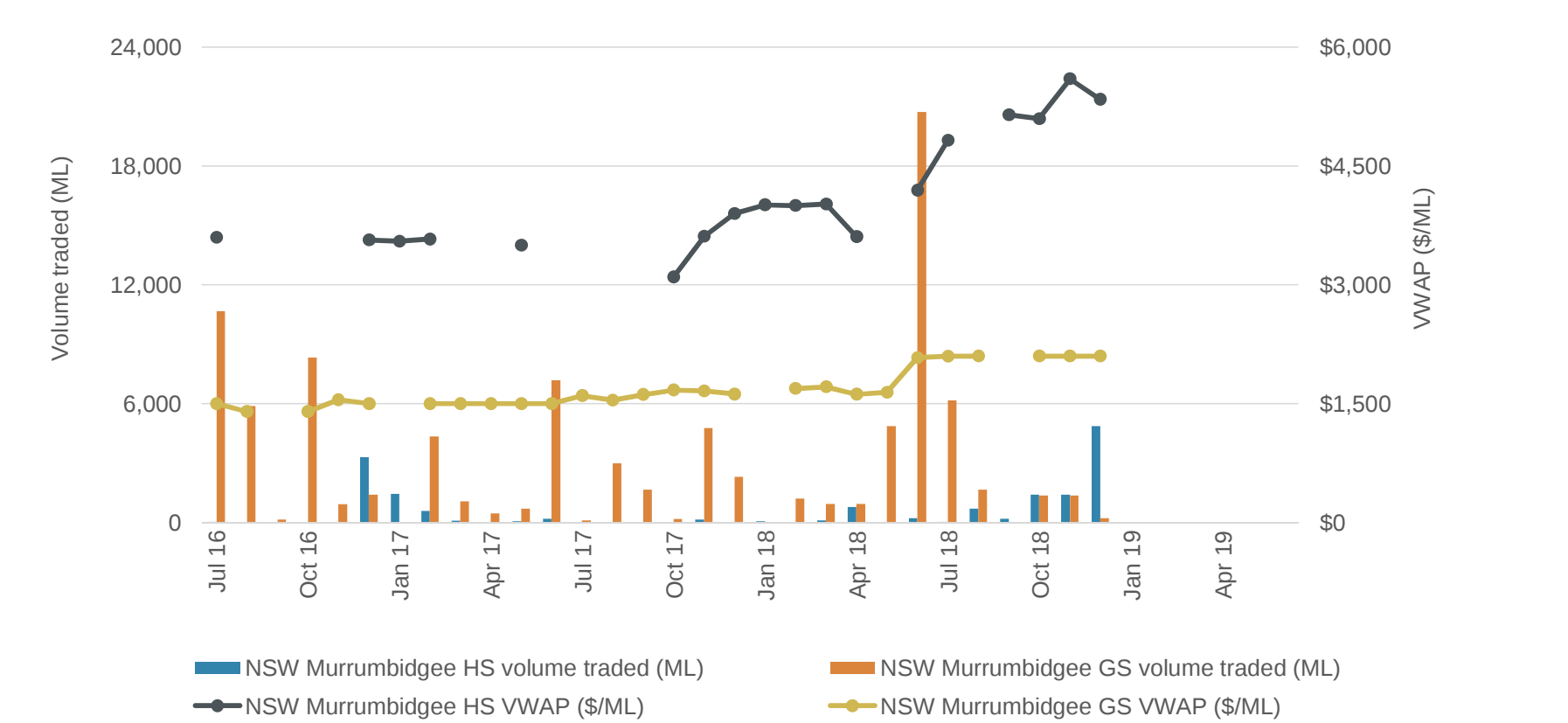
NSW Murrumbidgee

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
NSW Murrumbidgee HS	\$5,340	\$6,000	3	4,866	1,622.00	\$5,800 - \$6,000
NSW Murrumbidgee GS	\$2,100	\$2,100	4	4,478	105.50	\$2,050 - \$2,150

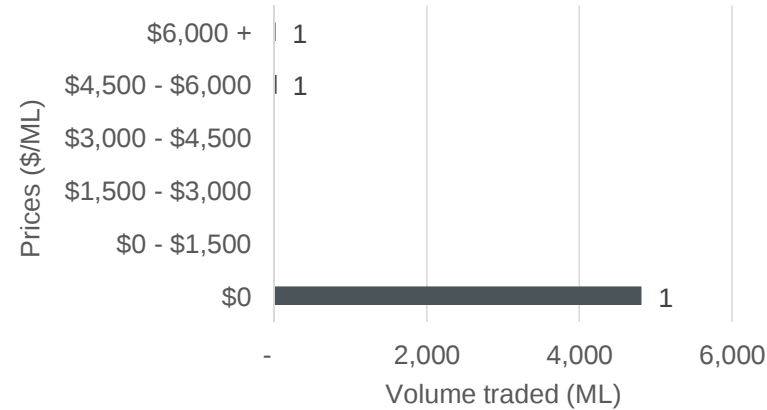
Source: Aither, 2018. Based on the NSW Water Register and quotes sourced from water brokers.

Market prices and volumes, July 2016 to June 2019

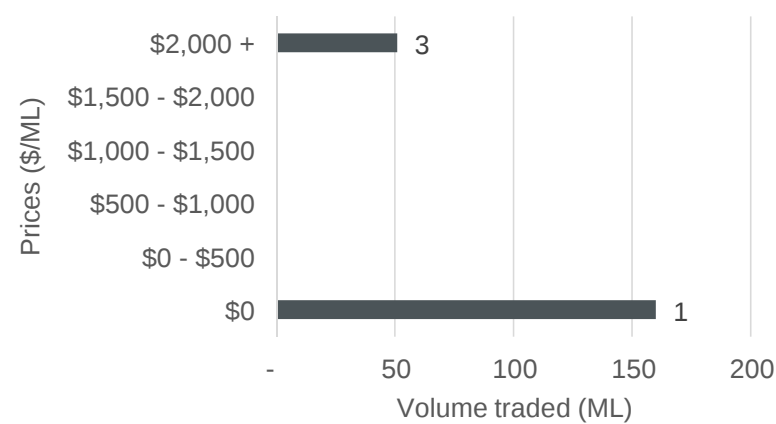


Source: Aither, 2018. Based on the NSW Water Register.

