



FINAL REPORT

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Water Entitlement Market Prices Murray-Darling Basin (December Quarter 2015)

Report prepared for Australian Government
Department of Agriculture and Water Resources

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1. Introduction

This December 2015 quarter water entitlement¹ market prices report has been prepared by Marsden Jacob Associates (Marsden Jacob) for the Australian Government Department of Agriculture and Water Resources. The report includes:

- Southern MDB market activity and price information by region and entitlement type (Section 2);
- Northern MDB market activity and price information by region and entitlement type (Section 3);
- Catchment and water sources list (Appendix 1).

Region, entitlements and key statistics

The entitlement price report is broadly split into southern and northern Murray-Darling Basin (MDB), as detailed in Table 1. Interactive maps showing the location of these trading regions are available on the Murray-Darling Basin Authority's website². The water sources included in each of the regions are listed in Appendix 1.

Table 1: Regions and entitlement types

Southern MDB		Northern MDB	
Region	Entitlement Type	Region	Entitlement Type
SA Murray	Class 3a	Macquarie	General Security
VIC Murray above Barmah Choke	High Reliability	Namoi	General Security
VIC Murray above Barmah Choke	Low Reliability	Gwydir	General Security
Vic Murray below Barmah Choke	High Reliability	NSW Border Rivers	General Security
Vic Murray below Barmah Choke	Low Reliability	Barwon Darling	Unregulated
Goulburn	High Reliability	Lachlan	General Security
Goulburn	Low Reliability	Condamine Balonne (St George)	Supplemented
Campaspe	High Reliability	Condamine Balonne (Upper Condamine and Lower Balonne)	Unsupplemented
Campaspe	Low Reliability	Upper Condamine Alluvium Groundwater (1, 2, 3 and 4)	Groundwater (Sub Areas 1, 2, 3 and 4)
Loddon	High Reliability	QLD Border Rivers	Supplemented
NSW Murray	General Security	QLD Border Rivers	Unsupplemented
NSW Murray	High Security	Lower Balonne	Overland Flow
NSW Murray Irrigation Limited	General Security		
Murrumbidgee	General Security		
Murrumbidgee	High Security		

¹ Water access entitlement is a perpetual or ongoing entitlement to exclusive access to a share of water from a specified consumptive pool as defined in the relevant water plan, Source: Schedule B(ii), Intergovernmental Agreement on a National Water Initiative (NWI)

² <http://www.mdba.gov.au/what-we-do/managing-rivers/water-trade/water-markets-product-info>
<http://www.mdba.gov.au/what-we-do/managing-rivers/water-trade/southern-connected-trading-zones>

Southern MDB		Northern MDB	
Region	Entitlement Type	Region	Entitlement Type
Lower Darling	General Security		
Lower Darling	High Security		

As requested by the Department, for each of the regions and water entitlement categories Marsden Jacob reports a range of measures, subject to data availability and the number of trades:

- volume weighted average prices (VWAP);
- median price;
- mean price;
- mode price;
- percentile price 25th and 75th;
- price quintiles;
- trade volume;
- number of trades; and
- water trading exchange prices.

Data sources

The data sources for this report are:

- National Water Market Register data, up to 31 December 2013;
- State Government water registers and websites; and
- Water exchange and broker noticeboard prices.

Notes

Entitlement prices in the State Government water registers can lag the exchange date of contracts or the water sale agreement by periods of days to several months. This means the entitlement prices shown in the monthly and quarterly VWAPs may not reflect exchanges during the month.

Entitlement prices that do not appear to reflect arms-length transactions have been excluded in the data cleaning process. Removing these values reduces price distortions in the reporting. This means prices in this report may differ from prices shown in registers where these transactions have not been removed.

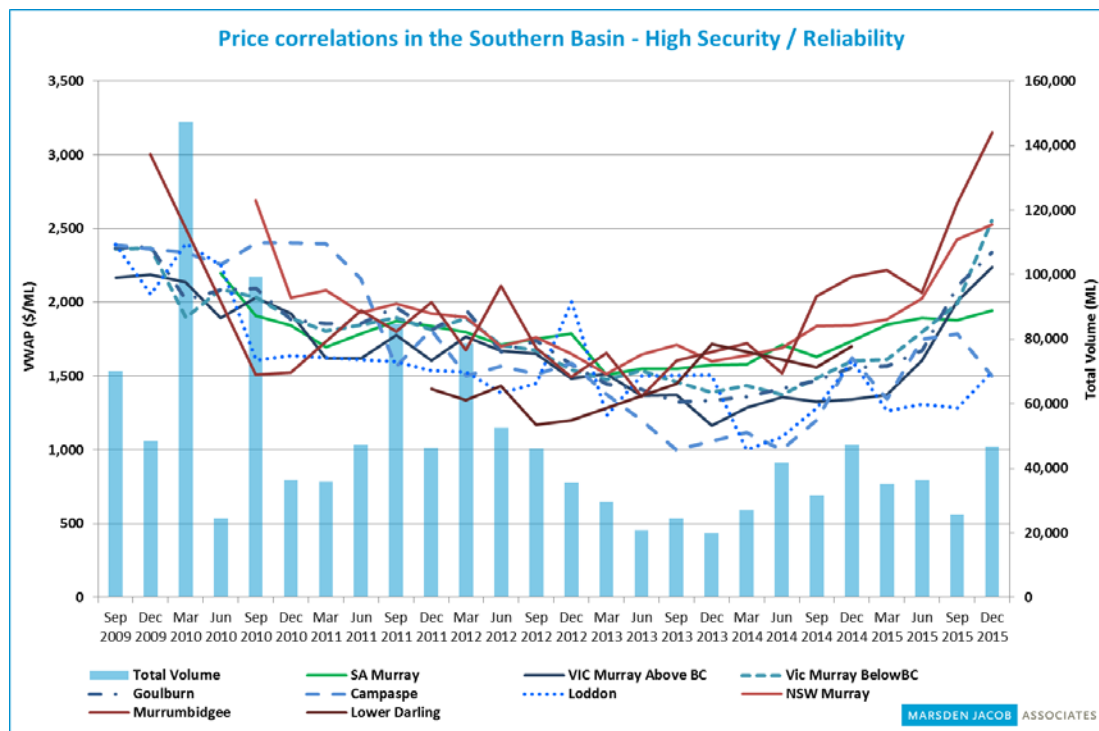
Marsden Jacob uses a two stage process to clean the data, which is based on the approach used by the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) and the former National Water Commission (NWC):

1. Removing prices that may not be genuine, e.g. removing transactions where the price was reported to be null (\$0 per ML); and
2. Reviewing and potentially removing transactions outside two standard deviations from the average price of water entitlements by region (or trading zone) and by water product.

Marsden Jacob does not necessarily remove all trades that fall outside two standard deviations as some of these reflect arms-length trades. If trades which fall outside two standard deviations are retained in the regional dataset this is noted in the region and entitlement specific reports.

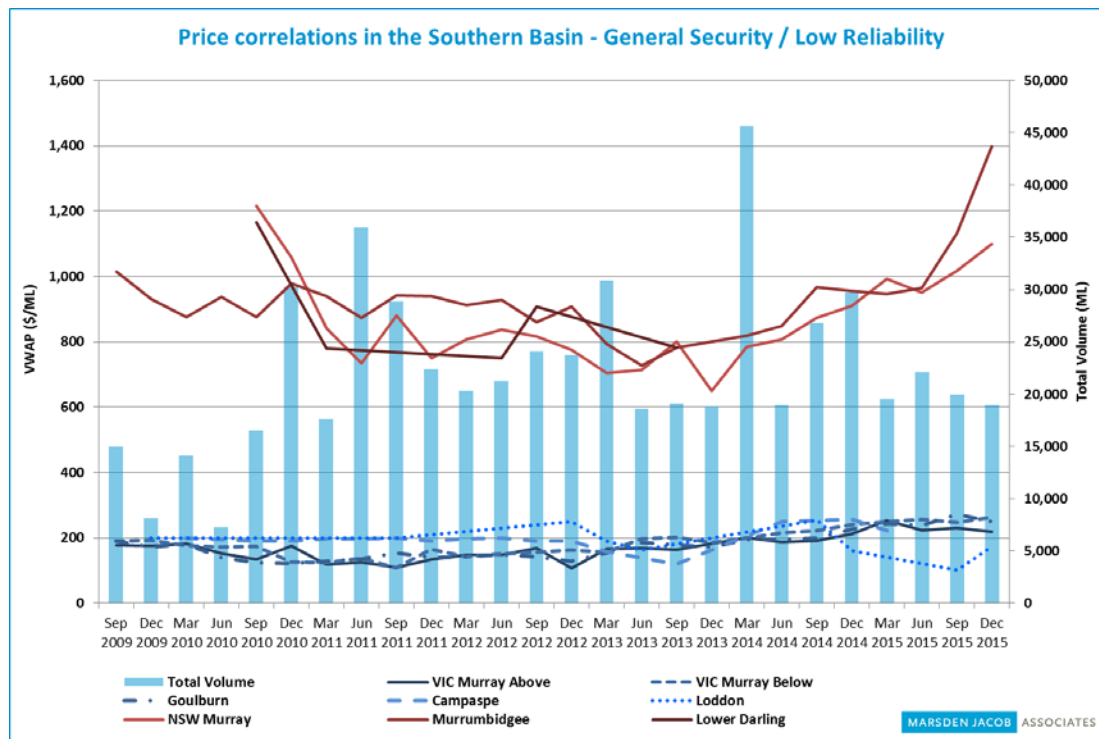
2. Southern Murray-Darling Basin

Figure 1: Price correlation in the Southern Basin: High Security / Reliability / Class 3a



Source: Marsden Jacob analysis, 2016

Figure 2: Price correlation in the Southern Basin: General Security / Low Reliability



Source: Marsden Jacob analysis, 2016

Note: Where possible, zero values have been interpolated in these charts so they differ slightly from the region and entitlement specific charts.

2.1 SA Murray: Class 3a

Figure 3: Entitlement market prices and volumes

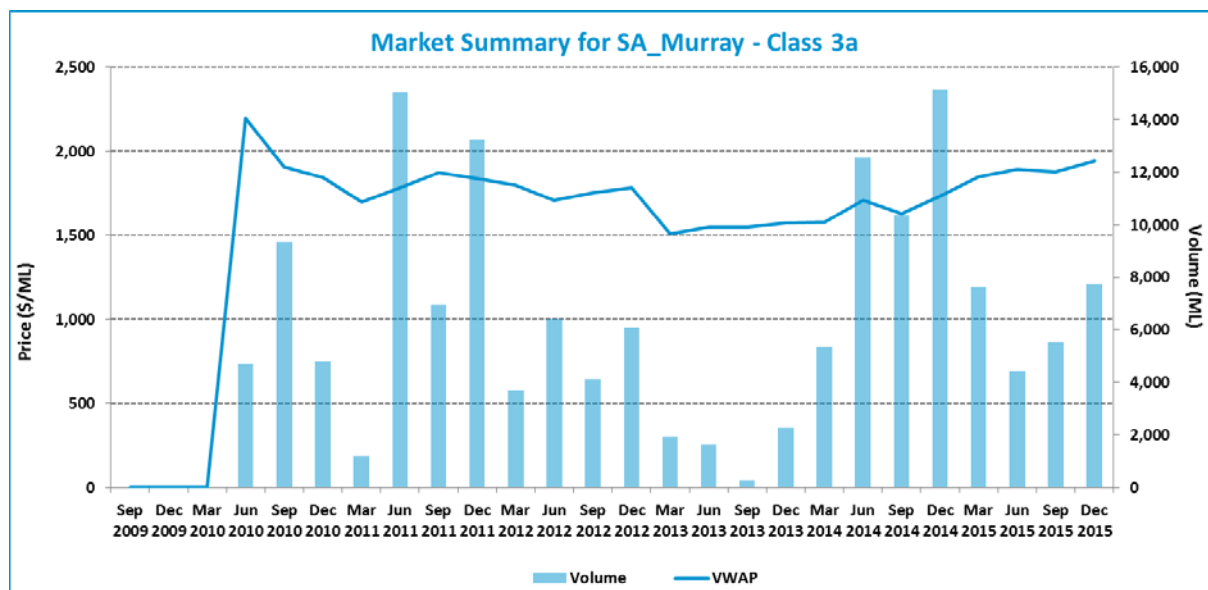
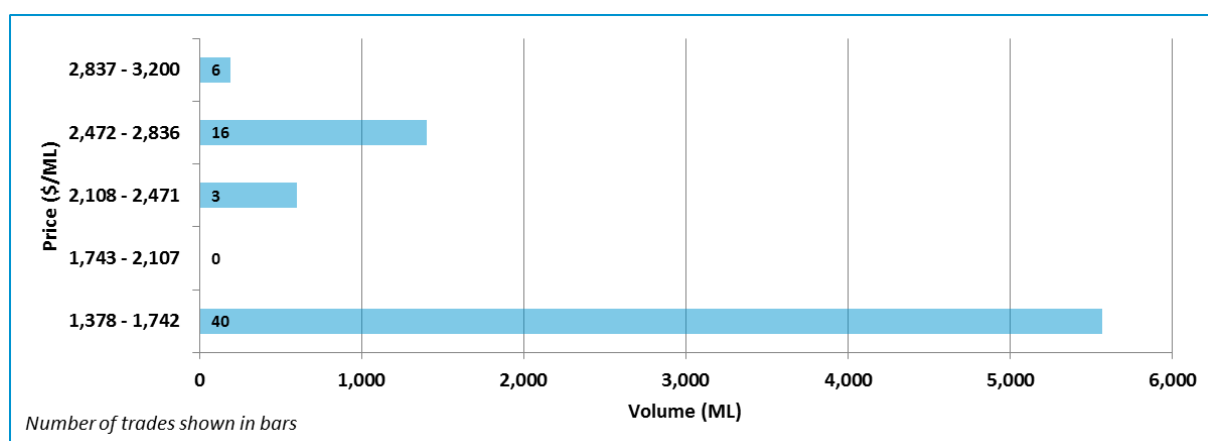


Table 2: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
2,189	1,945	1,916	1,710	2,550	1,710	2,075	1,710	7,759	65	2,750 – 3,400

Figure 4: Entitlement market price range by volume



Note: Three trades which are outside two standard deviations of the average price of water entitlements have been included for this region.

