

Public consultation on the proposed new method to calculate the value of water taken illegally

This document answers frequently asked questions about the proposed new method for valuing water taken illegally.

Section 60G of the *Water Management Act 2000* (WM Act) is a charge that can be imposed on a water user when the Natural Resources Access Regulator (NRAR) is satisfied, based on the balance of probabilities, that water has been taken illegally. For the purposes of section 60G, the value of illegally taken water is determined in accordance with clause 20 of the Water Management (General) Regulation 2018 (the Regulation).

What is the current method?

Clause 20 of the Regulation provides the current method to determine the value of water:

- the published trading price data for the relevant water source
- if there is no trading data, the ‘relevant published water access (entitlement) charge for the valley in which the water source is located’ (PWAE) should be used.

Why is a method for valuing illegally taken water needed?

The current method for valuing illegally taken water produces highly inconsistent results across water sources and does not adequately reflect the actual value of the water.

The water’s value often ends up being calculated via a PWAE charge applicable to the water source from which water was illegally taken. PWAE charges are administrative charges issued by the Independent Pricing and Regulatory Tribunal (IPART) and do not represent the value of water, resulting in inconsistent charges and an ineffective deterrence to illegal water take.

NRAR is responsible for the enforcement of water management laws in NSW. NRAR’s experience implementing the current method has produced inconsistent and often extremely low water values across water sources, limiting NRAR’s ability to impose charges for illegal take under section 60G of the WM Act.

Why is the proposed new method better?

The current method is based on trade prices for the relevant water source and defaults to the relevant published water access (entitlement) charge (PWAE) in the absence of trades, or limited

trade data. In other words, if no trading of water has occurred the 'market' price cannot be identified or used in determining the value of water. This is bad, because the PWAE charges that are used instead are not specifically meant to value water and often result in values much lower than average trade values.

The PWAE charges are issued under section 114 of the WM Act, which is not specifically meant to value water. The PWAE charge is only a calculation of the efficient cost for utility services (from WaterNSW) to provide their water management services (costed at per unit of entitlement). The PWAE charge is much lower than average trade values (often calculated at around \$4-\$10 per megalitre) and is determined by IPART.

As most of the water sources in NSW are not actively traded, the current method produces highly inconsistent results across water sources and does not adequately reflect the value of illegal water take. This has limited NRAR's ability to impose charges for illegal water take under section 60G of the WM Act.

The proposed new method aims to fix this issue, by establishing a balance between robust economic principles, accuracy and practicality based on available information.

The new method will be a stronger deterrent against non-compliance because it will:

- be based on a broader range of available data
- provide a suitable indicator of the value of illegally taken water
- enhance NRAR's ability to impose appropriate and proportionate sanctions for breaches of water law
- ensure fairness for those who are compliant.

What is the difference between the current and proposed method?

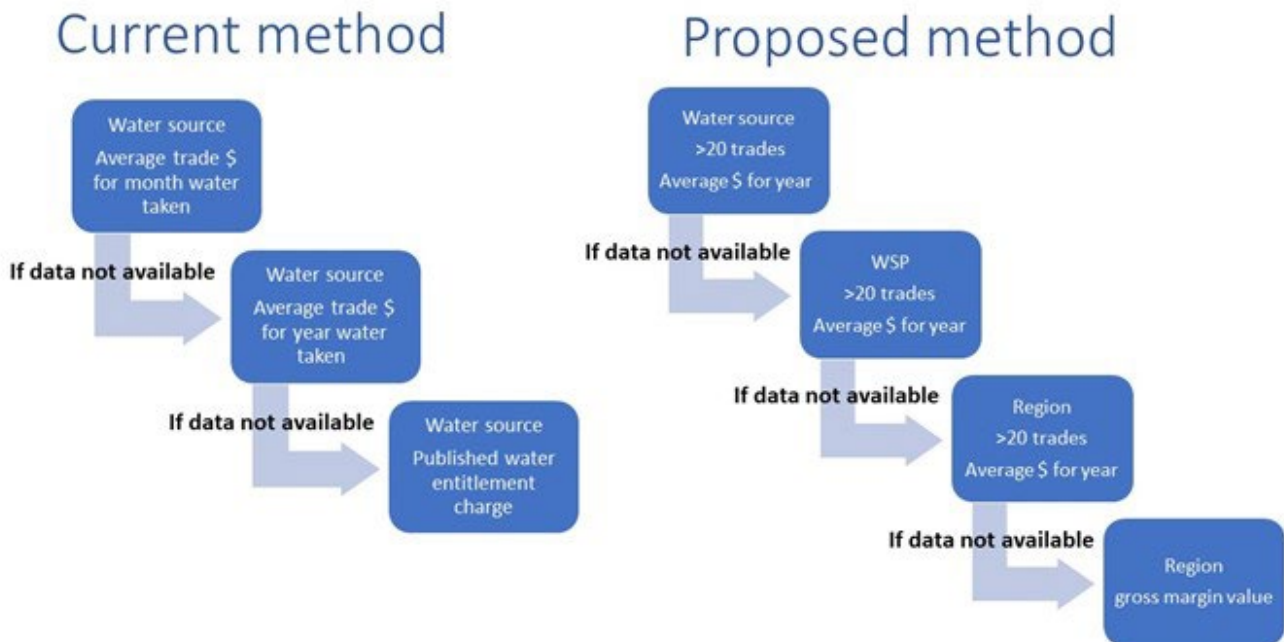
Unlike the current method, the proposed new method allows us to:

- combine water sources in water sharing plan areas or in broader regions
- separate temporary trades in regulated, unregulated, and groundwater sources so that we can compare like for like.

When no trading data is available, the new method considers gross margin values to discourage illegal take of water.

Figure 1 shows a comparison between the current method and the proposed new method.

Figure 1: Comparison of current and proposed methods



Why is the proposed method based on a minimum of 20 trades?

The proposed new method uses a minimum of 20 trades to make sure we have enough data to be more certain about the accuracy of the trade values.

Why does the proposed new method group water sources?

The proposed new method groups water sources to reach a statistical threshold of at least 20 trades.

Where there are fewer than 20 trades in a water source in the relevant water year, trade data is taken for all water sources in the relevant water sharing plan to determine the Volume Weighted Average Price (VWAP).

If there are still less than 20 trades within the whole water sharing plan, then for surface water, all water sources within the relevant water region are considered to determine the VWAP. Water regions are based on Regional Water Strategies Catchments for surface water (separated into regulated and unregulated) and on specified groups of groundwater sources for groundwater (Northern, Southern and Other).

What is a market failure?

Market failure, in economics, is a situation defined by an inefficient distribution in the free market. The water trading system in NSW is considered a 'market'. An example of market failure in this market would be a situation where water is not being bought and sold.

In simple terms, market failure in the water trading system is when the price for water does not reflect its current availability, making it difficult for farmers who want to purchase water to decide if it is the right choice for them.

For example, a catchment with few buyers or sellers means there is a lack of market participants willing to either sell water entitlements or buy those available. This means only a small number of trades will occur. As a result of this market failure, it is not possible to determine a reasonable value of water to discourage illegal take. This means that when a market failure occurs, an alternative measure of value, like a gross margin value, is required.

What is gross margin value?

Gross margin is the profit that water users receive from an additional megalitre of water used. This economic concept is based on approximations of business costs and revenues for producing irrigated crops, compared with the business costs and revenues associated with non-irrigated crops. The gross margin for a range of crops was calculated for the regional water strategies, aiming to estimate the value of a megalitre of water across NSW.

The gross margin value is an approximate water value to someone who has taken it illegally. For example, in severe droughts (when water values are likely to be high due to scarcity), water may not be available to trade. Therefore, market values for water would not be available. It is proposed that the gross margin value would be triggered in these conditions.

What does the new proposed method mean for me?

Most water users don't take water illegally, so the method will have no impact.

If you are found to be taking water illegally, you may be charged a higher penalty under section 60G of the WM Act.

The proposed new method provides a practical way to value illegally taken water in a wide range of different contexts, including where water trading is non-existent. This, in turn, helps NRAR to enforce compliance with water laws.

How does NRAR decide whether to issue a section 60G charge?

NRAR uses a risk-based assessment to determine how to respond appropriately to breaches of water laws. [NRAR's Regulatory Policy](#) provides further information.

Section 60G of the WM Act requires NRAR to follow certain steps before issuing a charge under section 60G. NRAR must:

- give written notice to the person they intend to issue the charge against
- give that person a reasonable opportunity to make submissions about the proposed charge
- take these submissions into consideration before issuing the charge.

The actual charge issued by NRAR can be up to 5 times the value of the water taken.

Starting with a reasonable water value, NRAR will use its discretion to calculate the most appropriate monetary charge.

Does the new method consider environmental or cultural value, or impacts of water theft on other users?

Illegal take of water has a diverse range of negative impacts. NRAR can take these into account when deciding what enforcement action to take, in line with its regulatory policy.