Market price range, December 2018 NSW Murrumbidgee HS



NSW Murrumbidgee GS



Source: Aither, 2018. Based on the NSW Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

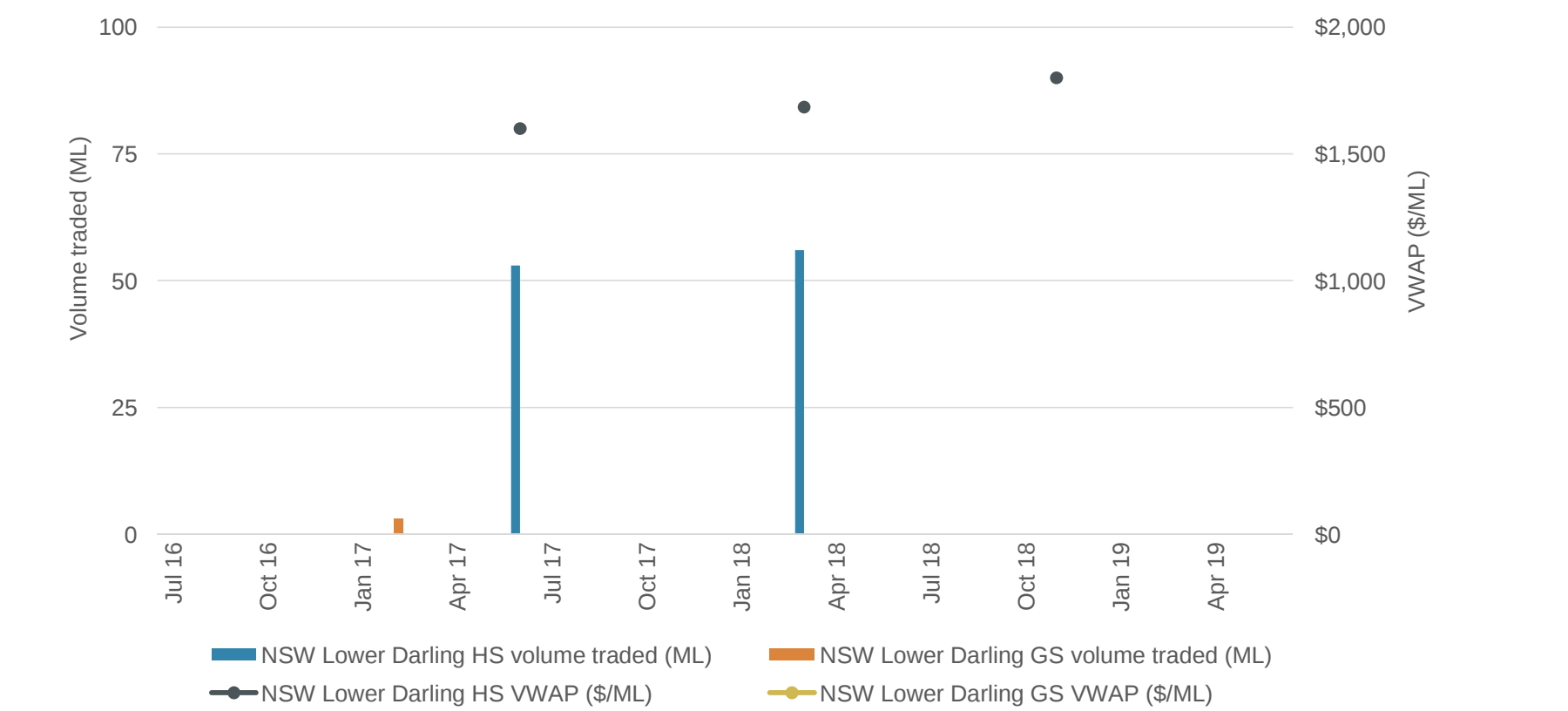
NSW Lower Darling

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
NSW Lower Darling HS	-	-	-	-	-	-
NSW Lower Darling GS	-	-	-	-	-	-

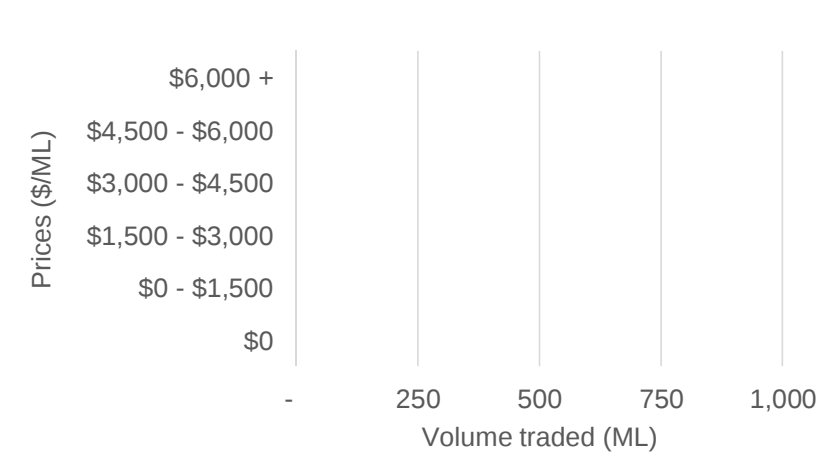
Source: Aither, 2018. Based on the NSW Water Register and quotes sourced from water brokers.

Market prices and volumes, July 2016 to June 2019



Source: Aither, 2018. Based on the NSW Water Register.

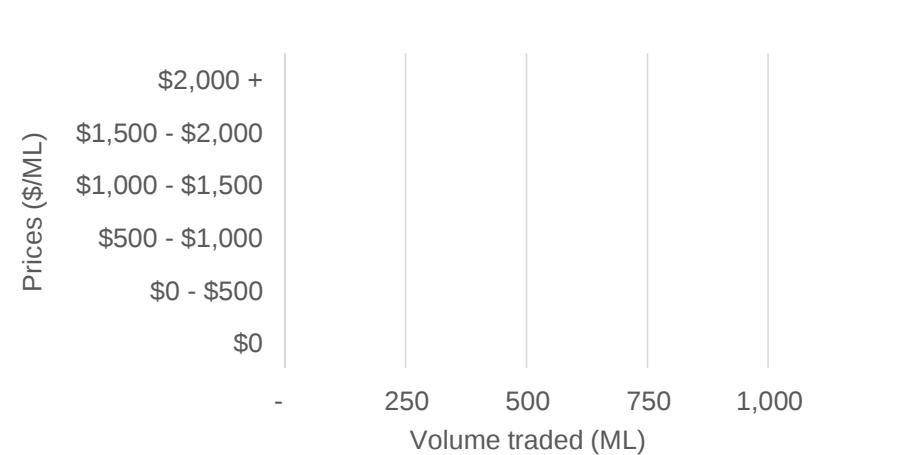
Market price range, December 2018
NSW Lower Darling HS



Source: Aither, 2018. Based on the NSW Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

