



WATER REFORM

Transparency in the NSW water market

Discussion paper

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Contents

Introduction	1
Project outline	2
Background	3
Water markets in NSW	3
Concerns about water markets.....	3
Commonwealth inquiry into water markets.....	4
Supporting the ACCC’s review and future reforms	4
Victorian Government consultation on transparency	4
NSW commitment to water information transparency	5
Water Reform Action Plan.....	5
Development of water information tools	5
Improved trade reporting.....	5
Current water market information	6
Registers	6
Water information tools.....	6
Improving water market transparency	8
How can we improve our existing portals?.....	8
What additional information do you need?	8
What additional market analytics would be useful?.....	9
Should we bring all this information together?	9
Next steps	10
Appendix 1 Glossary of some water market terms	11
Appendix 2 Roles and responsibilities	13
New South Wales.....	13
Federal.....	13

Introduction

Transparency in the water market provides certainty and confidence to water users that markets are operating effectively and in accordance with water sharing rules.

As part of our Water Reform Action Plan, NSW sought your feedback on water information transparency in 2018. We heard that there was a need to improve transparency of water information to build confidence and support a more compliant culture among water users. We also heard that there is a need to simplify and re-organise existing information to make it more accessible.

In response, we have undertaken significant work to improve access and transparency of water market information through development of Water Information Dashboards and the WaterInsights Portal.

Water markets are continuously evolving. In recent years, drought, high water prices, strong competition for water and shifting demand dynamics have all contributed to increased stakeholder concerns about the transparency and function of water markets. To address this, some stakeholders have called for increased levels of market transparency, including publishing names of water holders and traders.

There is a range of water information already available to the public in NSW, including water holder names. However, we recognise that it is not all available in one place and is not straightforward to access.

We are therefore now seeking your current feedback on our existing water registers and new water information tools. We would like to understand how useful these are, what information we should be sharing and how we can better present the information that we have in order to both address community concerns and meet the needs of our water users and market participants.

Project outline

The purpose of this consultation, and any action that will follow, is for the NSW Government to:

- improve understanding of water markets (including trade products, prices and rules)
- improve participation in water markets; and
- increase confidence in the market, conduct of participants, and how the market is managed.

To achieve this, we need to ensure we are providing useful information that best suits the needs of water users and market participants. This means information that is timely, accurate, relevant, and in an appropriate format.

We are consulting with all water users, water market participants and the community to seek feedback on our water registers and water information tools, including:

- [NSW Water Register](#)
- [NSW Water Access Licence \(WAL\) Register](#)
- [Environmental Water Register](#)
- [Water Information Dashboards](#)
- [WaterInsights Portal](#)

We would like to understand:

1. How useful these platforms are and how we can improve them?
2. What additional information held by the NSW Government should be made publicly available?
3. What new information should be collected and published?
4. What additional water market analytics would be useful?

Consultation will include:

- 'Have your say' [online public survey](#)
- Two public webinar sessions hosted by the NSW Government and WaterNSW
- Local print and radio advertising

Background

Water markets in NSW

Water markets are a fundamental tool for irrigated agricultural producers in NSW and are an increasingly important tool for regional urban water suppliers, environmental water managers and investors. They are critical to driving improvements in productivity and efficiency in communities and the NSW economy. NSW has a thriving trade market that has grown significantly over time, with more than 12,000 trades conducted in NSW in the last water year alone.

The NSW Government supports an open, fair, efficient and sustainable water market characterised by integrity, transparency and accountability. We are committed to ensuring our water markets facilitate economic and social benefits to people, businesses, communities and industries, while also protecting our river systems and the environment.

Concerns about water markets

Ongoing drought conditions resulting in reduced allocations and high-water prices have led to increased scrutiny of water markets by water users and communities. There are concerns that the market is not working to its full efficiency and can be distorted due to lack of transparency.

Specifically, media and stakeholders have raised concerns about:

- The potential for market manipulation, particularly by large water holders
- The conduct of market intermediaries
- The potential impact of non-land holding licence holders ('speculators') and 'zero-share' licence holders on market activity and prices
- High water prices in the southern Murray-Darling Basin (MDB)
- Inaccurate trade price reporting
- Multiple, fragmented and incomplete market information that is difficult to access

Several factors have contributed to these concerns, including:

- Unprecedented dry and warm conditions resulting in low water availability. The Southern MDB saw the lowest total allocations to licences since the Millennium Drought
- Sustained high water prices, including record breaking water allocation prices in the Southern MDB
- Changing demand patterns, with large development of horticulture creating increasing competition for available water as well as delivery of water through physical constraints
- Changing market behaviour with water users increasingly accessing water through the temporary allocation market rather than purchasing permanent entitlement
- Increasing use of secondary market products such as leases, forwards and carryover parking
- Emerging market participants such as water funds
- Media reporting on the influence of speculators and foreign investors
- Media allegations of misconduct by water users and mismanagement by agencies

Some stakeholders believe that these concerns can be addressed by increased transparency of market information, in particular by making more details publicly available about water holders, especially large water holders and frequent water traders.

