

Deeming – what is it?

There has been a lot of talk about “deeming” savings from replacing outlets such as Dethridge wheels in irrigation districts. Many people are confused about deeming and how it works.

This fact sheet sets out to explain and clarify deeming - particularly as it applies to Dethridge wheel replacements.

Deeming - a definition

The word “deeming” means to decide or judge something.

So how does that apply to the replacement of a Dethridge wheel?

When irrigation modernisation projects are developed, the volume of water savings need to be estimated. Measurement over time has shown that Dethridge wheels have recording errors in the range of - 2% (over-recording) to +25% (under-recording). Typically they under-record the water delivered.

Dethridge wheels are generally replaced with more accurate measurement devices such as Magflow meters or FlumeGates. Testing has shown these measure more accurately - up to 5% under or over.

In modernisation projects, there are usually tens or hundreds of Dethridge wheels replaced. It would cost over \$5000 per meter to test each one in the field and see how accurate it is. This is way too expensive, and just not practical.

So, based on the testing done to date on Dethridge wheels, a certain percentage of water delivered is estimated or “deemed” to have been saved when a new outlet is installed.

How is the percentage savings “deemed” for a Dethridge wheel?

The state-wide average Dethridge meter error has been worked out through two flow studies funded by Goulburn Murray Water in 2007 and 2008 that tested 53 Dethridge meters. The testing was carried out by Thiess Services, a company that specialises in water flow measurement.

What is the deemed percentage in Victoria?

It is 8.6% of the average annual water use measured by Dethridge wheels before the upgrade of the outlet.

Where does this figure come from?

The Victorian State Government established a water savings protocol that guides the estimation process for irrigation modernisation projects. It is available at <https://www.water.vic.gov.au/water-for-agriculture/investment-in-irrigation-efficiency/water-savings-protocol>.

Does that mean that the farmer automatically gets “deemed water savings”?

No. The use of these water savings needs to be decided at the time the modernisation project is agreed. Typically, the party investing the money for modernisation will decide how the water savings will be used.

In the case of the Macalister Irrigation District Channel Automation Project, the investors were the State and Commonwealth Governments.

They decided to use all water savings, including those deemed from new outlets, for environmental flows.

In Northern Victoria for NVIRP stage 2, water savings, including those from deeming, are planned to be shared equally between the environment and irrigators.

What options exist for the use of “deemed” water savings in future projects?

There are several options for using “deemed” water savings in new projects:

- Water could be provided back to the farmer with the new outlet at no cost;
- Water could be provided back to the farmer with the new outlet at an agreed cost;
- Water could be provided to the environment;
- Water could be auctioned; or
- Water could be used to provide increased irrigators general security.

How do these approaches affect pricing?

If funding for outlet replacements is provided by the customers in irrigation districts and deemed water is provided to individual customers at no cost, prices to all customers will rise to cover the cost of outlets. If water savings are auctioned or a price set on the deemed water, then prices will not rise as much as some of the cost of the outlet is offset.

Do customers get service benefits with new outlets?

Customers on modernised systems will generally be able to get higher flow rates and more consistent flow rates.

Why do we need to replace Dethridge wheels anyway?

The Australian Standard on metering has defined Dethridge wheels as outside the acceptable levels of variation for metering accuracy. Southern Rural Water can no longer replace Dethridge wheels with Dethridge wheels or construct new Dethridge wheels, although we can continue to maintain wheels that are still in service Magflow meters and FlumeGates are 2 to 4 times more expensive than a Dethridge wheel.

Our position for our irrigation districts is that we will continue to maintain Dethridge wheels in service until other outlet costs come down, we have an agreed modernisation project, or we have some funding contribution to reduce the cost to irrigators.

More information

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