NSW Lower Darling GS



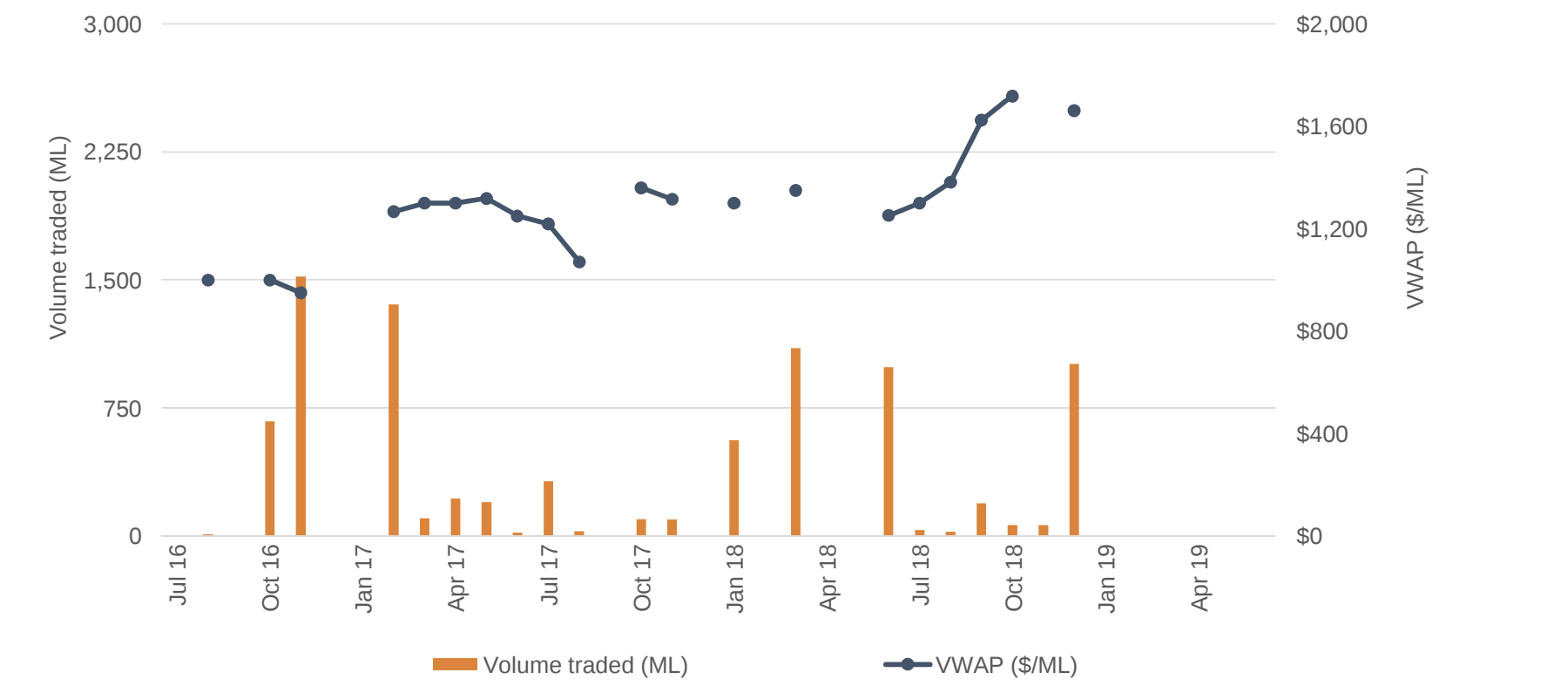
NSW Macquarie

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
NSW Macquarie GS	\$1,661	\$1,661	3	1,009	336.33	-

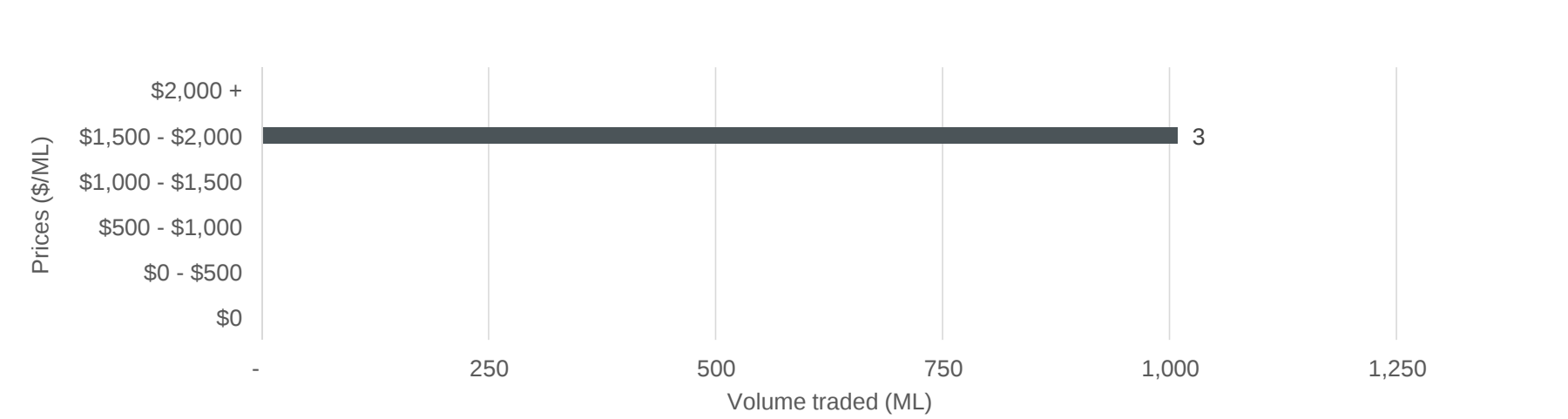
Source: Aither, 2018. Based on the NSW Water Register and quotes sourced from water brokers.

Market prices and volumes, July 2016 to June 2019



Source: Aither, 2018. Based on the NSW Water Register.

Market price range, December 2018



Source: Aither, 2018. Based on the NSW Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