Federal inquiry into water markets

In response to stakeholder concerns, the Australian Competition and Consumer Commission (ACCC) is currently reviewing water markets across the Murray-Darling Basin and exploring options to improve their operation, transparency, regulation, competitiveness and efficiency. An [interim report](#) was released by the ACCC in July 2020, which identified a range of issues.

Regarding water market information, the ACCC noted deficiencies across the Basin in accessing reliable, timely and consistent market data. These information failures can favour better-resourced traders or even create the potential for market manipulation by larger market participants. The ACCC are exploring a range of potential solutions including harmonising state registers, creating a single exchange platform, or creating a single national information portal or water register for water and trade information.

Supporting the ACCC's review and future reforms

Since 2019, NSW has been providing information to help the ACCC in their review of water markets. We provided a [high-level submission](#) in response to the ACCC's Interim Report in August 2020. We are now evaluating the options in the ACCC Interim Report in more detail and are consulting with key stakeholders to understand their views.

To support these considerations, we engaged Aither, a consultancy firm, to undertake an [independent review](#) of the options put forward in the Interim Report. This information will help inform ongoing discussions with the ACCC and stakeholders, as well as policy positions the NSW Government may adopt in response to the inquiry.

NSW anticipates that the ACCC will recommend reforms that will have significant implications for our water information registers and platforms and, in the short to medium term, for the trade market.

Victorian Government consultation on transparency

The Victorian Government has also been consulting with the community on increasing transparency in the water market. The Victorian Department of Environment, Land, Water and Planning held an online survey between April and June 2020. The survey asked for information about what details of water market activity they would be comfortable sharing to achieve a good balance between privacy and transparency.

The responses to the survey indicated a general desire for greater transparency but not at the expense of irrigators privacy. The results show level of comfort with providing more insights into water markets as long as it didn't include personal information.

Since the Survey, the Victorian Government has commenced work on changes to market transparency, including a new water webpage providing information on large water market participants, legislative amendments and collecting 'reason for trade' data.

The Victorian Government's website gives more information on the [consultation and its outcomes](#).

NSW commitment to water information transparency

Water Reform Action Plan

In 2017, NSW responded to stakeholder concerns, including an [independent investigation](#) into water management and compliance¹, by implementing the [Water Reform Action Plan](#). A primary commitment of the Plan was to ensure transparency in how we share, allocate and manage water. As part of this NSW consulted with a wide range of stakeholder across the state on developing a single, comprehensive public register (see [Consultation Paper](#)). Stakeholders supported accurate and timely information located in one place, and the need to simplify and reorganise existing information to make it more accessible.

Stakeholders generally did not support making all licence holder information publicly available. Whilst some participants believed that full disclosure is necessary to build market confidence, many were concerned that releasing commercially sensitive information could leave the market open to manipulation and coercion (Read about [what we heard](#) from stakeholders).

Development of water information tools

In response to what we heard, NSW developed new water information tools, including the Water Information Dashboards and the Water Insights Portal. Further information on our water information registers and tools is provided later.

Improved trade reporting

To address concerns about inaccurate price reporting, we have also updated temporary trade application forms and systems to capture additional information on the price, type and purpose of trades, with increased requirements around zero-dollar and low value trade price reporting. Information to identify trades involving water brokers or environmental water holders is now also captured. It will help both water managers and market participants to better understand:

- The accuracy of prices being reported, giving stakeholders confidence that accurate market information is being provided, with less likelihood of distortion of sales prices.
- The types of trades being undertaken
- The market prices of different types of trades
- The type and extent of dealings related to secondary market products
- The role and practices of water brokers in trades
- The validity and authority of all parties involved in the trade

¹ Department of Planning, Industry and Environment 2017, Independent investigation into NSW water management and compliance – final report, industry.nsw.gov.au/data/assets/pdf_file/0019/131905/Matthews-final-report-NSW-water-management-and-compliance.pdf

Current water market information

NSW publishes water information to support our water users and market participants to make informed decisions. The information is available through our water registers and our water information tools.