Data Sources: SA Water Register (www.waterconnect.sa.gov.au/Systems/WTR/Pages/default.aspx), National Water Exchange (www.waterexchange.com.au), Waterfind (www.waterfind.com.au), H2OX (www.h2ox.com)

2.2 VIC Murray above Barmah Choke: High Reliability

Figure 5: Entitlement market prices and volumes

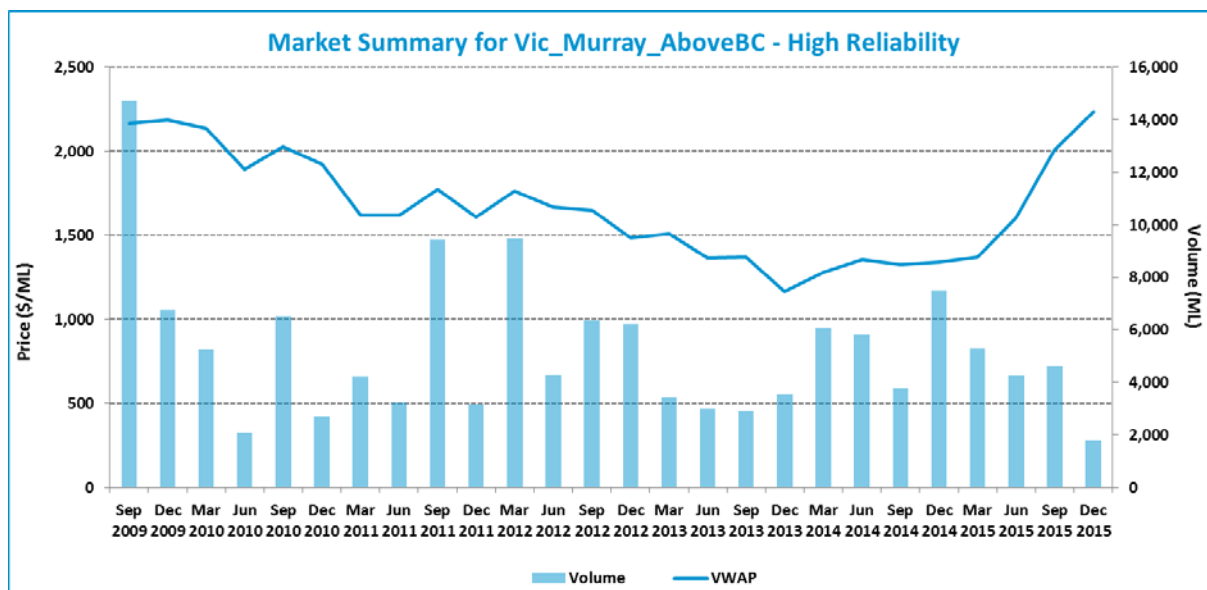
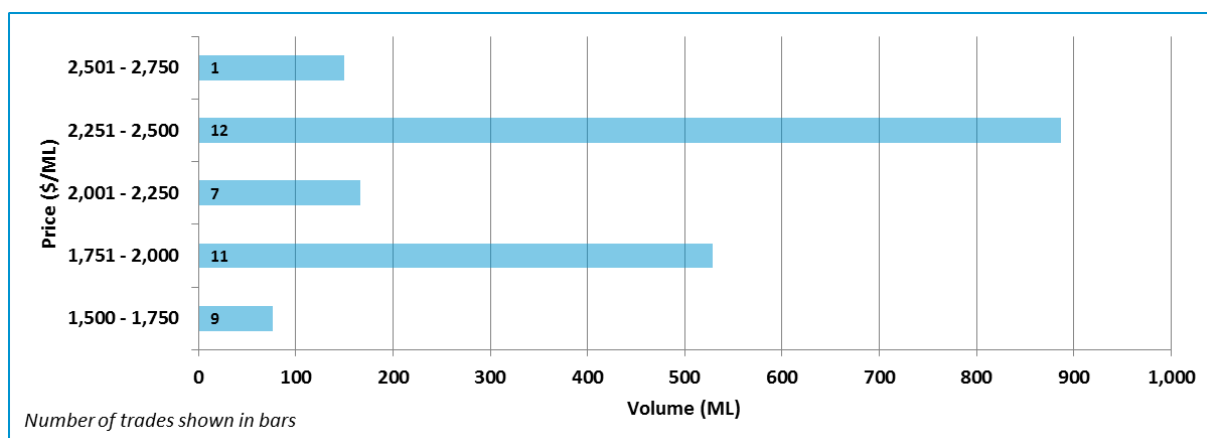


Table 3: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
2,372	2,236	2,070	1,800	2,400	2,025	2,050	1,500	1,808	40	2,600 – 3,150

Figure 6: Entitlement market price range by volume



Data Sources: VIC Water Register (waterregister.vic.gov.au/water-trading/water-share-trading), National Water Exchange (www.waterexchange.com.au), Waterfind (www.waterfind.com.au), H2OX (www.h2ox.com)

2.3 VIC Murray above Barmah Choke: Low Reliability

Figure 7: Entitlement market prices and volumes

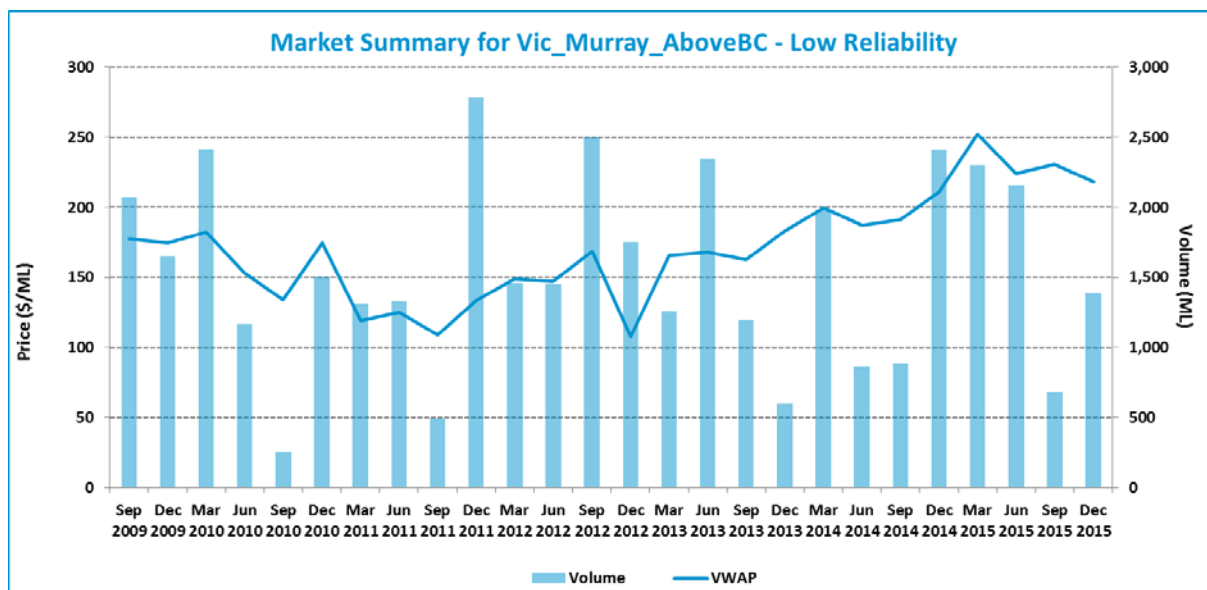
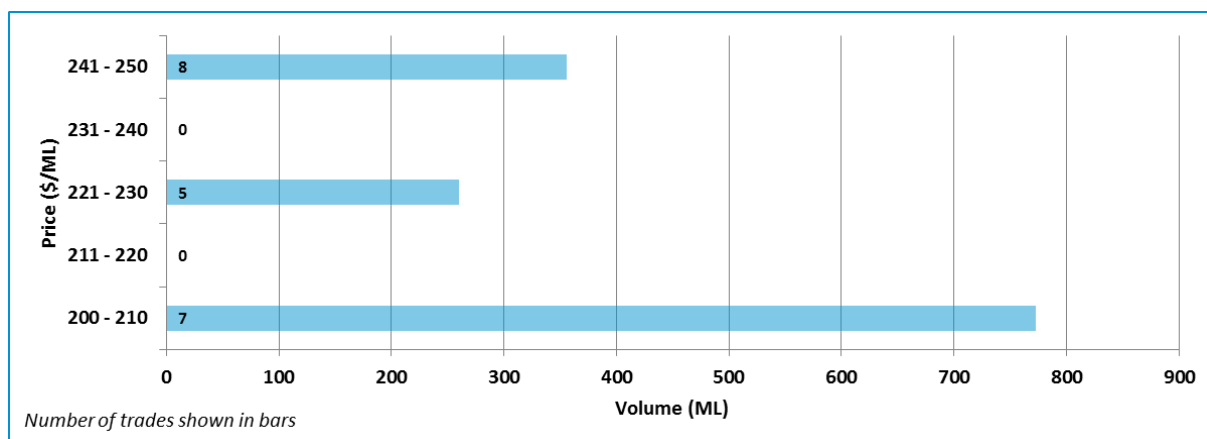


Table 4: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
236	218	222	200	250	230	228	250	1,389	20	230 – 270

Figure 8: Entitlement market price range by volume



Data Sources: VIC Water Register (waterregister.vic.gov.au/water-trading/water-share-trading), National Water Exchange (www.waterexchange.com.au), Waterfind (www.waterfind.com.au), H2OX (www.h2ox.com)

2.4 VIC Murray below Barmah Choke: High Reliability

Figure 9: Entitlement market prices and volumes

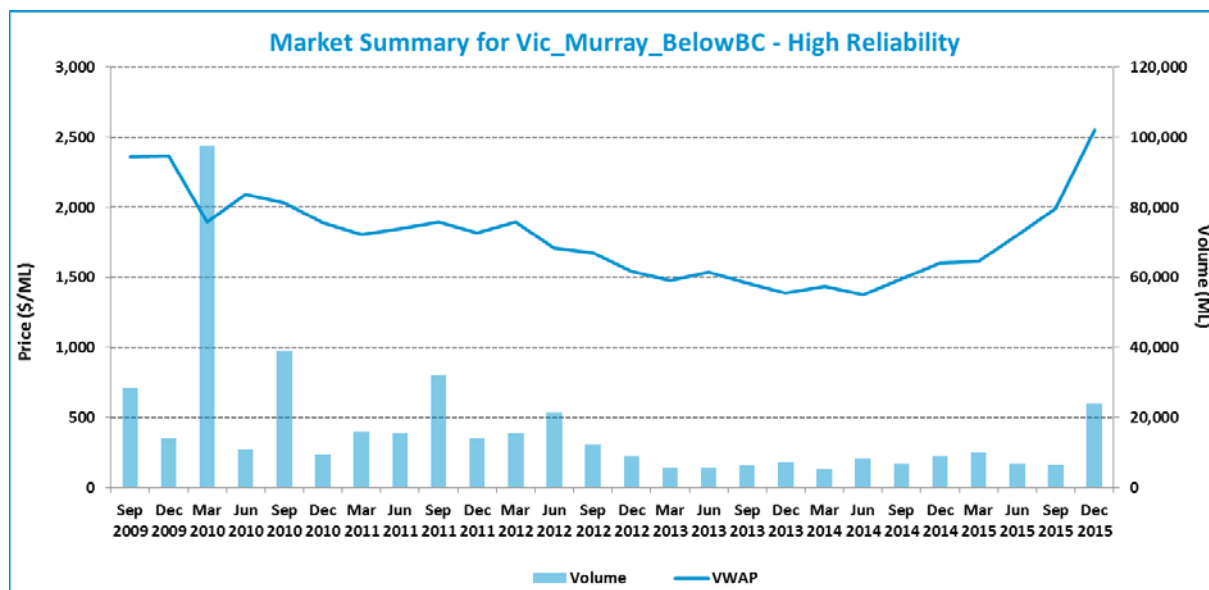
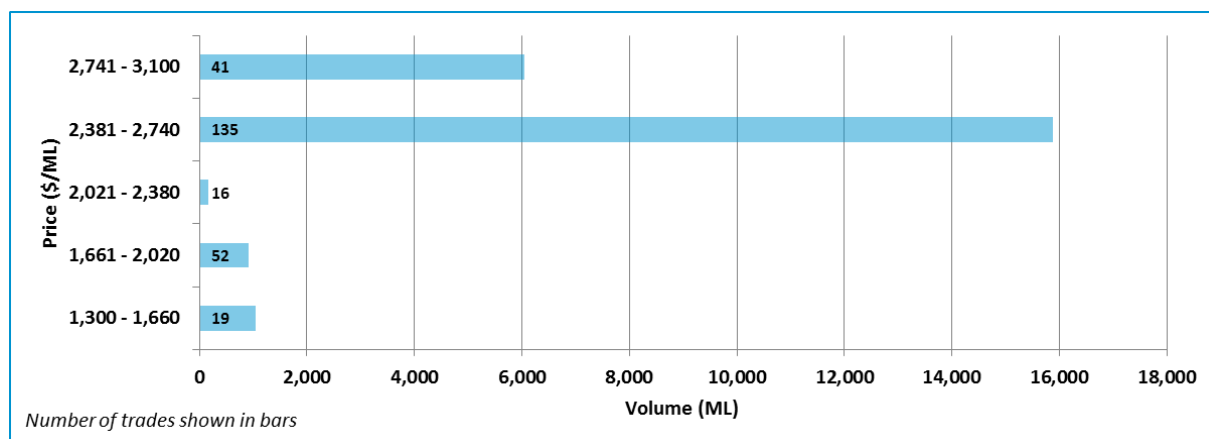


Table 5: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
2,645	2,551	2,433	2,000	2,550	2,500	2,358	2,550	24,075	263	2,750 – 3,250

Figure 10: Entitlement market price range by volume



Note: A number of trades which are outside two standard deviations of the average price of water entitlements have been included for this region.