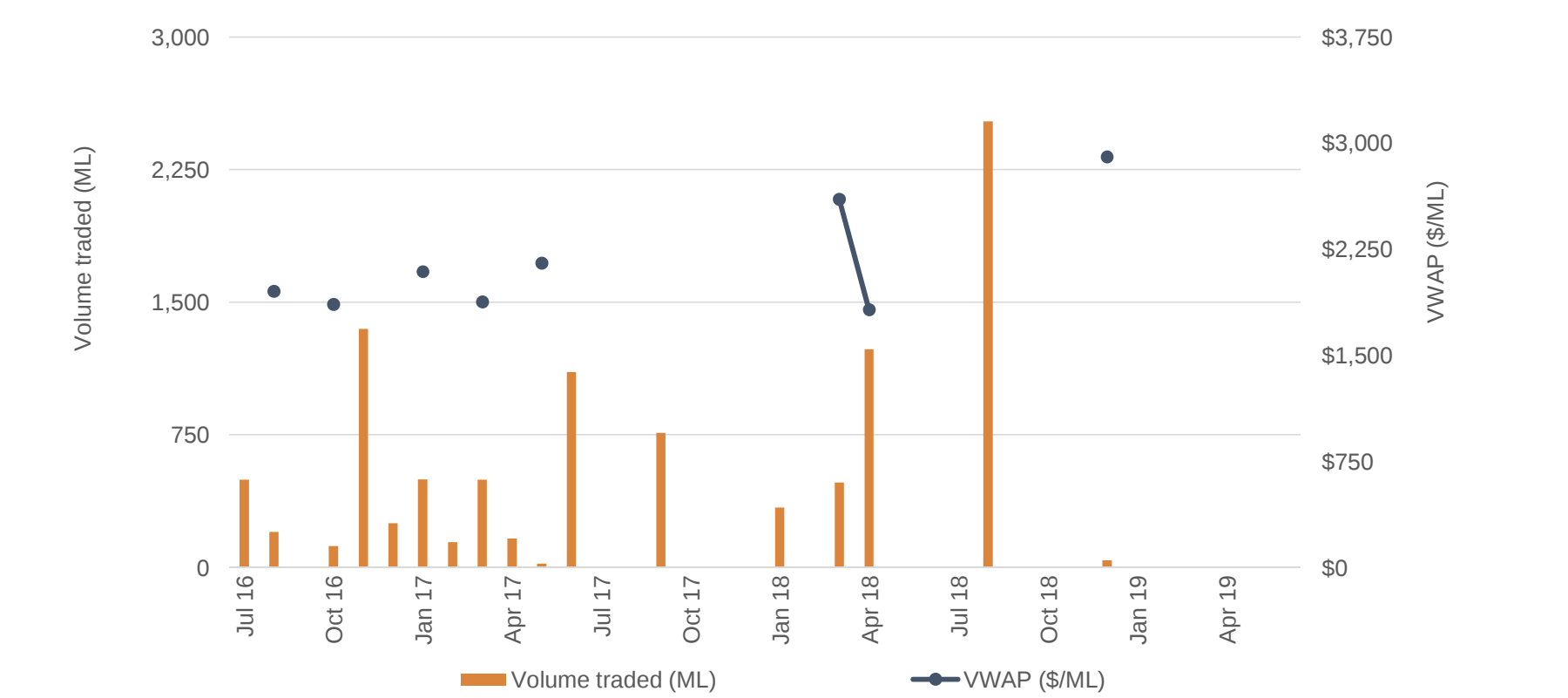
NSW Lower Namoi

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
NSW Lower Namoi GS	\$2,900	\$2,900	1	40	40.00	-

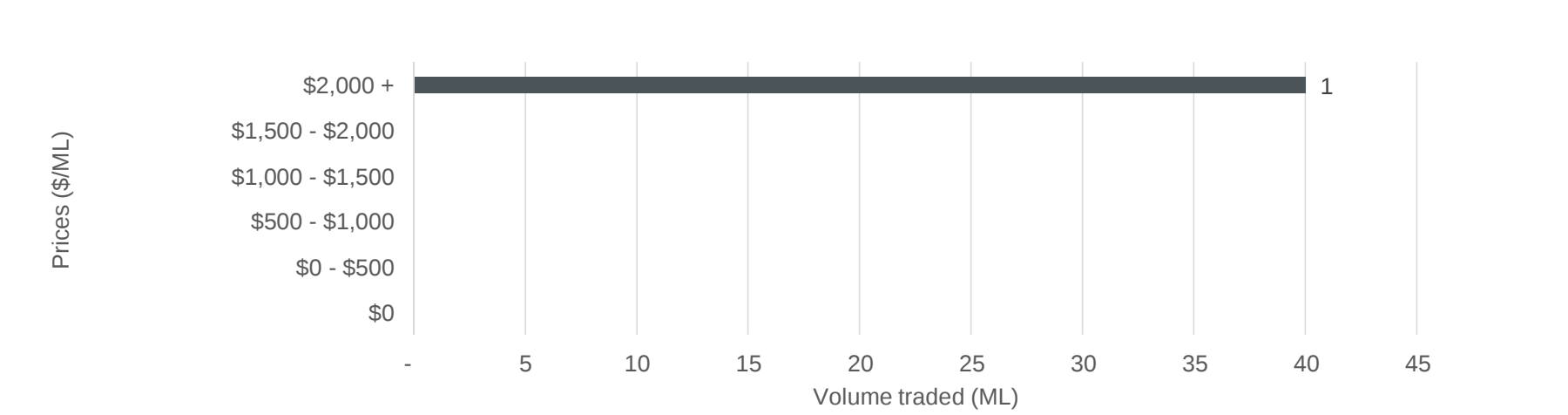
Source: Aither, 2018. Based on the NSW Water Register and quotes sourced from water brokers.

Market prices and volumes, July 2016 to June 2019



Source: Aither, 2018. Based on the NSW Water Registers.

Market price range, December 2018



Source: Aither, 2018. Based on the NSW Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