Registers

All information in relation to licences and trade, subject to NSW privacy legislation, is available on the following registers:

- The **NSW Water Register** provides free information about water licences, water use and works approvals, trade, licence dealings (e.g. subdivision or consolidation of a licence), environmental water holdings, and other matters related to water entitlement in NSW. The NSW Water Register is a legislated instrument administered by WaterNSW.
- The **WAL Register** provides additional detailed information not available on the NSW Water Register, specifically the name of the licence holder. To search the WAL Register the relevant WAL number is required, with each search incurring a fee of \$15. The WAL Register is a legislated instrument administered by NSW Land Registry Services.
- The **Environmental Water Register** provides detailed information about environmental water holders and their trades. It is complemented by a range of tools to help understand environmental licences and shares in each water source. The Environmental Water Register was developed to meet Basin Plan requirements and is administered by the Water division of the Department of Planning, Industry and Environment.

Water information tools

NSW has also developed tools to help market participants easily access, understand and analyse water and trade information. The tools address feedback received in the Water Reform Action Plan consultation process.

The **WaterInsights Portal** consolidates all NSW water information into a single, user-friendly platform. It provides real-time data on storage levels, allocations announcements, and water usage rules along with 30 years of historical data. It is also being developed to include trade data. Improved functionality and new information products are being progressively introduced which will incorporate cyclic feedback from ongoing stakeholder consultation.

The **Water Information Dashboards** provide water users with an easy way to understand the information that is contained in the water register. Users can view data by water source, licence category and trade types and can gain an understanding of trends in usage, trade and prices. Information is updated weekly. An explanation of each Dashboard is provided in Table 1

Table 1. Summary of NSW Water Information Dashboards

Dashboard	Description
Trade dashboard	Provides information on allocation and entitlement trade volumes and prices dating back to 2004 and updated weekly. Data can be filtered by region, water type, water source or zone and licence category
Allocations dashboard	Provides information on water availability announcements
Usage dashboard	Provides information on current water usage (the volume of measured take) and water availability in each water source for each licence category
Utilisation dashboard	Provides information on water utilisation (the volume of take as a proportion of the share component) and activation rates
Share component dashboard	Show the total share components for each licence category in each water source
Annual environmental shares summary dashboard	Provides a summary of environmental water shares held across NSW and within each water source for each water year and compares environmental water shares to total shares
Held Environmental Water (HEW) dashboard	Shows environmental water that is held as part of a licensed volumetric entitlement for environmental use
Planned Environmental Water (PEW) dashboard	Provides information on water committed for ecosystem health or other environmental purposes
Accounting Rules Summary dashboard	Provides a summary of the water accounting rules for each regulated river source in NSW

Improving water market transparency

NSW has led recent measures to improve water market transparency. We currently collect and publish more water market information than the other Basin States. However, we recognise that this information is not all available in one place and is not straightforward to access. We also understand concerns raised by stakeholders and the ACCC, and we acknowledge that there is scope to improve our systems in order to improve understanding, participation and confidence in water markets.

During recent stakeholder consultation we have heard that our water users want the opportunity to tell us what information is most useful to help them participate in the water market. That is why we are seeking your feedback before we make further changes to our systems.

How can we improve our existing portals?

We want to ensure that the registers and tools we have developed are meeting the needs of our water users and market participants. Our [survey](#) is seeking your feedback to understand how often you use these products, how useful they are to you, and what we need to do to ensure they are meeting your information needs.

What additional information do you need?

We want to ensure that we are providing information that is appropriate and relevant to meet the needs of our water users and market participants. If there is information available that would address the concerns raised by stakeholders and the community about the transparency of the water market, we will endeavour to make it accessible.

For example, our trade forms now collect additional information on the price, type and purpose, of trades. Our survey asks whether you want this information published on the NSW Water Register.

We would also like to understand whether there is sufficient personal information related to water holders already available, or whether we need to amend legislation to publish additional personal information. For example, the name of a licence holder can be obtained via a search of the WAL register, but requires a fee and for the licence number to be known. We would like to understand whether it is useful and necessary to make this information freely available. Our survey therefore seeks your feedback on publishing additional personal information on the NSW Water Register, such as the name, address or geographical location of works relating to the water access licence.

We also want to understand whether it would be useful to collect and publish other market-related information to support your decisions. We have heard that information on crops statistics and the intended use of traded water can be beneficially to operating in the water markets, and so we are seeking your feedback to collect and publish this information.