Data Sources: VIC Water Register (waterregister.vic.gov.au/water-trading/water-share-trading), National Water Exchange (www.waterexchange.com.au), Waterfind (www.waterfind.com.au), H2OX (www.h2ox.com)

2.5 VIC Murray below Barmah Choke: Low Reliability

Figure 11: Entitlement market prices and volumes

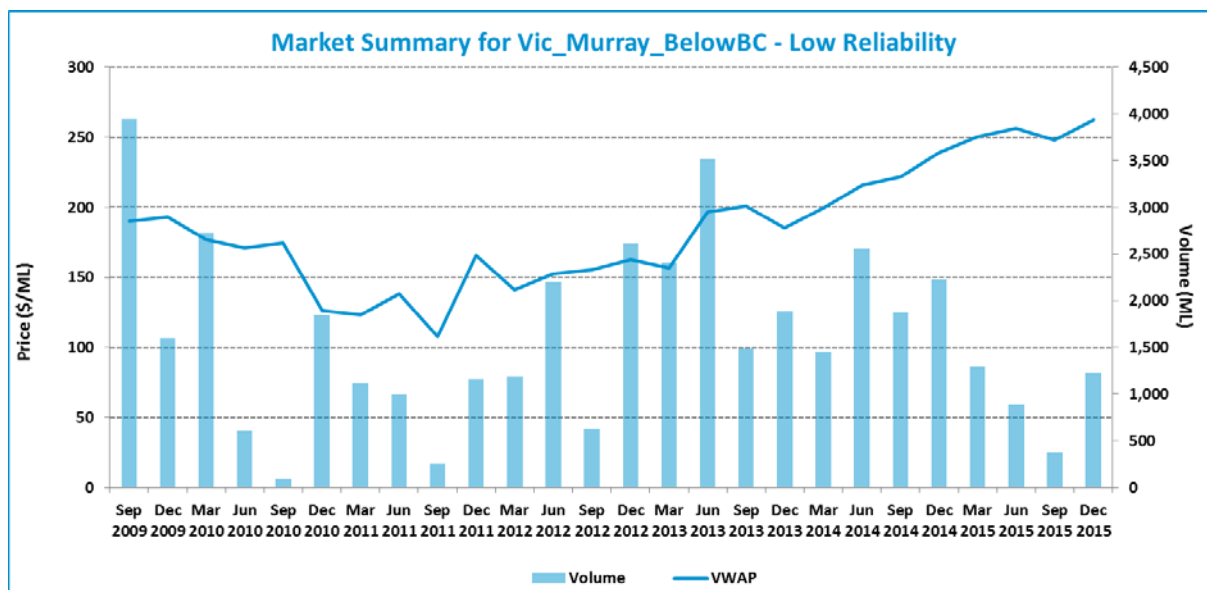
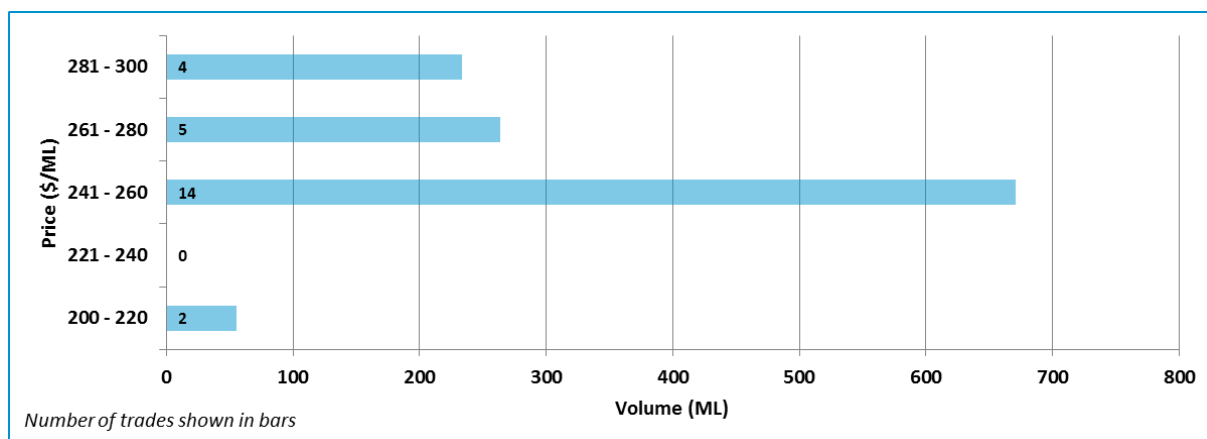


Table 6: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
270	262	259	250	280	260	260	250	1,223	25	250 – 300

Figure 12: Entitlement market price range by volume



Note: Trades which are inside two standard deviations of the average price of water entitlements have been excluded for this region.

Data Sources: VIC Water Register (waterregister.vic.gov.au/water-trading/water-share-trading), National Water Exchange (www.waterexchange.com.au), Waterfind (www.waterfind.com.au), H2OX (www.h2ox.com)

2.6 Goulburn: High Reliability

Figure 13: Entitlement market prices and volumes

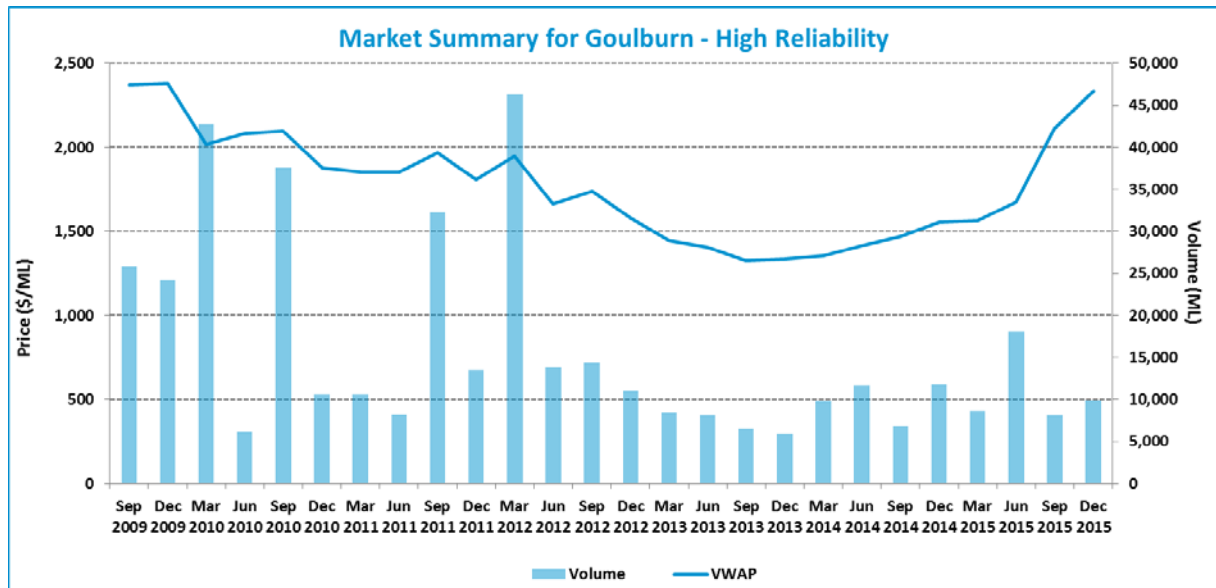
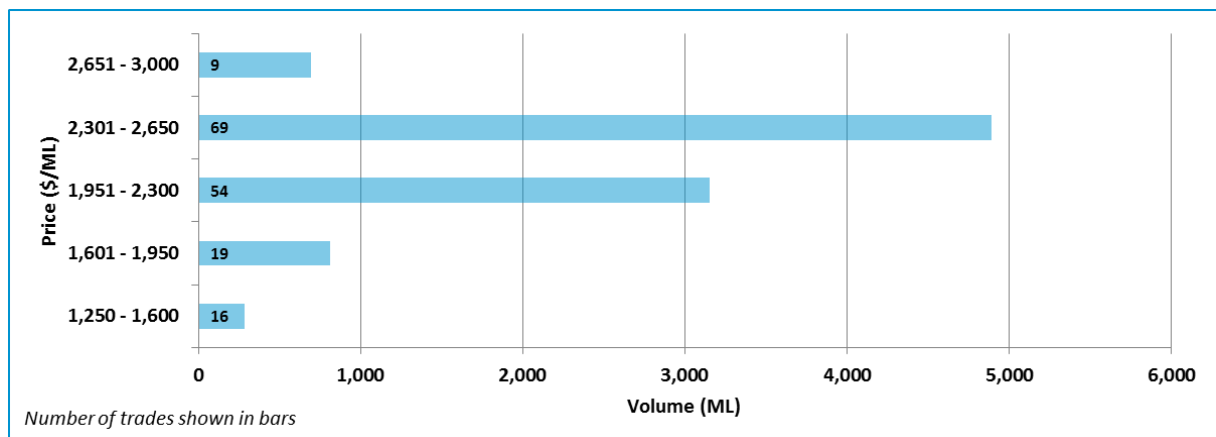


Table 7: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
2,568	2,336	2,234	2,000	2,480	2,300	2,210	2,400	9,839	167	2,800 – 3,000

Figure 14: Entitlement market price range by volume



Data Sources: VIC Water Register (waterregister.vic.gov.au/water-trading/water-share-trading), National Water Exchange (www.waterexchange.com.au), Waterfind (www.waterfind.com.au), H2OX (www.h2ox.com)

2.7 Goulburn: Low Reliability

Figure 15: Entitlement market prices and volumes

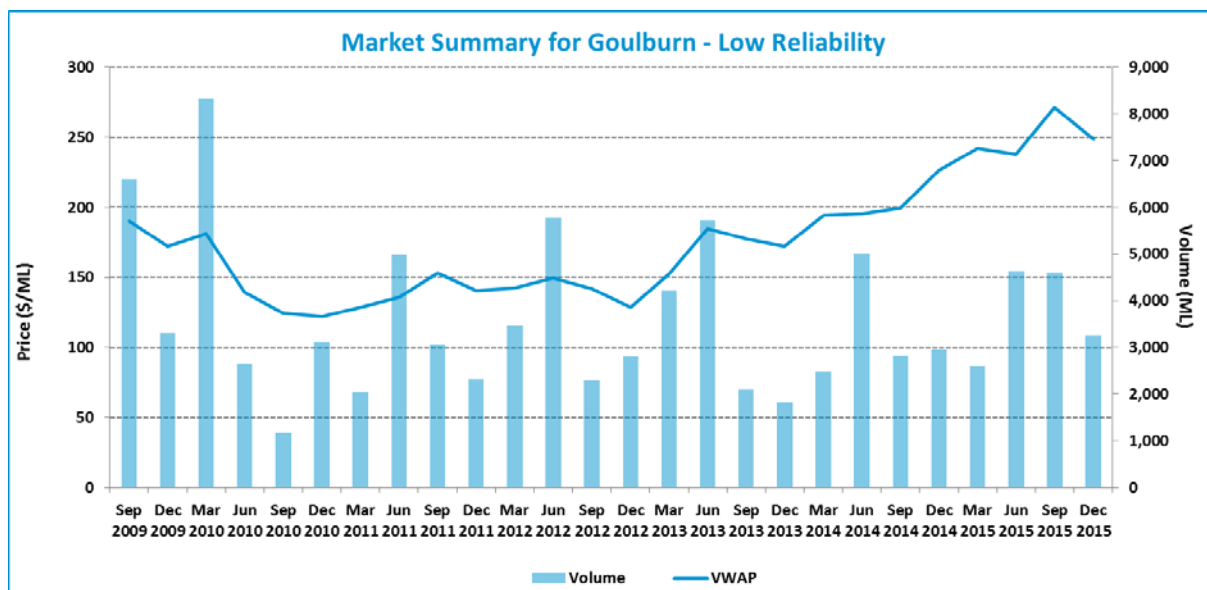
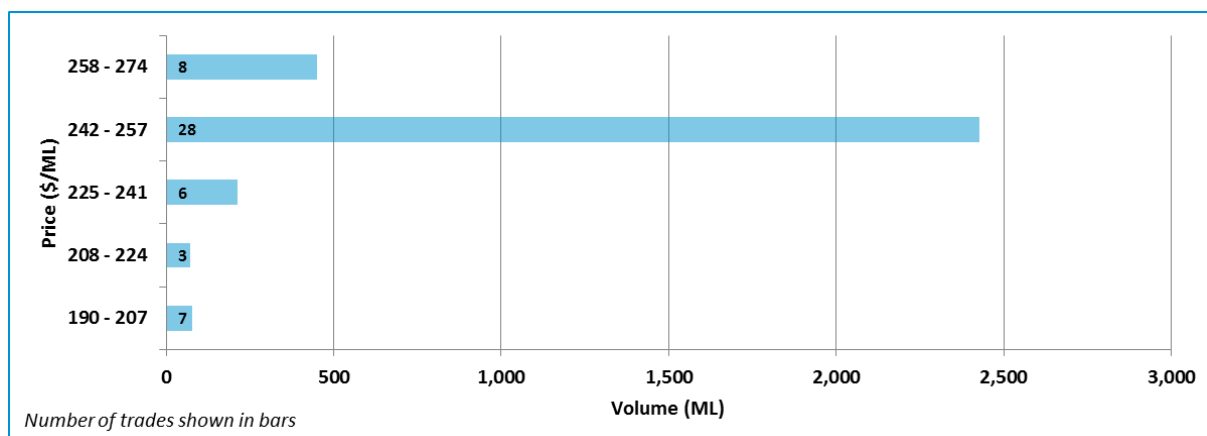