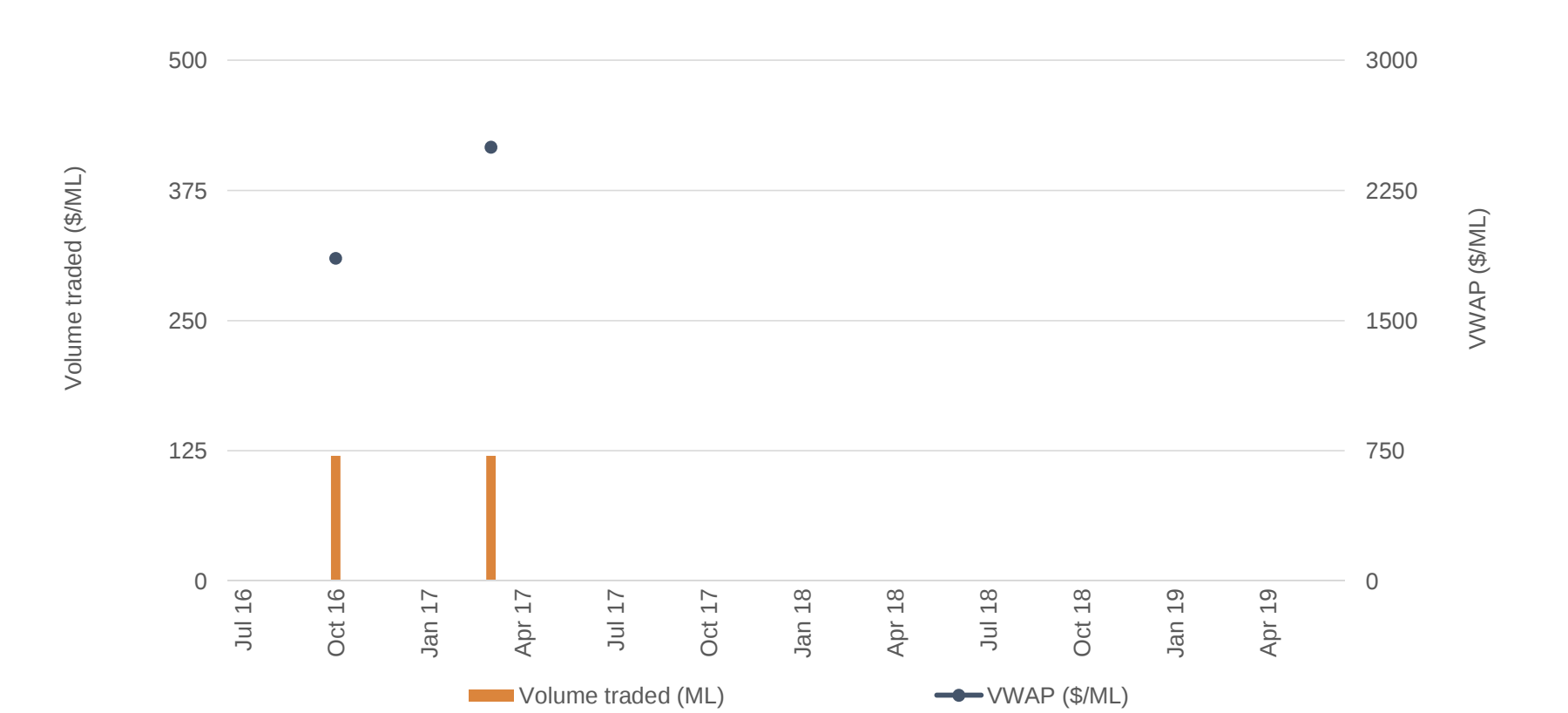
NSW Upper Namoi

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
NSW Upper Namoi GS	-	-	-	-	-	-

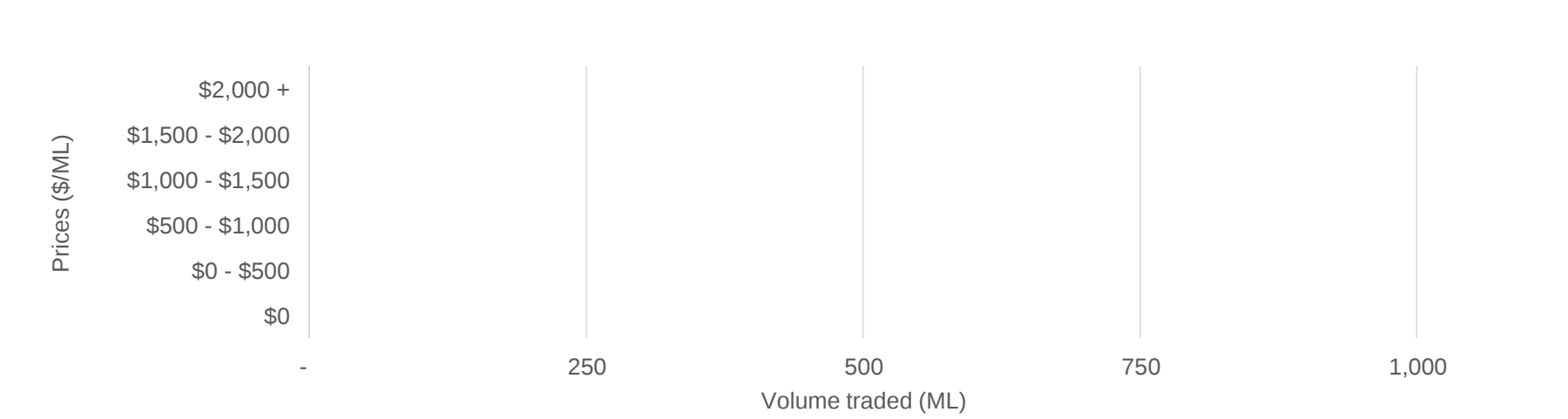
Source: Aither, 2018. Based on the NSW Water Register and quotes sourced from water brokers.

Market prices and volumes, July 2016 to June 2019



Source: Aither, 2018. Based on the NSW Water Register.

Market price range, December 2018



Source: Aither, 2018. Based on the NSW Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