However, we recognise that increasing water market transparency, needs to be carefully balanced with managing the commercial privacy of water holders. One way of addressing this is to use generic identifiers for key users' groups, rather than personal information. For example, rather than the holder's name, the NSW Water Register could include information on the type of licence, such as whether the licence is an environmental water holder, government-associated licence, or irrigation corporation licence.

Another way of addressing this is to focus on increasing information related to water users who own and trade large volumes of water only, given that concerns about manipulation and distortion of markets and asymmetric market power are largely related to these types of licences. A threshold volume of entitlement could be established whereby additional information is published for water holders that exceed that threshold. We'd like to understand whether this would address concerns about transparency and if it is appropriate to share this information publicly.

It is important to consider the equity and impact of having different information requirements for different water users within NSW, as well as between NSW licence holders and those in other states. Information asymmetries in markets may have the potential to create negative impacts.

What additional market analytics would be useful?

We want to ensure that the information we provide helps water users understand the market, helps address key market concerns, and ultimately improves market confidence. To achieve this, NSW could provide additional analytics on the Water Information Dashboards or the WaterInsights Portal.

For example, aggregated data for key user groups, such as zero-share licence holders, environmental water holders and non-work approval holders, could be provided in order to improve understanding of their trading patterns and potential influence on the water market.

Similarly, trade price information could be categorised by trade purpose to improve the understanding of market prices for different trade products, and the number of zero-dollar or low-value trades reported.

NSW is seeking your advice to understand whether this, or other possible analytics, would be beneficial to support your decisions as well as addressing wider concerns about market transparency.

Should we bring all this information together?

The NSW Government recognises that there are multiple information sources available across the Murray-Darling Basin, which can make it difficult and time consuming for water users to find what they need to know to make informed decisions. We would like to hear your opinion on the value of doing this, and also how you think this could best be achieved. We want to ensure that any changes to our information sources make it easier for you to understand and participate in the market.

Next steps

This consultation paper is to start a conversation the NSW Government is having with the community on reforms to water trade transparency in NSW.

Community submissions will be a critical element to inform the best options for transparency measures in NSW.

A summary of the feedback we receive as part of this consultation process will be released by the Government following the close of the consultation period.

Commitment to ongoing consultation and ensuring the community understands the way water is managed in NSW.

If you have any questions, email water.relations@dpie.nsw.gov.au.

Appendix 1 Glossary of some water market terms²

Asymmetric information is when information concerning a transaction is unequally shared between the two parties to the transaction. Information asymmetries are a common type of market failure. However, information asymmetries typically relate to the quality or characteristic information of the product being transacted. Information asymmetries, like other market failures, cause a misallocation of resources and therefore create social losses.

Exchange (market, water or stock) can be defined as a physical or digital place where trading is carried out. Exchanges may have many roles in lowering transaction costs, including improving market transparency, standardising products, facilitating regulation of products or enforcing contracts. Exchanges are typically neutral intermediaries unlike brokers who usually work actively with buyers, or sellers, or both.

Forwards allow irrigators to lock in an allocation price for the following year(s), guaranteeing a set volume of water in future years.

Market depth refers to being able to see the amount of a product available and having real time information on buy and sell offers.

Market distortion can be defined by any persistent features of the economy that result in prices failing to reflect their underlying value. In a competitive economy with no market failure, markets will naturally tend towards their underlying value. Market distortions can be caused by a number of sources, including government policy such as taxes or regulation, or market failures such as externalities or monopolies. Market distortions represent a social problem as they lead to misallocations of resources throughout the economy and create social losses.

Market manipulation can be defined as ‘the act of artificially inflating or deflating the price of an [asset] or otherwise influencing the behaviour of the market for personal gain.’ Market manipulation can include the use of market power, and also include a range of other behaviours that can affect the operation of a market or the information available to markets. For instance, issuing many small trades for a particular price may affect price reporting, which has the potential to advantage the market manipulator.

Market power can be defined as ‘the ability of an economic agent... to affect the equilibrium price in a market. Market power derives from being large relative to the market... A monopoly [cartel or oligopoly] supplier of a product has market power: they can set the price that maximises profit. Similar considerations apply to market power on the demand side of the market. There are several determinants of market power in addition to size.’ In the context of water markets, an entity or group of entities would need to represent a large supplier of water to the market or be the main purchaser of water from markets. Other sources of market power, such as barriers to entry or product differentiation, would be difficult to apply in the context of a publicly operated market.