Table 8: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
249	249	262	240	250	250	241	250	3,241	52	250 – 260

Figure 16: Entitlement market price range by volume



Data Sources: VIC Water Register (waterregister.vic.gov.au/water-trading/water-share-trading), National Water Exchange (www.waterexchange.com.au), Waterfind (www.waterfind.com.au), H2OX (www.h2ox.com)

2.8 Campaspe: High Reliability

Figure 17: Entitlement market prices and volumes

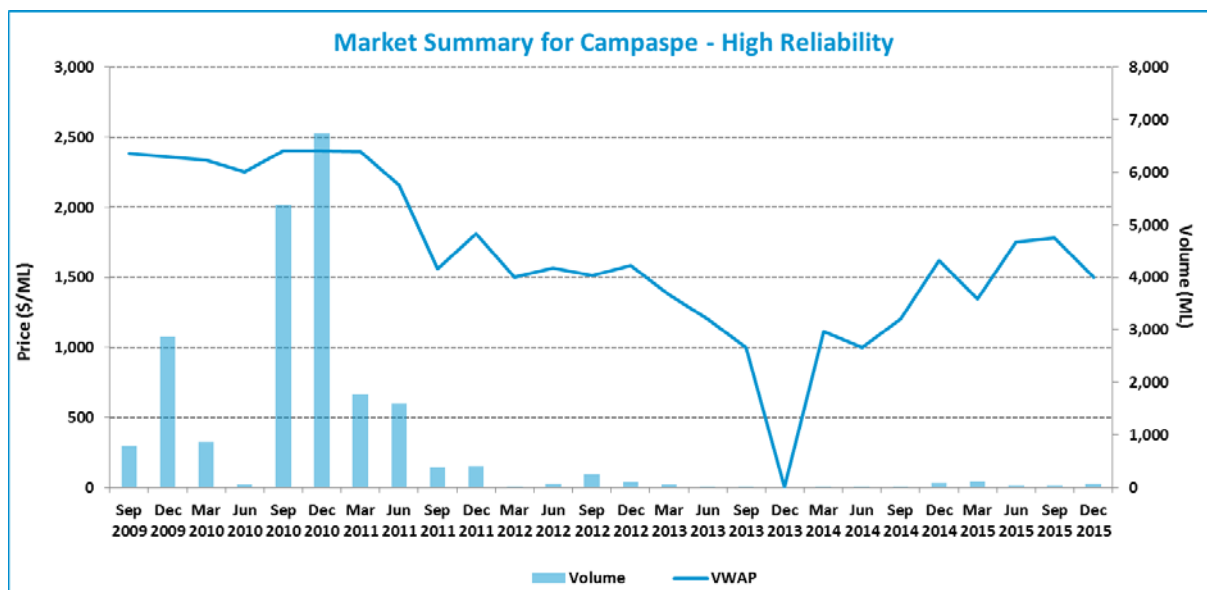
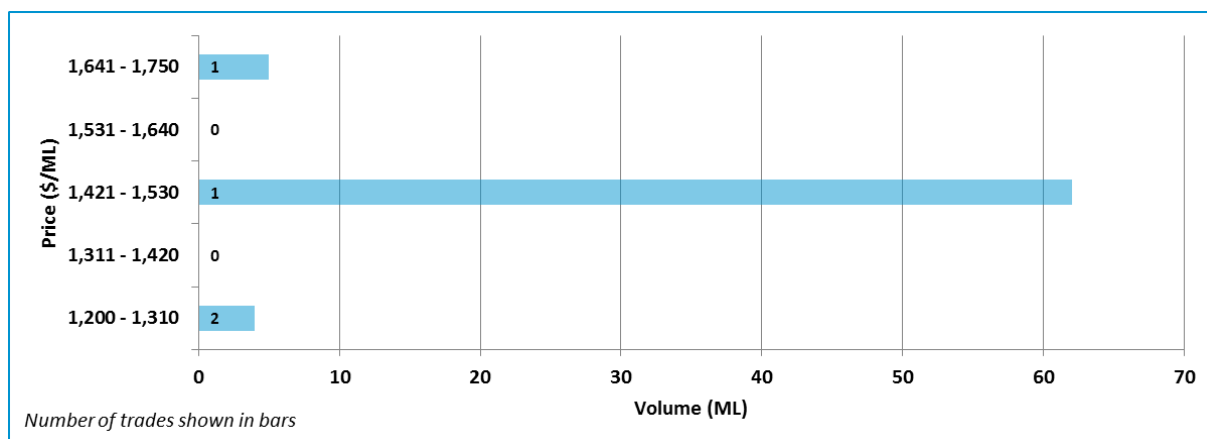


Table 9: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
1,200	1,501	1,601	1,200	1,563	1,350	1,413	1,200	71	4	2,500 – 2,700

Figure 18: Entitlement market price range by volume



Data Sources: VIC Water Register (waterregister.vic.gov.au/water-trading/water-share-trading), National Water Exchange (www.waterexchange.com.au), Waterfind (www.waterfind.com.au), H2OX (www.h2ox.com)

2.9 Loddon: High Reliability

Figure 19: Entitlement market prices and volumes

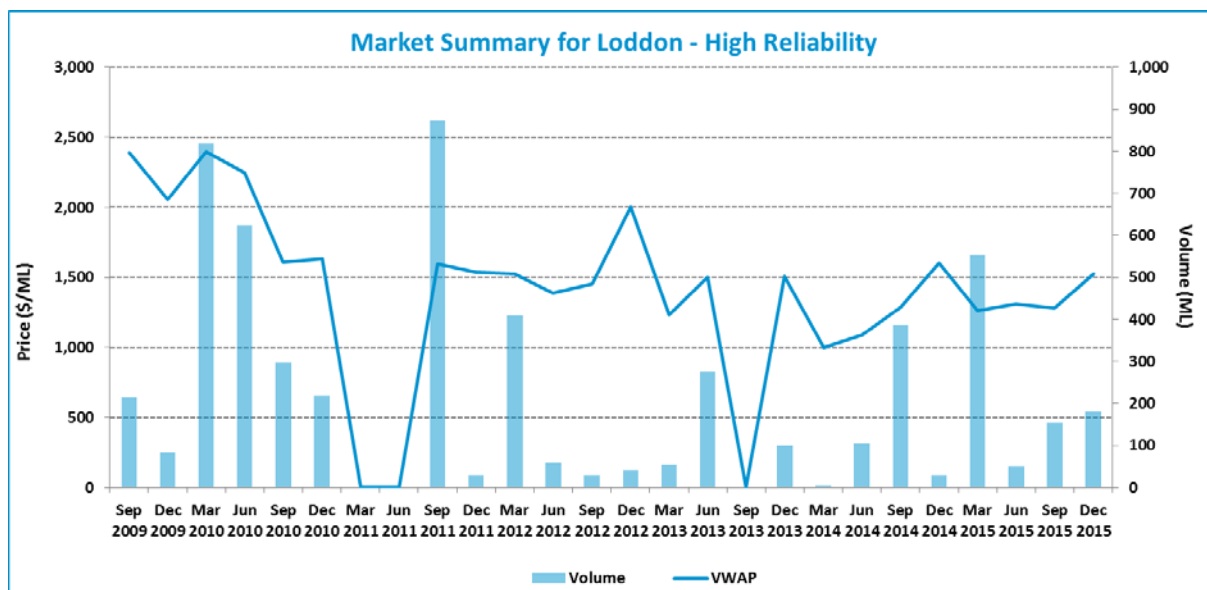
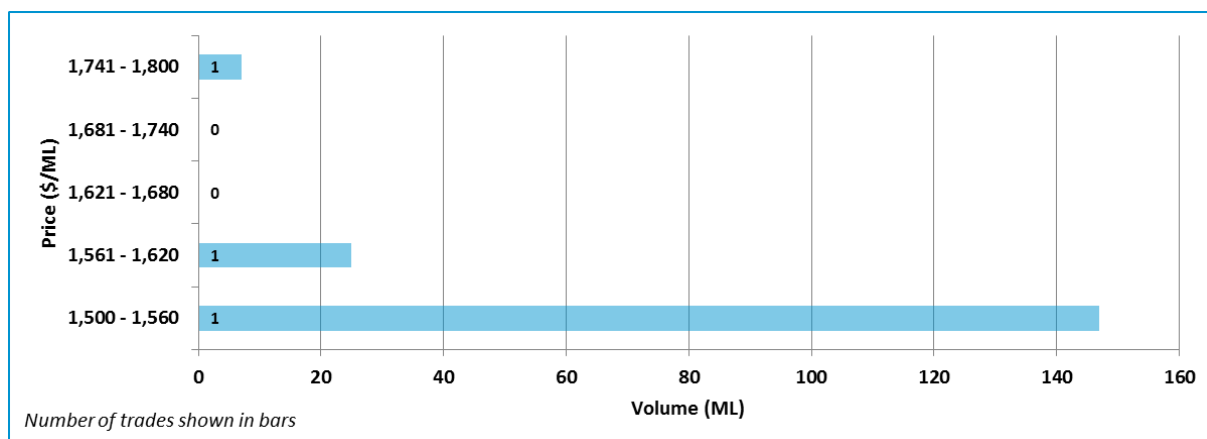


Table 10: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
1,526	1,526	1,413	1,550	1,700	1,600	1,633	-	179	3	No listings

Figure 20: Entitlement market price range by volume



Data Sources: VIC Water Register (waterregister.vic.gov.au/water-trading/water-share-trading), National Water Exchange (www.waterexchange.com.au), Waterfind (www.waterfind.com.au), H2OX (www.h2ox.com)

2.10 NSW Murray: General Security

Figure 21: Entitlement market prices and volumes

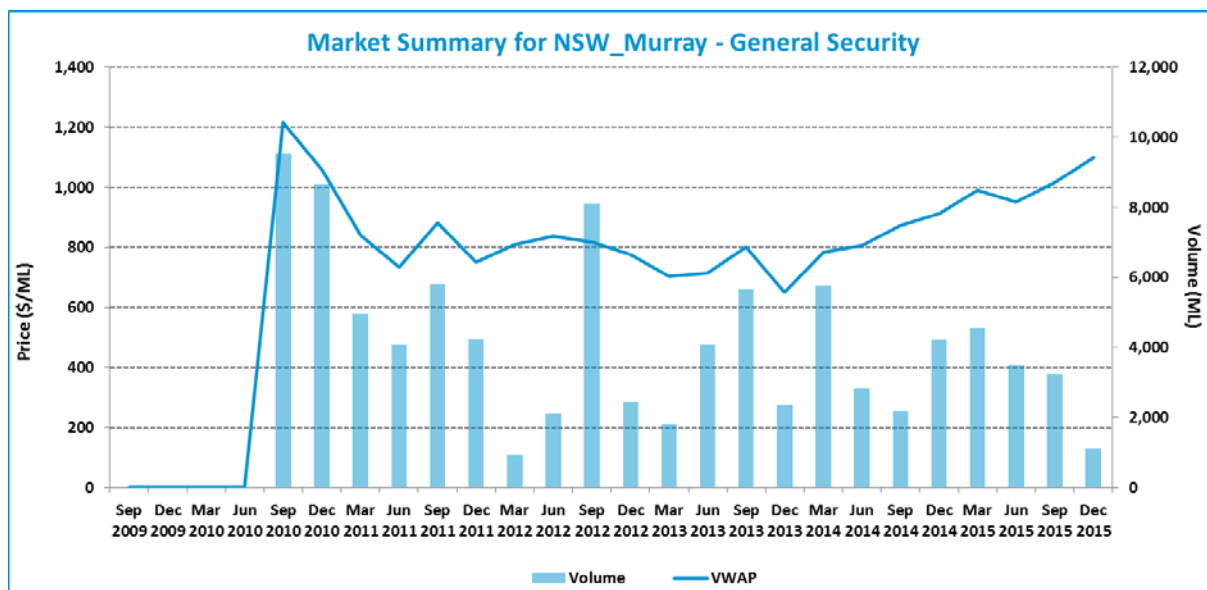
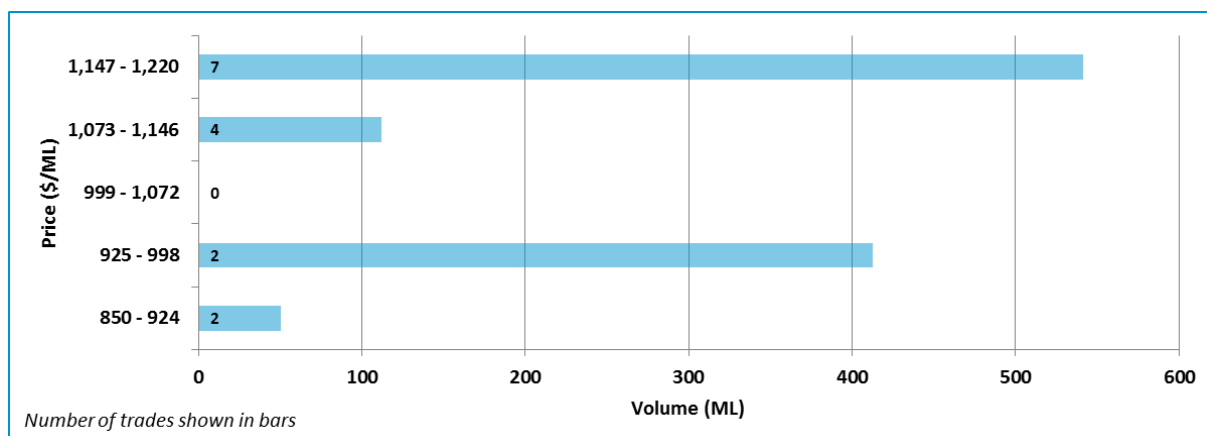


Table 11: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
1,208	1,099	1,037	1,033	1,200	1,114	1,102	1,200	1,116	15	975 – 1,500