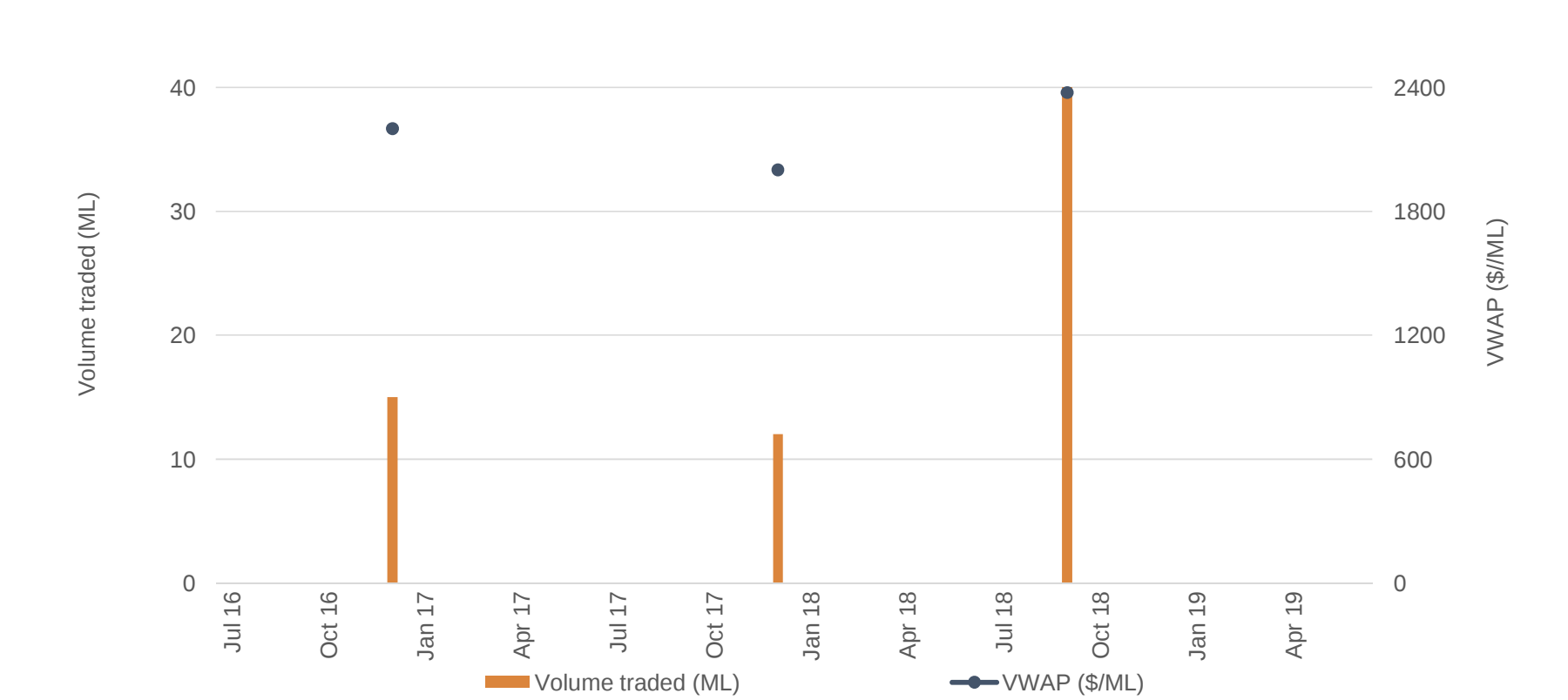
NSW Gwydir

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
NSW Gwydir GS	-	-	-	-	-	-

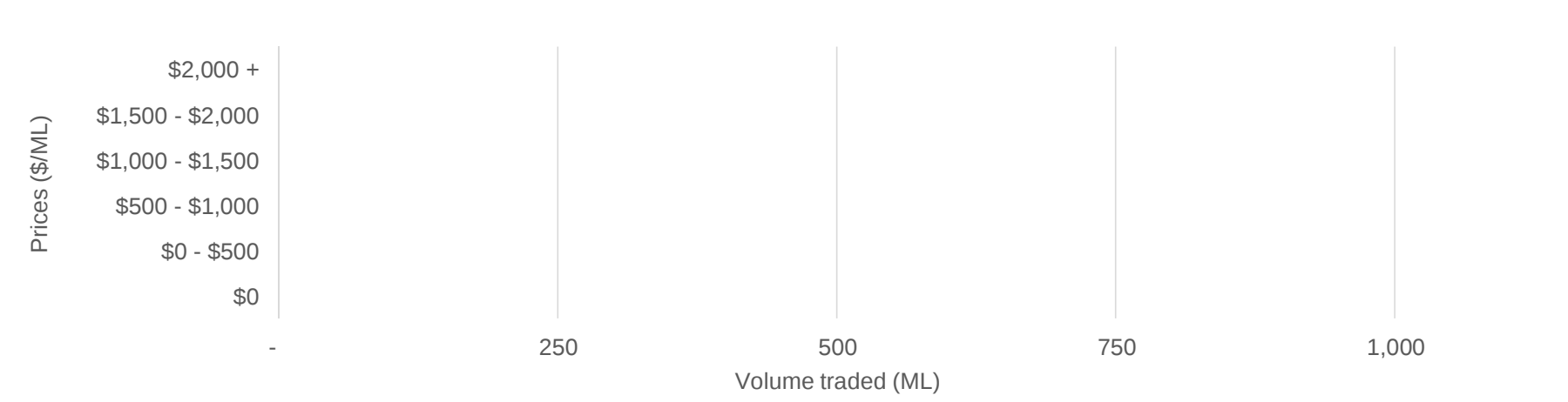
Source: Aither, 2018. Based on the NSW Water Register and quotes sourced from water brokers.

Market prices and volumes, July 2016 to June 2019



Source: Aither, 2018. Based on the NSW Water Register.

Market price range, December 2018



Source: Aither, 2018. Based on the NSW Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

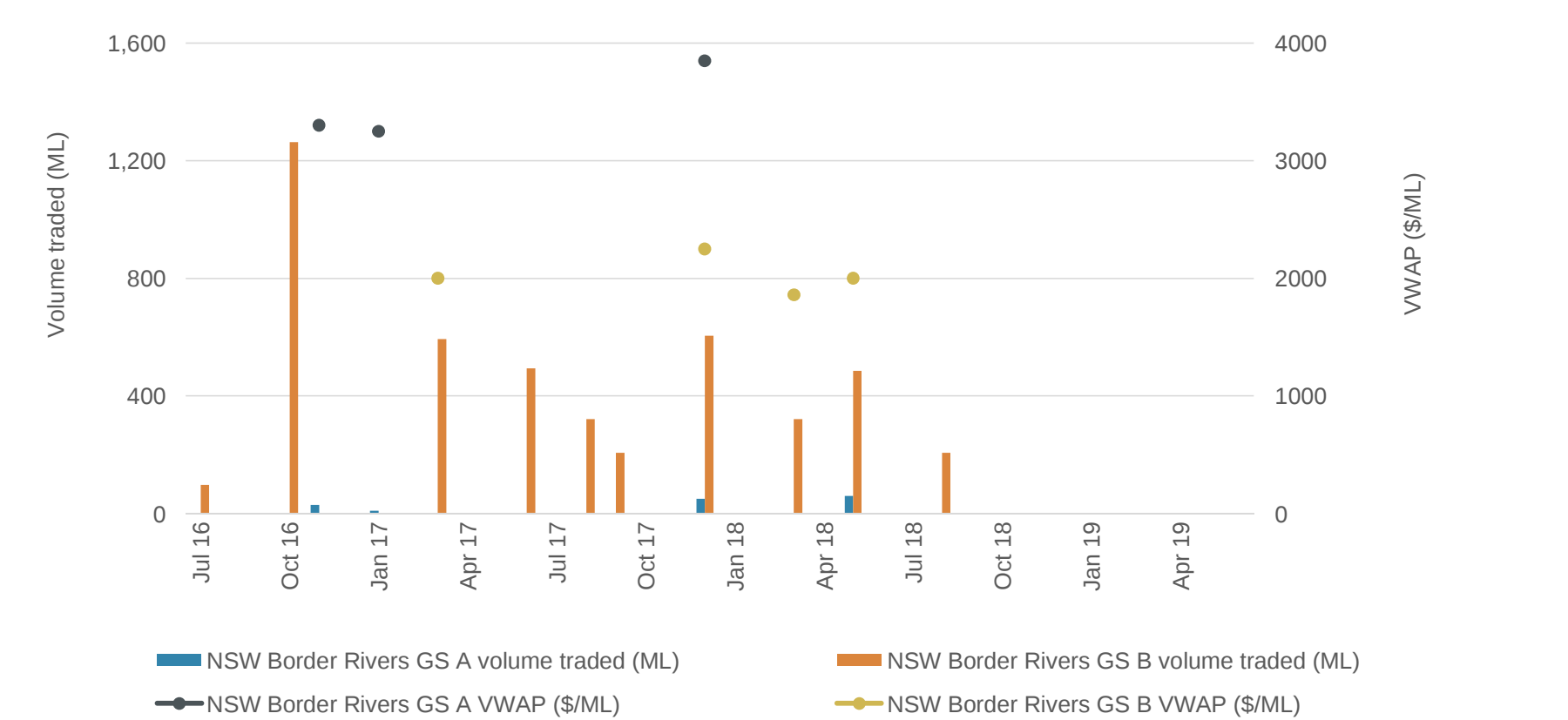
NSW Border Rivers

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
NSW Border Rivers GS A	-	-	-	-	-	-
NSW Border Rivers GS B	-	-	-	-	-	-