Market transparency can be defined as the degree to which information is available on market conditions, especially on the price, quantity available, and product characteristics. Market transparency is not commonly used or authoritatively defined as an economic term, and interpretations could vary. According to Wikipedia, ‘A market is transparent if much is known by many about what products and services or capital assets are available, market depth (quantity available), what price, and where’. Market transparency could be considered to assist in the operation of competitive markets. Increasing market transparency could have the effect of increasing or decreasing price, and of increasing or decreasing the quantity of trade. The market effect is expected in the short term but may also persist.

² Source: https://s3.ap-southeast-2.amazonaws.com/hdp.au.prod.app.vic-engage.files/9015/6939/2970/Options_paper-Water_market_transparency.pdf

Speculation can be defined as ‘activity aimed at profiting from expected changes in the prices of goods, assets or currencies, with most transactions capable of being interpreted as speculative’, however, the term may be more reserved for use where expected capital gains provide a major motive. Other definitions suggest speculation can be defined as ‘the purchase of an asset (a commodity, goods, or real estate) with the hope that it will become more valuable in the near future’ ; or the ‘act of conducting a financial transaction that has substantial risk of losing value but also holds the expectation of a significant gain or other major value’ . Some definitions suggest speculators may buy goods or assets they do not actually want but whose prices they expect to rise. Speculation is not illegal nor constitutes misconduct. Speculative behaviour exists in all markets and is not necessarily contained to any particular type of market participant.

Appendix 2 Roles and responsibilities

Regulation of the water market is covered by a number of organisations in NSW and the Federal Governments. The roles of each are summarised below.

New South Wales

Department of Planning, Industry and Environment – Water

- Responsible for surface and groundwater management including ensuring water security for NSW
- Ensures equitable sharing of surface and groundwater resources and that water entitlements and allocations are secure and tradeable
- Manages NSW's water resources through planning, policy and regulation
- Leads negotiations with the Commonwealth, including the MDBA and other jurisdictions

Natural Resources Access Regulator (NRAR)

- Responsible for compliance and enforcement of NSW water law with powers for investigations and other strategies as part of providing quality regulation
- Determines when to commence prosecutions or uses other enforcement tools in the event of non compliance
- Other functions include:
 - preparing policies and procedures relating to the enforcement powers under natural resources management legislation
 - advising and reporting to the Minister on matters relating to administration of natural resources management legislation
 - publishing details of convictions in prosecutions

WaterNSW

- The state's bulk water supplier and operational manager of surface water and groundwater resources
- Develops and operates infrastructure solutions for water supply security and reliability
- Conducts customer facing functions such as the delivery of water and billing
- Operates and maintains the NSW Water Register

Department of Planning, Industry and Environment – Environment, Energy and Science

- Manages the state's environmental water holdings
- Develops a long-term environmental watering plan as required under the Basin Plan

Federal

Murray Darling Basin Authority (MDBA)

- Established as an independent, expertise-based statutory agency

- Responsible for planning the basin's water resources, with all planning decisions made in the interest of the basin as a whole
- Prepares, implements and reviews integrated plans for the sustainable use of the basin's water resources
- Operates the Murray River system and efficiently delivers water to users on behalf of partner governments, as well as measuring, monitoring and recording the quality and quantity of the basin's water resources
- Provides water rights information to facilitate water trading across the basin

Commonwealth Environmental Water Holder (CEWH)

- Manages the Commonwealth's environmental water holdings so as to protect or restore environmental assets in the Murray Darling Basin and in other areas where environmental water is held.

Department of Agriculture and Water Resources

- Responsible for the management and use of water resources including National Water Initiative, the Murray-Darling Basin Plan, urban water policy and reform, and water quality improvement
- Administers the key Commonwealth funding programs relevant to water management reforms

Australian Competition and Consumer Commission (ACCC)

- The Australian Competition and Consumer Commission (ACCC) is an independent Commonwealth statutory authority whose role is to enforce the Competition and Consumer Act 2010 and a range of additional legislation, promoting competition, fair trading and regulating national infrastructure.
- Under the Water Act 2007 (the Water Act) and the Competition and Consumer Act 2010 (the CCA), the ACCC has several functions in water, including to:
 - enforce the Water Market Rules 2009 (Water Market Rules) and the Water Charge Rules 2010 (Water Charge Rules) under the Water Act
 - enforce the CCA with water brokers, exchanges and infrastructure operators
 - monitor and report on regulated charges and compliance with the Water Market Rules and Water Charge Rules
 - where regulation has not been returned to a Basin state regulator, to determine regulated charges for on-river infrastructure operators in certain circumstances
 - provide advice to the Commonwealth Minister responsible for water on the Water Market Rules and Water Charge Rules
 - advise the Murray-Darling Basin Authority (MDBA) on the Basin Plan water trading rules.