Figure 22: Entitlement market price range by volume



Data Sources: NSW Water Register

(<http://registers.water.nsw.gov.au/wma/WaterShareIntraWSLocSearch.jsp?selectedRegister=WaterShare>, <http://www.water.nsw.gov.au/water-licensing/registers>), National Water Exchange (www.waterexchange.com.au), Waterfind (www.waterfind.com.au), H2OX (www.h2ox.com)

2.11 NSW Murray: High Security

Figure 23: Entitlement market prices and volumes

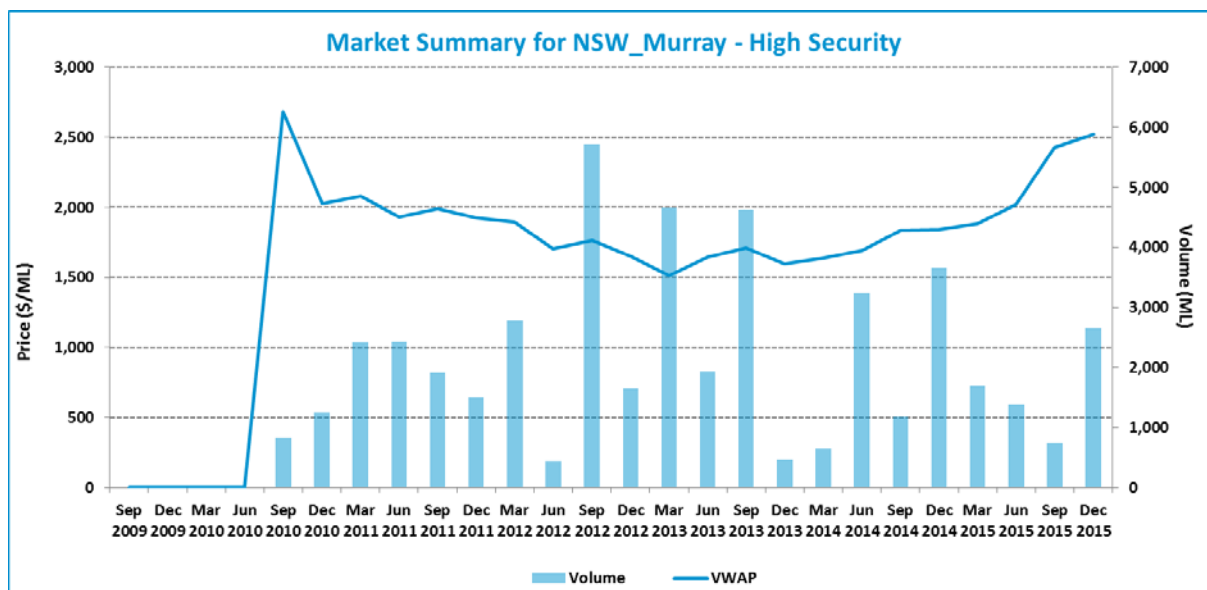
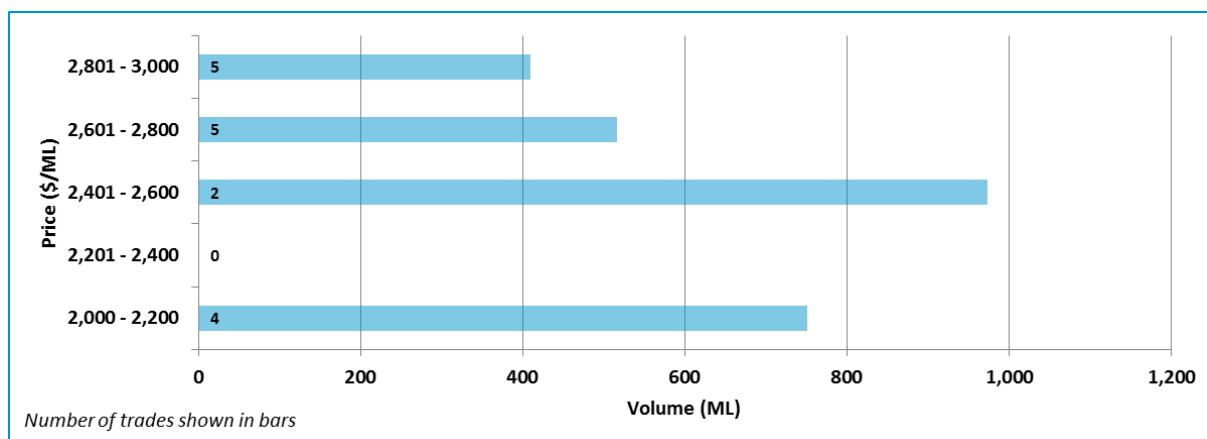


Table 12: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
2,921	2,524	2,502	2,413	2,845	2,725	2,619	3,000	2,652	16	2,750 – 3,300

Figure 24: Entitlement market price range by volume



Data Sources: NSW Water Register

(<http://registers.water.nsw.gov.au/wma/WaterShareIntraWSLocSearch.jsp?selectedRegister=WaterShare>,

<http://www.water.nsw.gov.au/water-licensing/registers>), National Water Exchange (www.waterexchange.com.au), Waterfind

(www.waterfind.com.au), H2OX (www.h2ox.com)

2.12 NSW Murray Irrigation Limited

Figure 25: Entitlement market prices and volumes

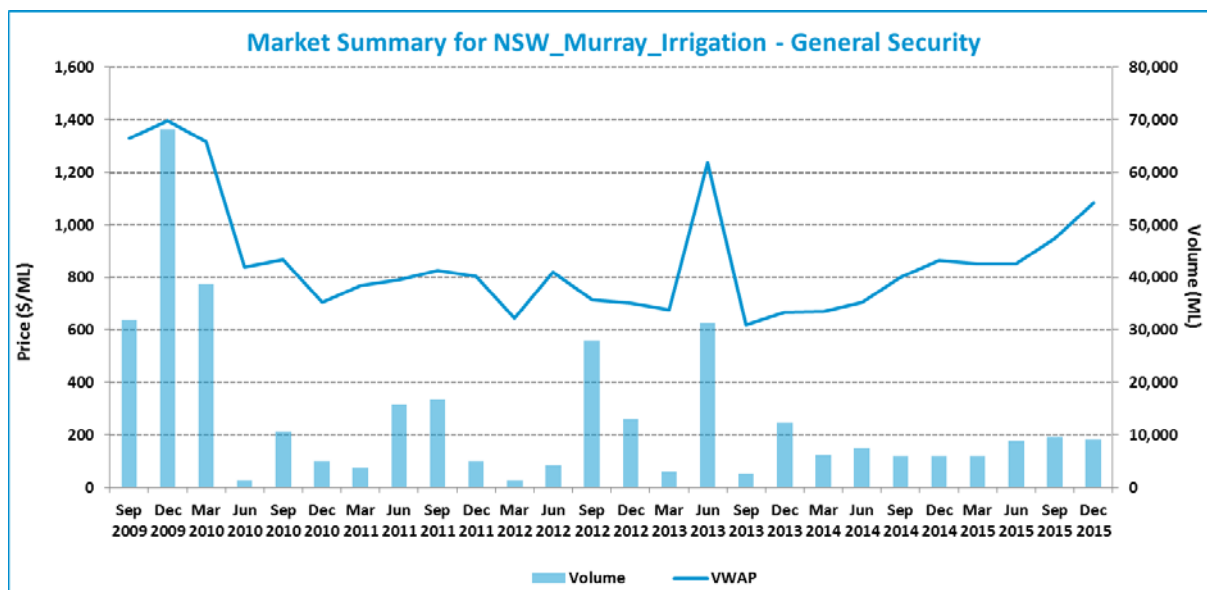
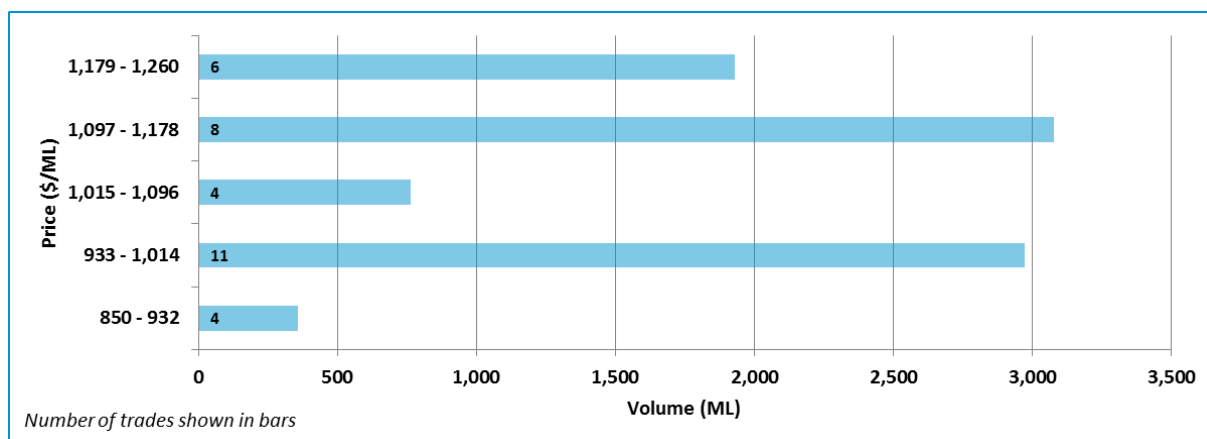


Table 13: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
1,075	1,084	1,013	1,000	1,150	1,050	1,059	1,000	9,105	33	850 – 1,250

Figure 26: Entitlement market price range by volume



Note: Some trades which are outside two standard deviations of the average price of water entitlements have been included for this region.

Data Sources: Murray Irrigation Limited (www.murrayirrigation.com.au)

2.13 Murrumbidgee: General Security

Figure 27: Entitlement market prices and volumes

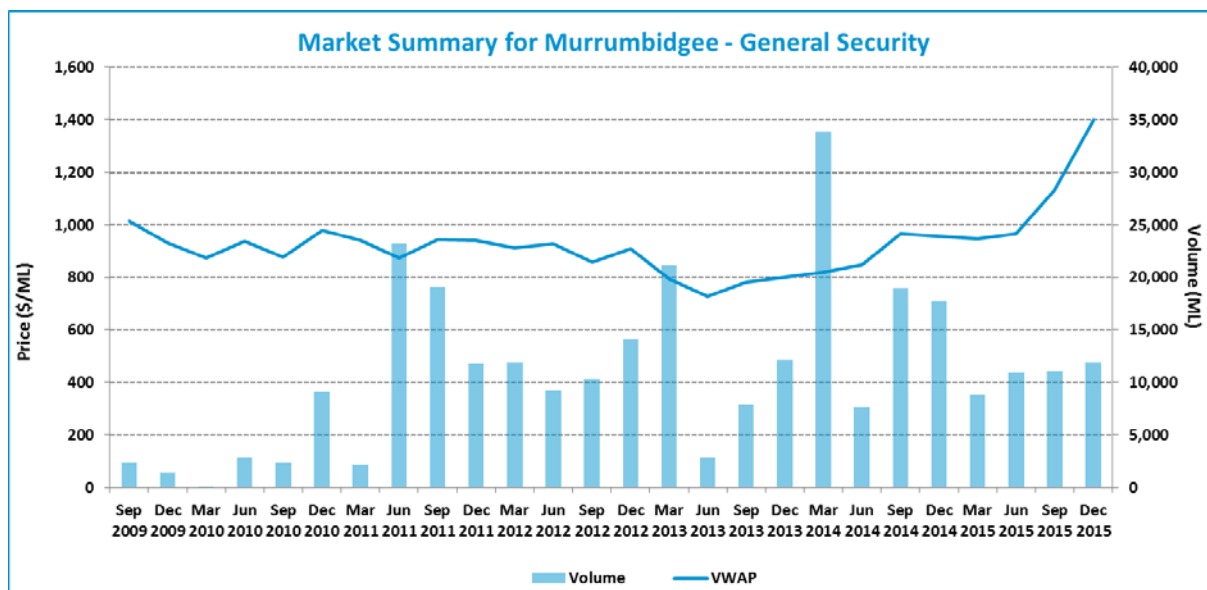
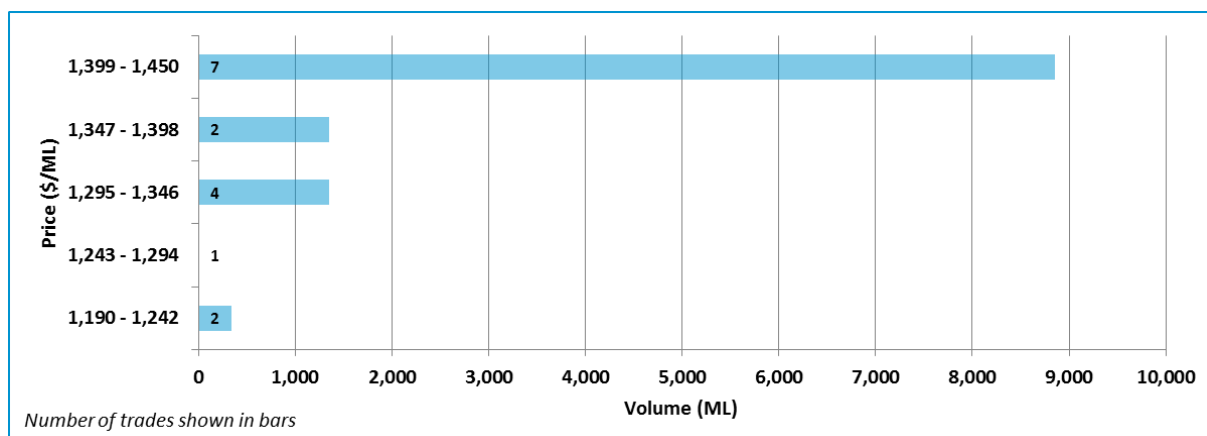