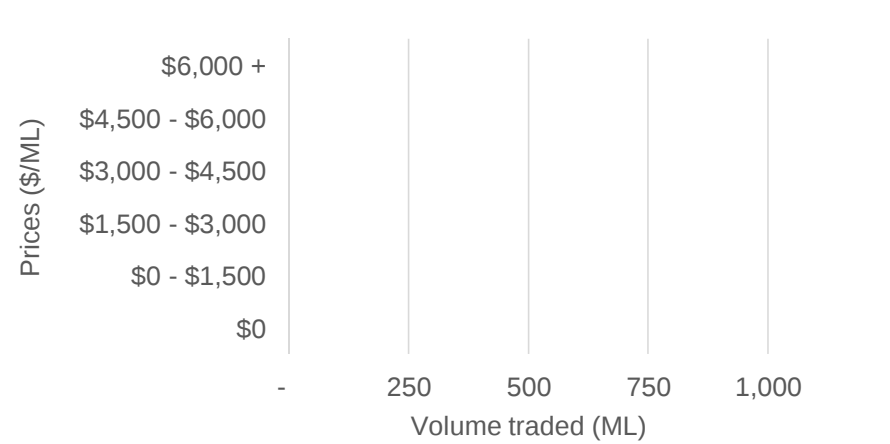
Source: Aither, 2018. Based on the NSW Water Register and quotes sourced from water brokers.

Market prices and volumes, July 2016 to June 2019



Source: Aither, 2018. Based on the NSW Water Register.

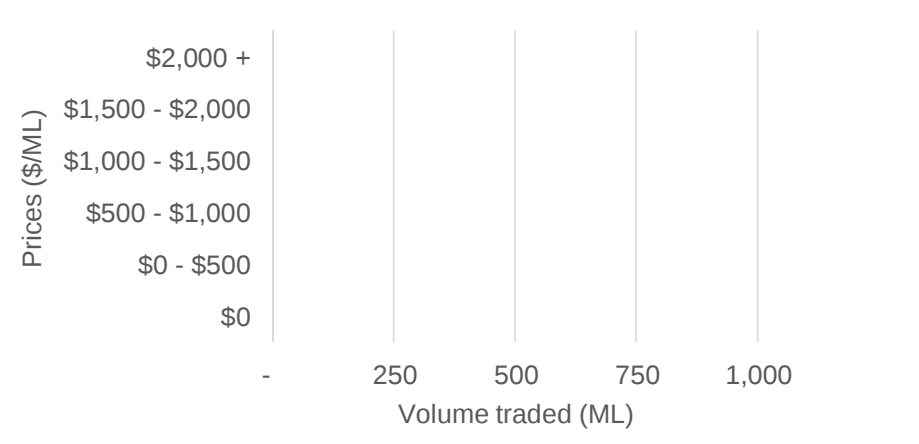
Market price range, December 2018 NSW Border Rivers GS A



Source: Aither, 2018. Based on the NSW Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

NSW Border Rivers GS B



NSW Barwon-Darling Unregulated

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
NSW Barwon-Darling Unregulated A	-	-	-	-	-	-
NSW Barwon-Darling Unregulated B	-	-	-	-	-	-
NSW Barwon-Darling Unregulated C	-	-	-	-	-	-

Source: Aither, 2018. Based on the NSW Water Register and quotes sourced from water brokers.

Market prices and volumes, July 2016 to June 2019



Source: Aither, 2018. Based on the NSW Water Register.

Market price range, December 2018

NSW Barwon-Darling Unregulated A



NSW Barwon-Darling Unregulated B



NSW Barwon-Darling Unregulated C



Source: Aither, 2018. Based on the NSW Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

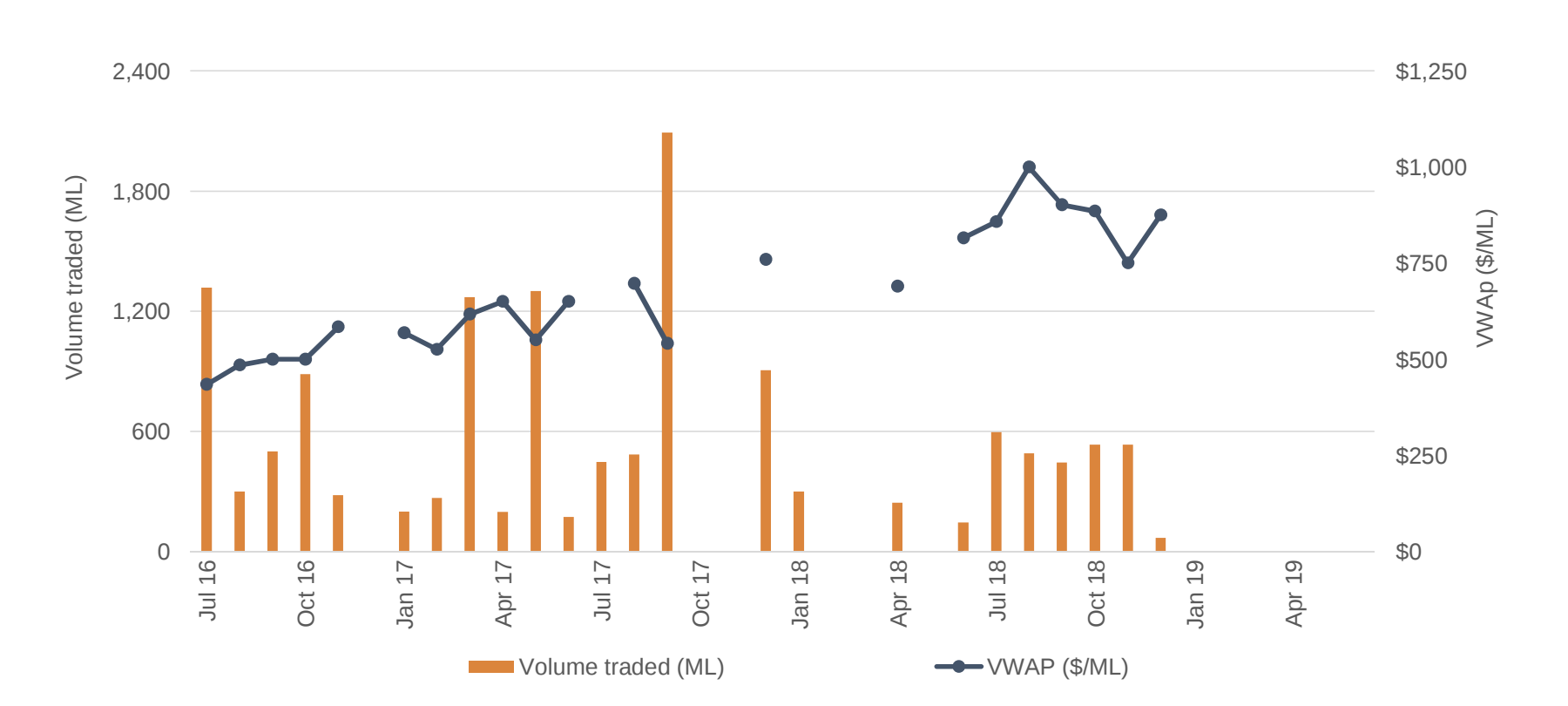
NSW Lachlan

Entitlement market overview, December 2018

Entitlement type	December 2018 VWAP (\$/ML)	December 2018 Maximum Price (\$/ML)	December 2018 Number of Transfers	December 2018 Volume of Transfers (ML)	December 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
NSW Lachlan GS	\$875	\$875	1	69	69.00	-

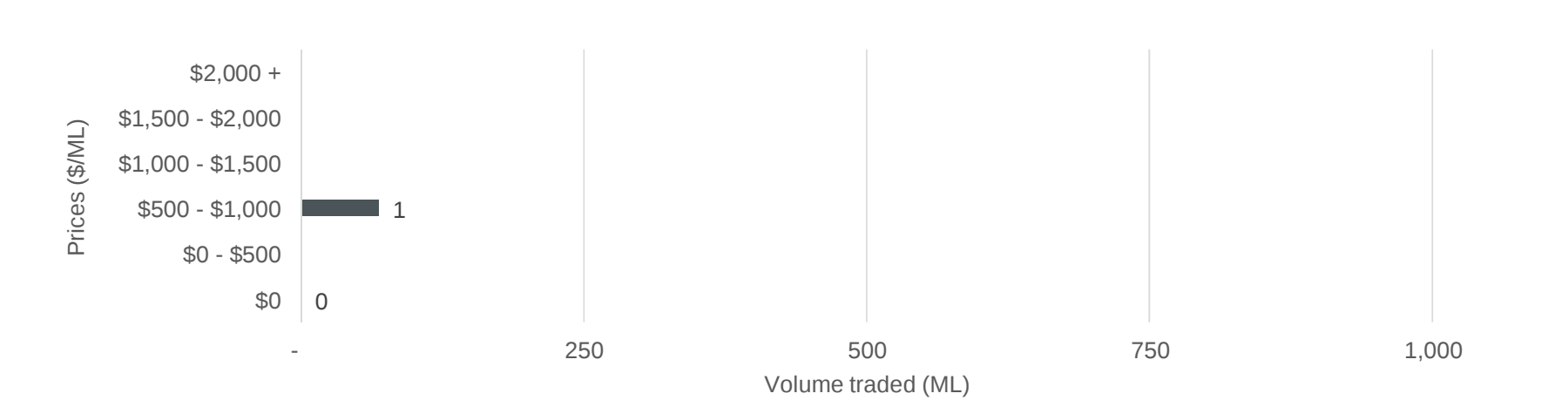
Source: Aither, 2018. Based on the NSW Water Register and quotes sourced from water brokers.

Market prices and volumes, July 2016 to June 2019



Source: Aither, 2018. Based on the NSW Water Register.

Market price range, December 2018



Source: Aither, 2018. Based on the NSW Water Register.

Note: Data labels are indicative of number of trades in each price bracket. Price bracket intervals do not include the upper bound price of the interval.

Queensland Entitlements

Entitlement market overview, December 2018

Entitlement	October 2018 VWAP (\$/ML)	October 2018 Maximum Price (\$/ML)	October 2018 Number of Trades	October 2018 Volume of trade (ML)	October 2018 Average Parcel Size (ML)	Broker Spread (Buy/Sell) (\$/ML)
QLD Condamine-Balonne (St George) Supplemented Condamine-Balonne	\$2,062	-	13	10,324	794	-
QLD Condamine-Balonne (Lower Balonne) Unsupplemented	\$1,800	-	1	500	500	-
QLD Condamine-Balonne (Upper Condamine) Unsupplemented	\$0	-	2	1,310	655	-
QLD Central Condamine Alluvium Groundwater (1, 2, 3 and 4)	-	-	-	-	-	-
QLD Upper Condamine Alluvium Groundwater (Dalrymple Creek) Groundwater	-	-	-	-	-	-
QLD Upper Condamine Alluvium Groundwater (Oakey Creek) Groundwater	-	-	-	-	-	-
QLD Border Rivers Supplemented (Macintyre Brook)	\$0	-	1	478	478	-
QLD Border Rivers Unsupplemented	\$1,884	-	12	3,244	270	-
QLD Condamine-Balonne Lower Balonne Overland flow	-	-	-	-	-	-

Notes: Dissaggregated entitlement trade data in QLD is not publically available therefore Aither has been unable to provide data in the same format as SA, Vic and NSW entitlement types. QLD groundwater trade data relates to trade in April 2018 as more recent trade data was unavailable at the time of publication. Trade related to QLD Border rivers unsupplemented trade reflects year to date trade as monthly trade data was unavailable. In instances where there has been more than one trade for a given month it has not been possible to determine a maximum price due to the nature of the data made available.

Source: Aither, 2018. Based on the QLD Water Register. Quotes sourced from water brokers.

Note: Queensland water trade data only available to October 2018 at time of publication.

Notes

VWAPs are based on estimates of commercial trades as outlined in Aither's methodology excluding \$0 values. Aither's methodology is available on request.

Only trades reported in December 2018 are included in the monthly Volume Weight Average Price (VWAP) and Maximum Monthly Price (\$/ML) reported in the entitlement summary tables.

The 'Number of Transfers and 'Volume of Transfers' (ML) are calculated based on all trades from state water market registers, including \$0 value trades. This is in line with Aither's calculation methodology which is available on request.

The average parcel size reported in the entitlement summary tables has been determined by taking the total monthly volume of transfers and dividing by the total number of transfers of the given entitlement during the month in question.

As trade prices for NSW Murray GS within Murray Irrigation are not reported, Aither has used NSW Murray GS on river prices as a substitute given the common characteristics that these entitlements share.

Aither's analysis was conducted on 7 January 2019 and only includes trade data available as of this date.

Document history

Revision:

Revision no.: 1
Author/s: Kai Wakerman Powell
Checked: Anthony Doucouliagos
Approved: Chris Olszak

Distribution:

Issue date: Thursday 17 January 2019
Issued to: Department of Agriculture and Water Resources
Description: Final

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