Table 14: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
1,392	1,398	1,269	1,300	1,413	1,363	1,349	1,340	11,909	16	1,300 – 1,650

Figure 28: Entitlement market price range by volume



Data Sources: NSW Water Register

(<http://registers.water.nsw.gov.au/wma/WaterShareIntraWSLocSearch.jsp?selectedRegister=WaterShare>,
<http://www.water.nsw.gov.au/water-licensing/registers>), National Water Exchange (www.waterexchange.com.au), Waterfind (www.waterfind.com.au), H2OX (www.h2ox.com)

2.14 Murrumbidgee: High Security

Figure 29: Entitlement market prices and volumes

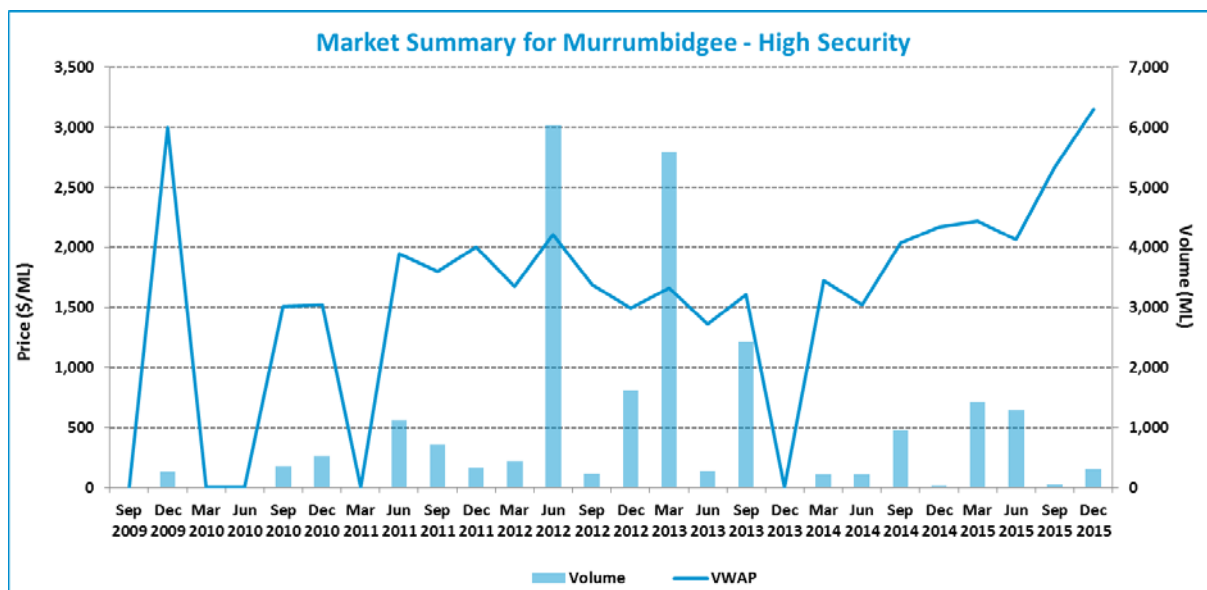
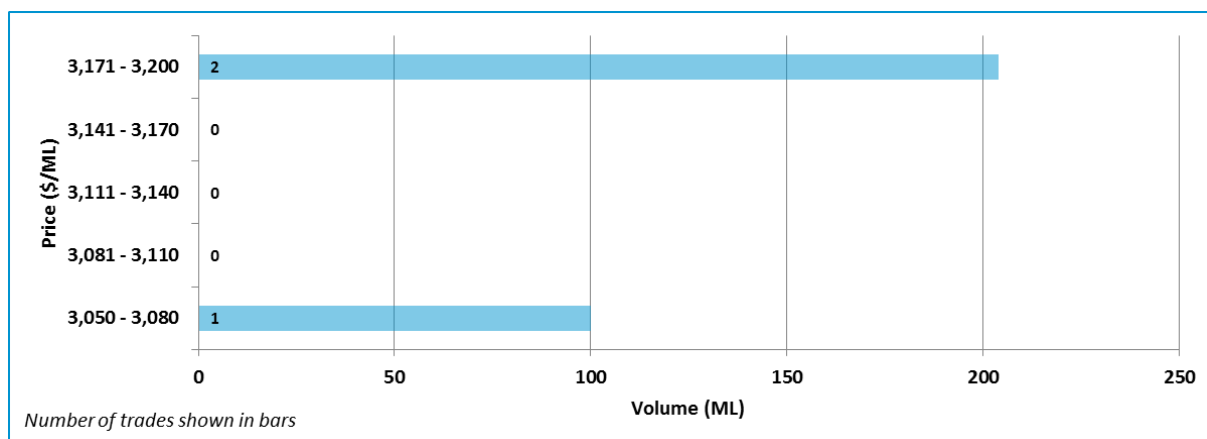


Table 15: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
3,050	3,151	3,088	3,125	3,200	3,200	3,150	3,200	304	3	3,200 – 4,000

Figure 30: Entitlement market price range by volume



Note: One trade which is inside two standard deviations of the average price of water entitlements has been excluded for this region.

Data Sources: NSW Water Register

(<http://registers.water.nsw.gov.au/wma/WaterShareIntraWSLocSearch.jsp?selectedRegister=WaterShare>,

<http://www.water.nsw.gov.au/water-licensing/registers>), National Water Exchange (www.waterexchange.com.au), Waterfind

(www.waterfind.com.au), H2OX (www.h2ox.com)

2.15 Lower Darling: General Security

Figure 31: Entitlement market prices and volumes

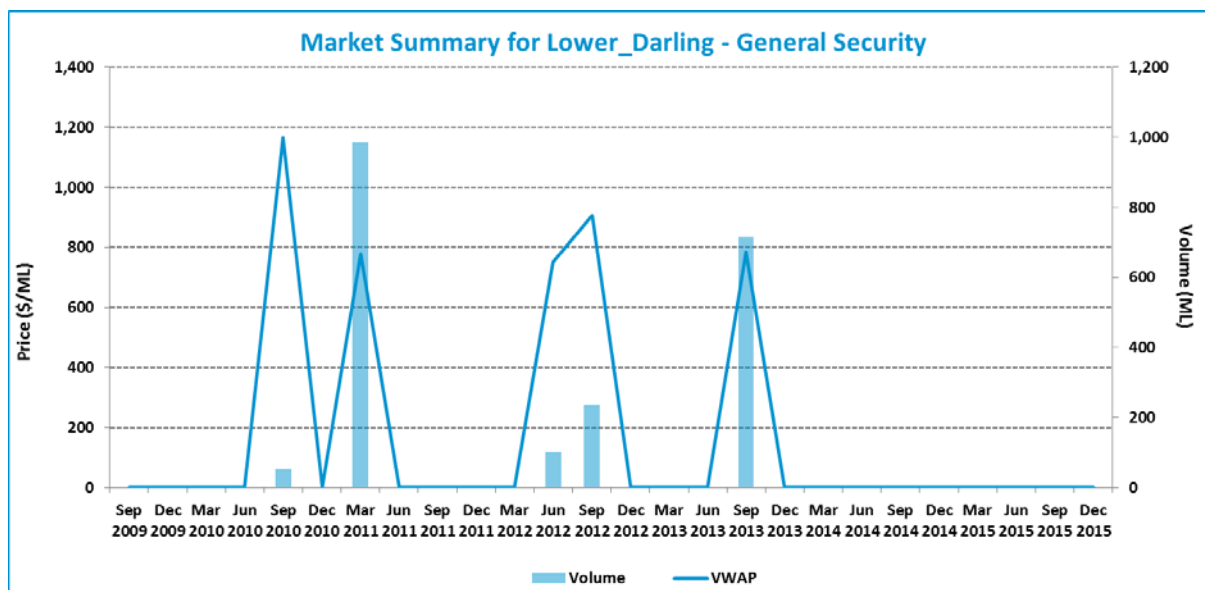


Table 16: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
-	-	-	-	-	-	-	-	-	-	No listings

Data Sources: NSW Water Register

(<http://registers.water.nsw.gov.au/wma/WaterShareIntraWSLocSearch.jsp?selectedRegister=WaterShare>,

<http://www.water.nsw.gov.au/water-licensing/registers>), National Water Exchange (www.waterexchange.com.au), Waterfind

(www.waterfind.com.au), H2OX (www.h2ox.com)

2.16 Lower Darling: High Security

Figure 32: Entitlement market prices and volumes

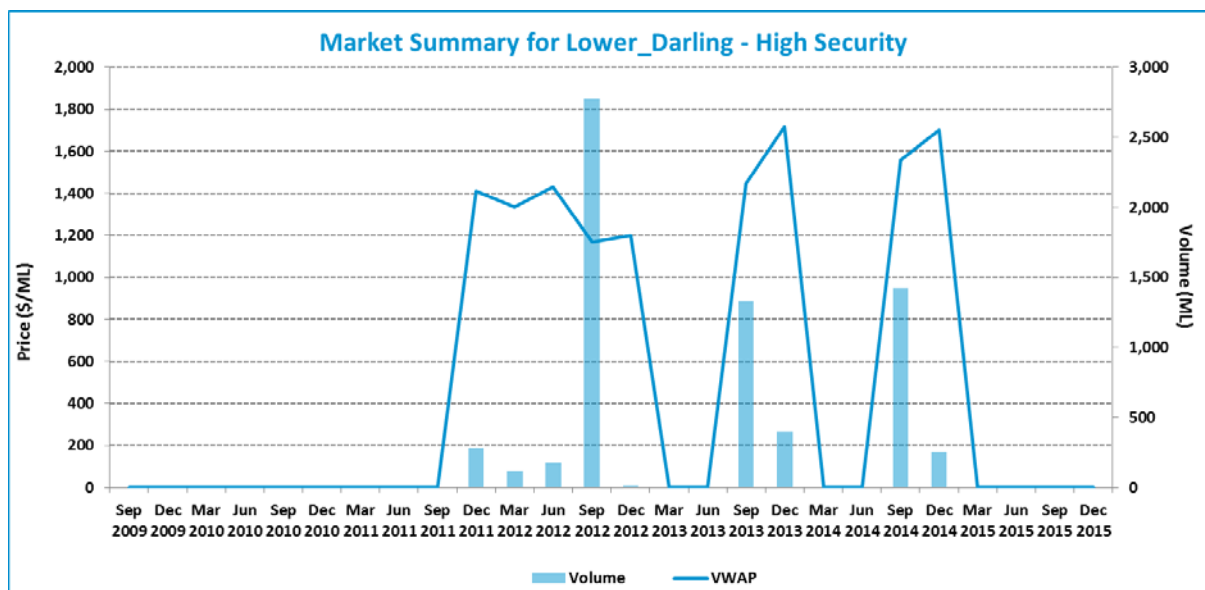


Table 17: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
-	-	-	-	-	-	-	-	-	-	No listings

Data Sources: NSW Water Register

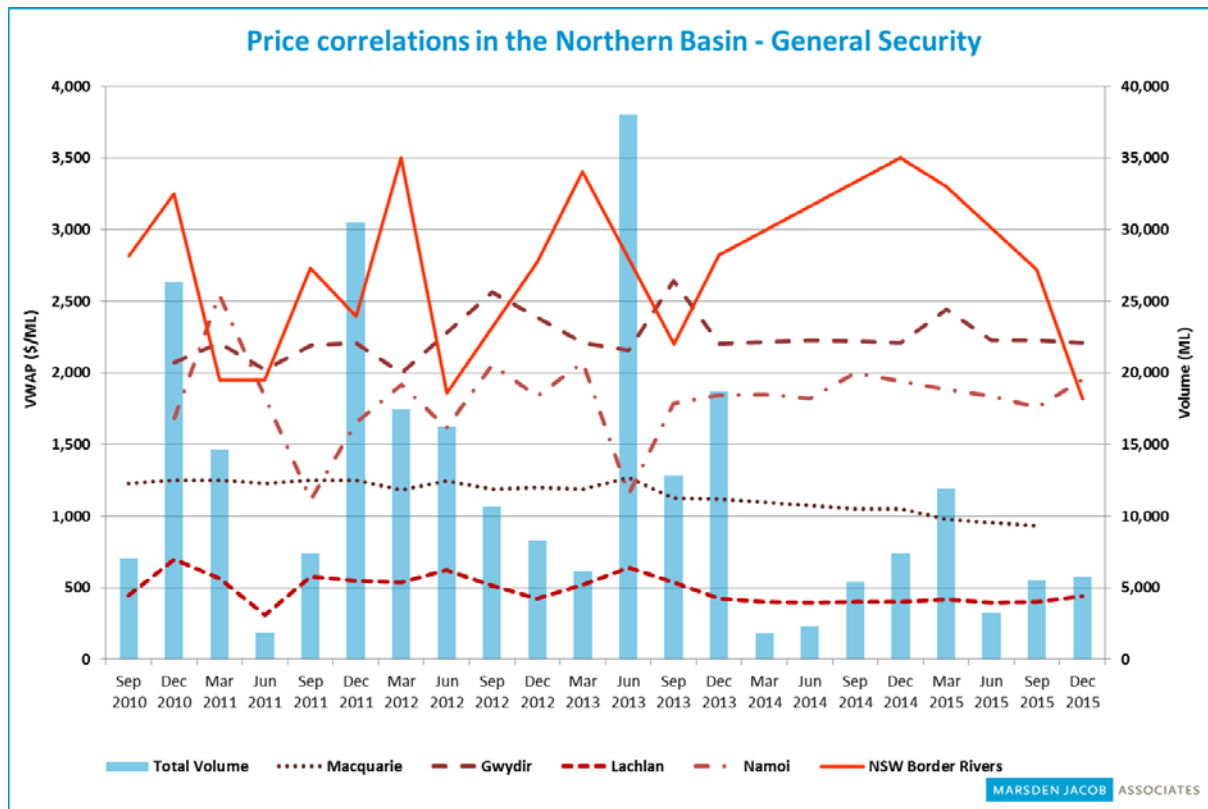
(<http://registers.water.nsw.gov.au/wma/WaterShareIntraWSLocSearch.jsp?selectedRegister=WaterShare>,

<http://www.water.nsw.gov.au/water-licensing/registers>), National Water Exchange (www.waterexchange.com.au), Waterfind

(www.waterfind.com.au), H2OX (www.h2ox.com)

3. Northern Murray-Darling Basin

Figure 33: Price correlation in the Northern Basin: General Security



Source: Marsden Jacob analysis, 2016

Note: Zero values have been interpolated in this chart so it differs from the region and entitlement specific charts.

3.1 Macquarie: General Security

Figure 34: Entitlement market prices and volumes

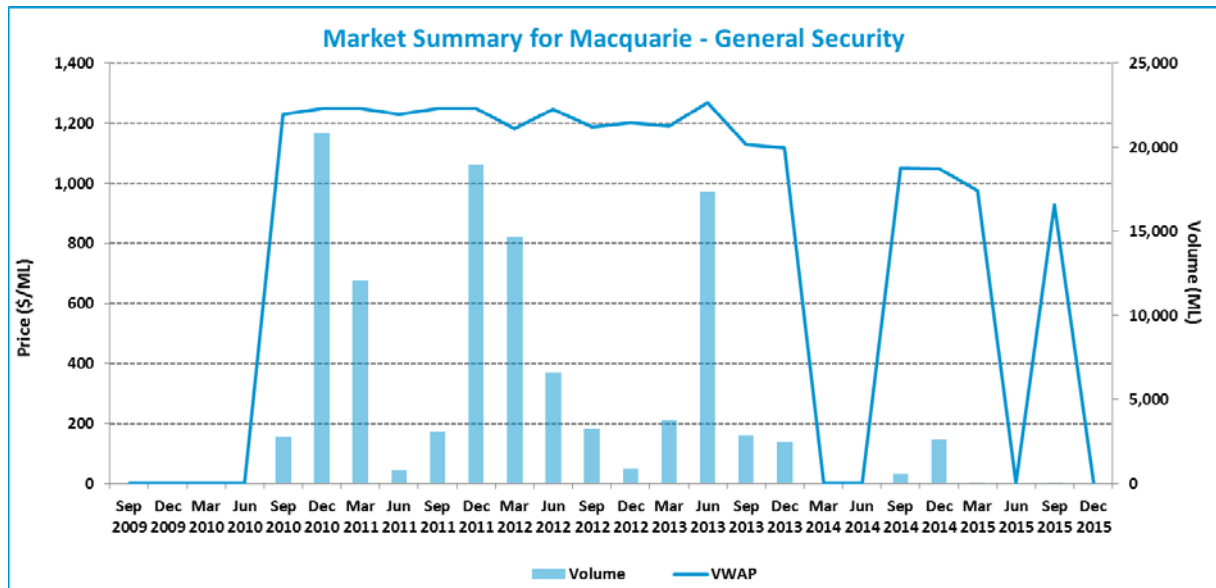


Table 18: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
-	-	929	-	-	-	-	-	-	-	1,000 – 1,100

Data Sources: NSW Water Register

(<http://registers.water.nsw.gov.au/wma/WaterShareIntraWSLocSearch.jsp?selectedRegister=WaterShare>, <http://www.water.nsw.gov.au/water-licensing/registers>), Waterfind (www.waterfind.com.au)

3.2 Namoi: General Security

Figure 35: Entitlement market prices and volumes

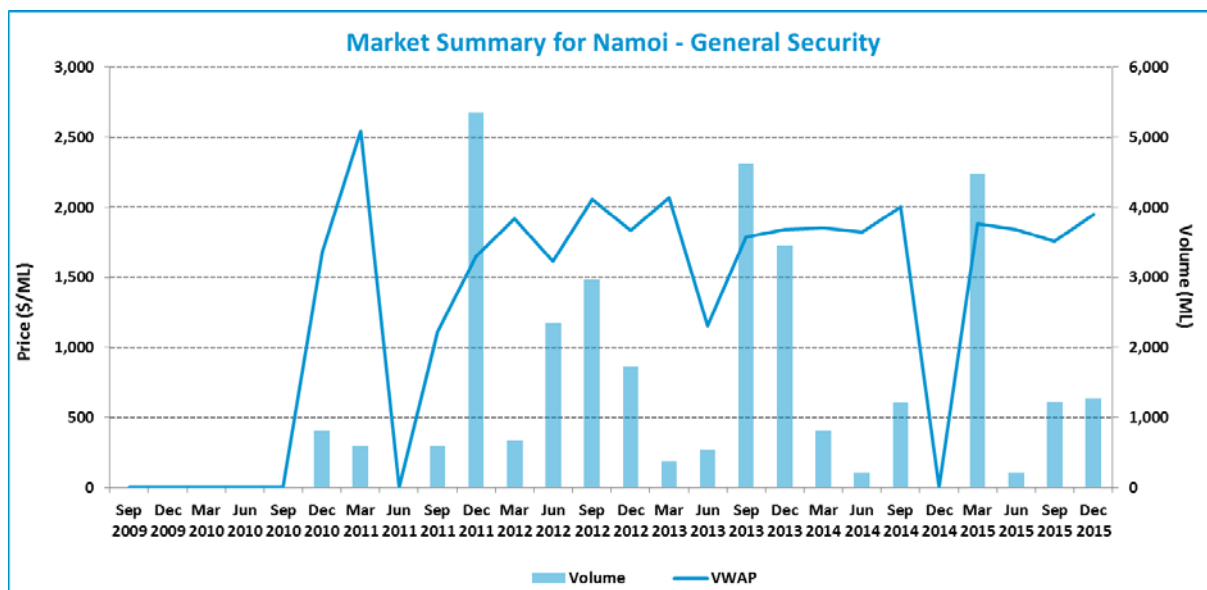


Table 19: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
-	1,950	1,856	-	-	-	-	-	1,266	1	No listings

Data Sources: NSW Water Register

(<http://registers.water.nsw.gov.au/wma/WaterShareIntraWSLocSearch.jsp?selectedRegister=WaterShare>, <http://www.water.nsw.gov.au/water-licensing/registers>), Waterfind (www.waterfind.com.au)

3.3 Gwydir: General Security

Figure 36: Entitlement market prices and volumes

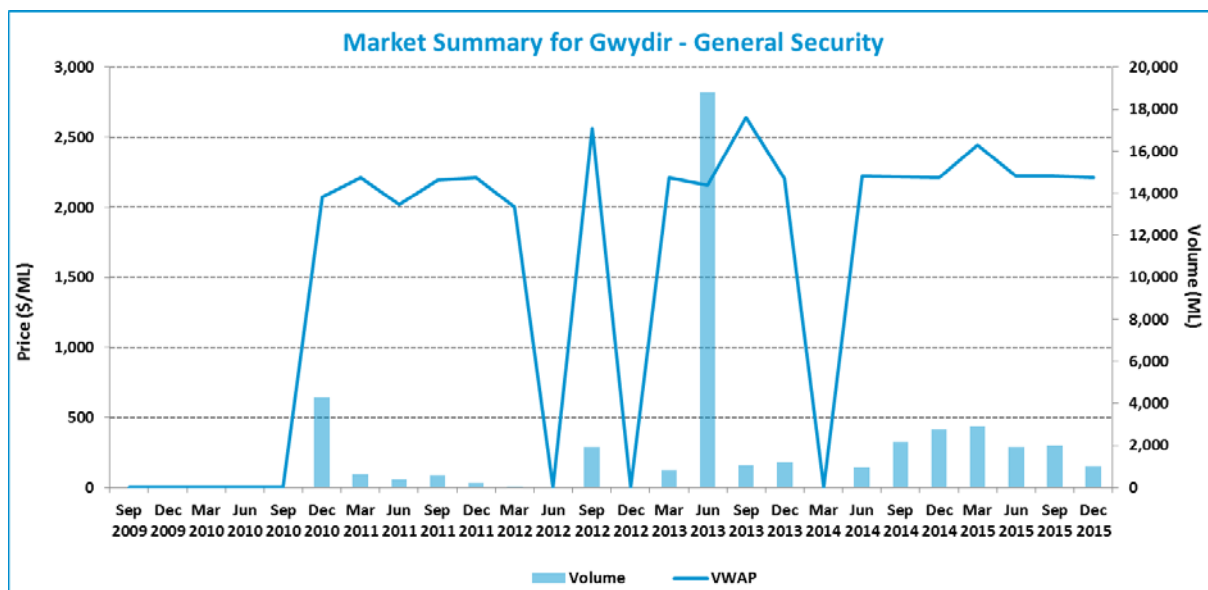
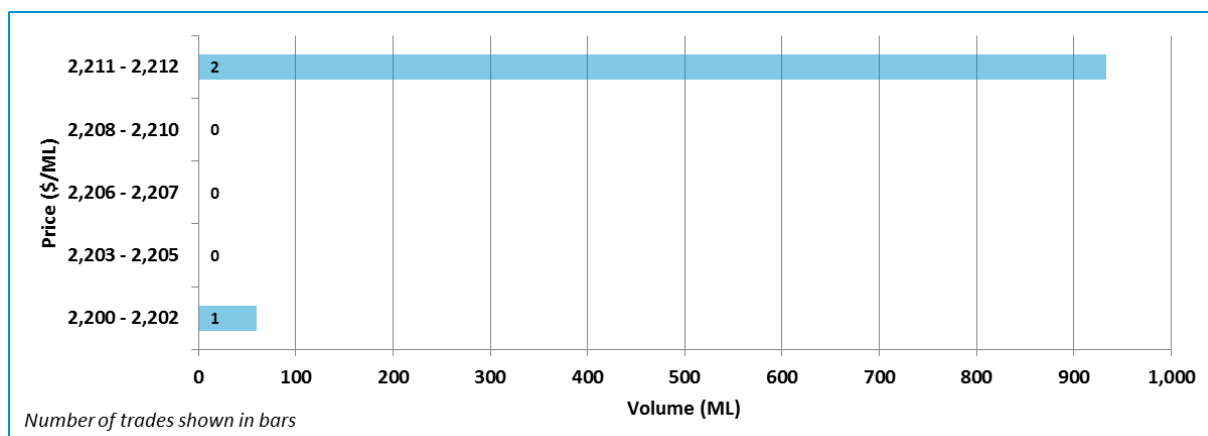


Table 20: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
2,203	2,211	2,221	2,206	2,212	2,212	2,208	2,212	993	3	2,100 – 2,200

Figure 37: Entitlement market price range by volume



Data Sources: NSW Water Register

(<http://registers.water.nsw.gov.au/wma/WaterShareIntraWSLocSearch.jsp?selectedRegister=WaterShare>, <http://www.water.nsw.gov.au/water-licensing/registers>), Waterfind (www.waterfind.com.au)

3.4 NSW Border Rivers: General Security

Figure 38: Entitlement market prices and volumes

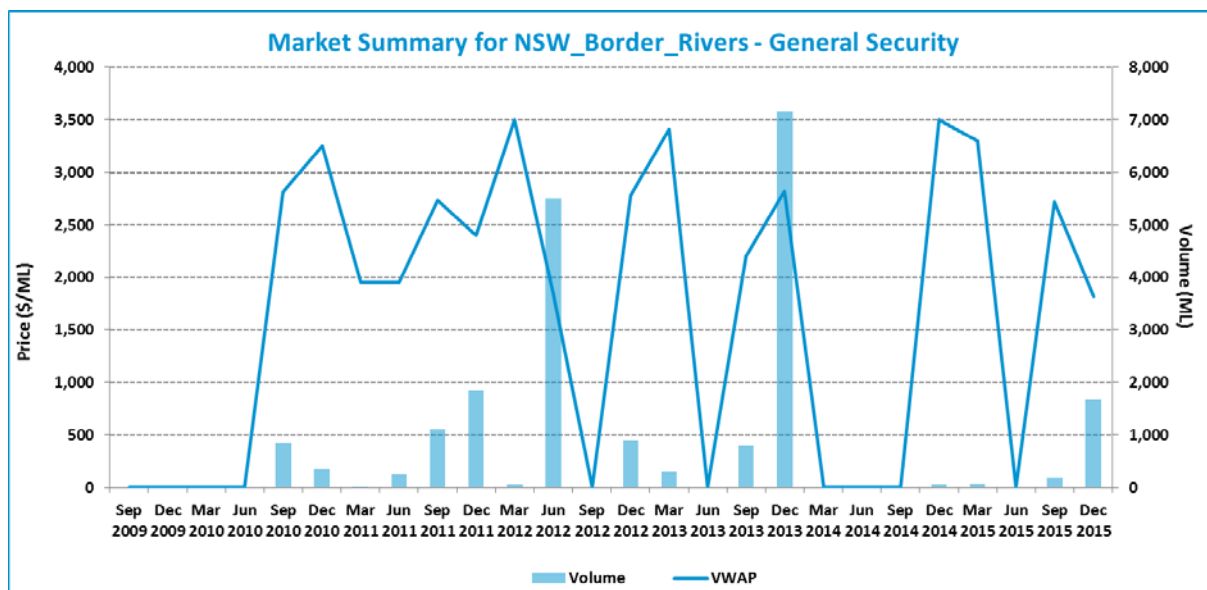
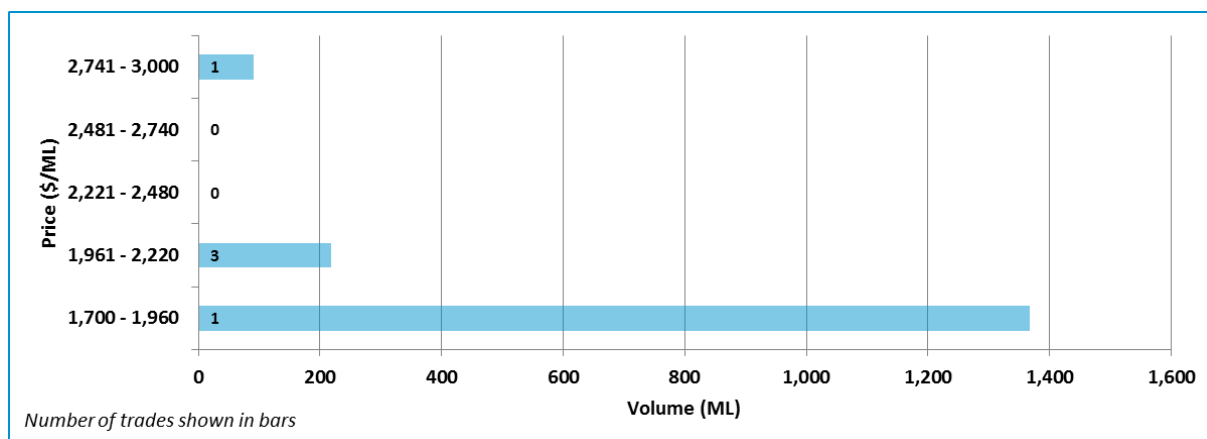


Table 21: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
2,056	1,820	1,909	2,000	2,200	2,167	2,213	-	1,677	5	2,000 – 3,300

Figure 39: Entitlement market price range by volume



Data Sources: NSW Water Register

(<http://registers.water.nsw.gov.au/wma/WaterShareIntraWSLocSearch.jsp?selectedRegister=WaterShare>, <http://www.water.nsw.gov.au/water-licensing/registers>), Waterfind (www.waterfind.com.au)

3.5 Barwon Darling: Unregulated

Figure 40: Entitlement market prices and volumes

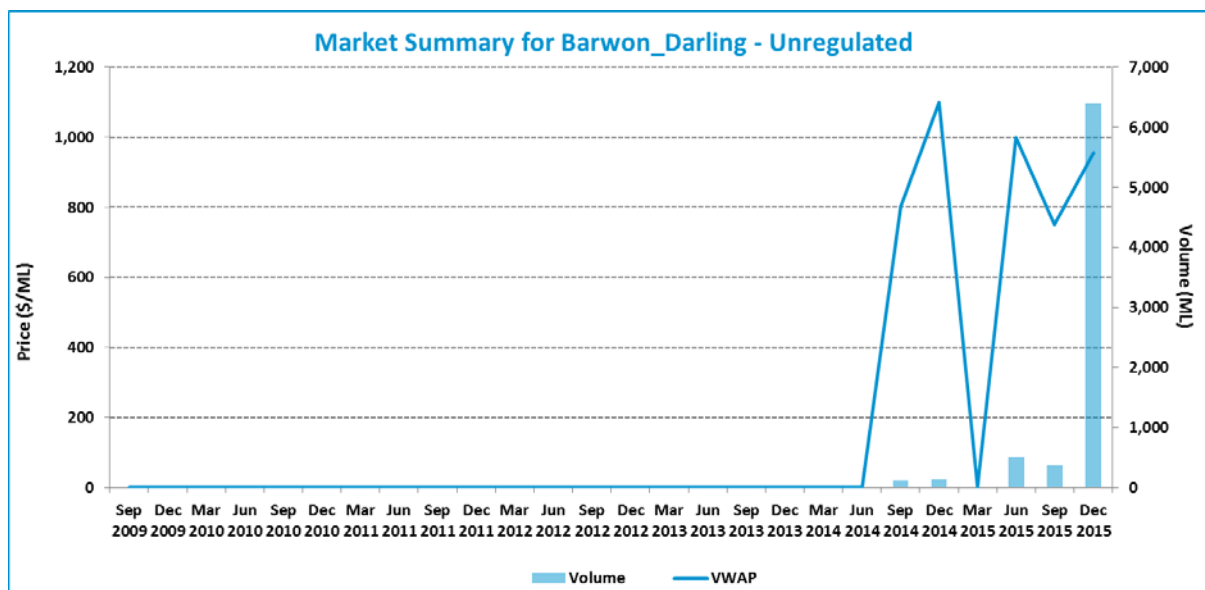
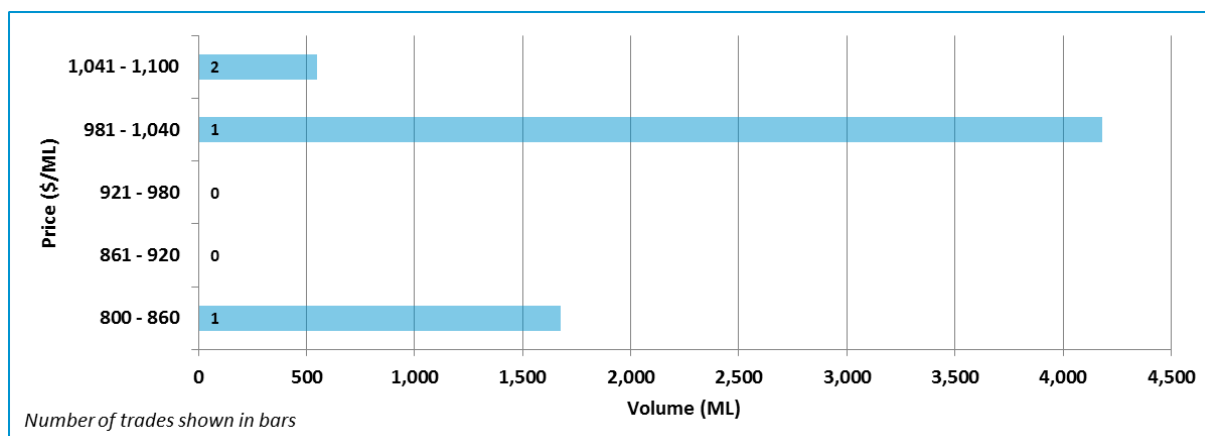


Table 22: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
1,089	955	944	950	1,085	1,040	995	-	6,404	4	No listings

Figure 41: Entitlement market price range by volume



Data Sources: NSW Water Register

(<http://registers.water.nsw.gov.au/wma/WaterShareIntraWSLocSearch.jsp?selectedRegister=WaterShare>, <http://www.water.nsw.gov.au/water-licensing/registers>), Waterfind (www.waterfind.com.au)

3.6 Lachlan: General Security

Figure 42: Entitlement market prices and volumes

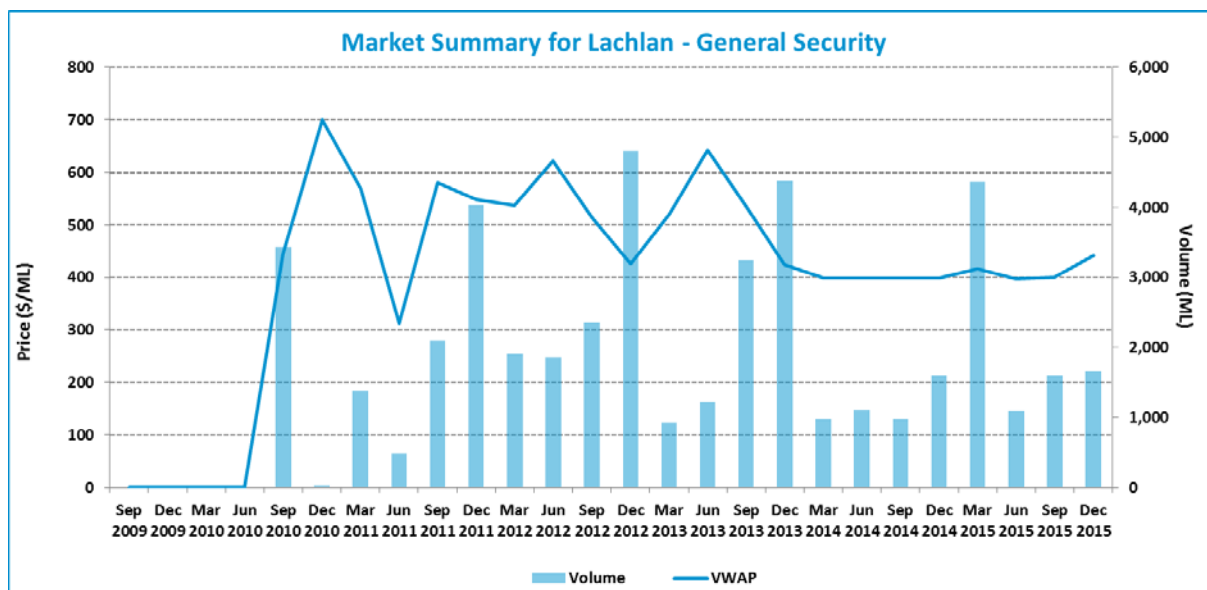
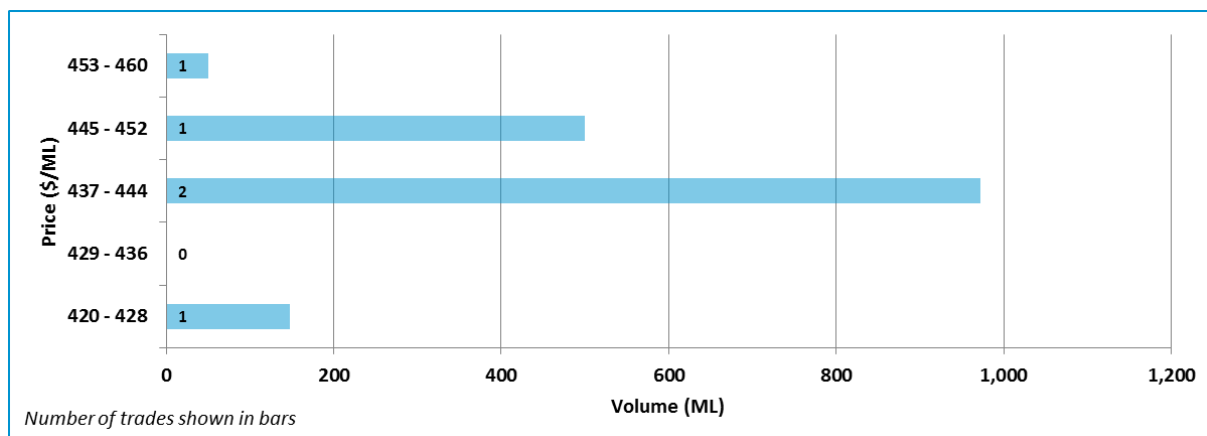


Table 23: Entitlement market prices and volumes

Volume weighted average price (\$/ML)			December 2015 Quarter (in \$/ML)					Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades	Market Spot Price (\$/ML)
Month of Dec 2015	Dec 2015 Quarter	YTD	25 th percentile	75 th percentile	Median	Mean	Mode			
441	442	421	440	450	440	442	440	1,669	5	440 – 500

Figure 43: Entitlement market price range by volume



Data Sources: NSW Water Register

(<http://registers.water.nsw.gov.au/wma/WaterShareIntraWSLocSearch.jsp?selectedRegister=WaterShare>, <http://www.water.nsw.gov.au/water-licensing/registers>), Waterfind (www.waterfind.com.au)

3.7 Queensland

The markets in Queensland are very thin, with only limited trading of entitlements occurring.

Queensland does not maintain a publicly available trade register. Information on entitlement trades is provided on an aggregated monthly basis.

Table 24: Entitlement market prices and volumes

Resource Operation Plan	Water Supply Scheme / Water Management Area	Type of Entitlement	Volume weighted average price (\$/ML)			Dec 2015 Quarter Volume (ML)	Dec 2015 Quarter # of trades
			Month of Dec 2015	Dec 2015 Quarter	YTD \$/ML		
QLD Border Rivers	Border Rivers/ Macintyre Brook	Supplemented	278	281	437	4,721	4
QLD Border Rivers	Border Rivers	Unsupplemented	No trade	1,800	1,800	1,347	2
Condamine-Balonne	St. George / Upper Condamine	Supplemented	No trade	2,150	2,457	14	2
Condamine-Balonne	Condamine Balonne / Lower Balonne / Upper Condamine	Unsupplemented	No trade	1,513	1,501	2,540	2
Condamine-Balonne	Upper Condamine	Alluvium Ground-water ^a	-	-	-	-	-
Condamine-Balonne	Lower Balonne	Overland Flow	-	-	-	-	-

Note: a. Data is only available up to September 2015 on the QLD Government website: https://www.dnrm.qld.gov.au/_data/assets/pdf_file/0008/293579/central-condamine-alluvium-water-licence-relocation-reports-to-30-june-2015.pdf (accessed 20 January 2016)

Data Sources: Queensland Business and industry portal (<https://www.business.qld.gov.au/industry/water/managing-accessing/markets-trading/market-information>)

Appendix 1: Regions and water sources

Table 25: Water Sources (Southern MDB)

Region	Water Source
SA Murray	River Murray Prescribed Water Course (Class 3a)
VIC Murray above Barmah Choke	6 Vic Murray Dart to Barmah
Vic Murray below Barmah Choke	7 Vic Murray Barmah to SA 6B Lower Broken Creek
Goulburn	1A Greater Goulburn 1B Boort 3 Lower Goulburn
Campaspe	4A Campaspe Eppalock to WWC 4C Lower Campaspe
Loddon	5A Loddon – Coliban Channel to Lower Weir Pool (now 5A Loddon - CC/Tull to LWP) 5B Bullarook
NSW Murray	New South Wales Murray Regulated River Water Source
Murrumbidgee	Murrumbidgee Regulated River Water Source
Lower Darling	Lower Darling Regulated River Water Source

Table 26: Water Sources (Northern MDB)

Region	Entitlement Type
Macquarie	Macquarie and Cudgegong Regulated Rivers Water Source
Namoi	Lower Namoi Regulated River Water Source Upper Namoi Regulated River Water Source
Gwydir	Gwydir Regulated River Water Source
NSW Border Rivers	Border Rivers Regulated River Water Source
Barwon Darling	Barwon Darling Unregulated River Water Source
Lachlan	Lachlan Regulated River Water Source