

Connections Project Water Recovery

Distribution of the irrigators' share

What is the Connections Project?

The Connections Project is a \$2 billion investment by the Victorian and Commonwealth governments to modernise the infrastructure that delivers water to irrigators in the Goulburn Murray Irrigation District (GMID), delivered over two stages.

In 2007 the Victorian Government announced its commitment to modernising the GMID irrigation system as part of the Our Water Our Future initiative, with expectations that as much as 75 GL of water recovered from losses could be returned to irrigators.

Following the development of a thorough business case for Stage 1 in 2009, over \$1 billion in funding was secured for the Northern Victorian Irrigation Renewal Project, forecast to achieve 225 GL long term average yield (LTAAY) of water recovery that would be distributed equitably between the environment, Melbourne urban water retailers and GMID irrigators.

The water recovery targets were set as LTAAY based on preliminary modernisation activities that showed that some of the water losses recovered were variable, with the volume recovered depending on deliveries in the irrigation system any year. This means that the amount of water recovered will be less than 225 GL in some years, and more in other years, to average out at this volume over time. The long-term average annual yield can be calculated for all high-reliability and low-reliability water shares in northern Victoria.

The 225 GL LTAAY recovered through Stage 1 is to be shared as up to 75 GL (LTAAY) each to the environment, to the Melbourne urban water retailers who contributed funding to the project, and to GMID irrigators. This volume of water being returned to irrigators is referred to as the 'irrigators' share'.

Another 204 GL LTAAY is being recovered under Stage 2, as a mix of high and low reliability entitlements, with the project on track to recover the full volume of 429 GL LTAAY.

Stage 2 water entitlements were issued to the Commonwealth Environmental Water Holder with most entitlements issued progressively in advance of water recovery, as negotiated with the Commonwealth to

receive \$1 billion in funding to complete the second stage of modernisation works.

The water recovered for irrigators under Stage 1 has been used to underwrite the operation of the irrigation system, allowing entitlements to be issued to the Commonwealth in advance of works without any impacts on existing entitlements.

Doing this removed the need for irrigators to contribute funding toward Stage 2 through increased infrastructure access fees, as well as helping to avert the buyback of entitlements by the Commonwealth to meet Basin Plan commitments.



Figure 1: The Connections Project has modernised irrigation delivery infrastructure to reduce water losses, with works completed in all six irrigation areas of the GMID.

How is water recovered?

Water is recovered by making improvements to the irrigation distribution system that reduce water losses such as seepage and evaporation (Figure 1). The water recovered through these works is then quantified and can be issued as entitlements.

The Victorian Water Savings Protocol (developed in 2009) sets transparent and repeatable rules for how water recovery is to be estimated, audited, confirmed and converted into water entitlements. The Water Savings Protocol makes sure that the water entitlements issued accurately reflect the amount and reliability of the losses recovered with a high level of confidence and transparency.

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Modernisation works recover water through reducing fixed losses – which occur no matter how much water is delivered – and variable losses, which change in magnitude depending on deliveries each season (table 1).

The water entitlements issued must be a mix of high-reliability and low-reliability products to accurately account for the variable component of the losses, so that the reliability of current entitlements is not impacted.

The Water Savings Protocol sets out how water recovery is estimated and verified, and what water products can then be issued. The water recovered is checked each year through independent audits to confirm the volume recovered and the types of entitlements that can be created.

Table: 1 Types of losses reduced through modernisation work, and the balance of fixed and variable water recovered.

Type of loss recovered	Nature of water loss
Evaporation	Fixed 100%
Service point leakage	Fixed 100%
Seepage	Fixed 100%
Delivery-independent outfall losses	Fixed 100%
Bank leakage	Fixed 35%, Variable 65%
Delivery-dependent outfall losses	Variable 100%
Unauthorised use	Variable 100%
Meter error	Variable 100%
Unmetered use	Variable 100%

Audit results have been published online each year since works began in 2008, verifying the water recovered as a long term average. The final audit will be carried out once all project works are complete.

This process protects the integrity of all water entitlements and means that new water shares can be issued with confidence, including that the reliability for existing entitlement holders is not undermined, with existing entitlements fully protected.

What is the difference between long-term average annual yield and water shares?

The water recovered through works is confirmed as LTAAY, which is an estimate of the average annual water recovery that would have been achieved from the modernisation works over the last 115 years. This

captures the variability in recovered losses due to seasonal conditions including deliveries, rainfall, water use and system operation.

Using LTAAY allows water recovery to be compared across systems using a common currency and is how water contributions are determined under the Murray-Darling Basin Plan. Long-term factors, specific for each system and reliability, are then used to convert that long-term average annual yield into an entitlement that a recipient can hold, e.g. a water share of specific reliability within a system and trading zone.

What is the make-up of the irrigators' share?

The exact make-up of water shares that will be distributed to irrigators cannot be known until all water recovery works are complete and the water recovered has been verified through the process set out in the Water Savings Protocol.

An estimate of the mix of high and low-reliability water recovery was provided to the Irrigators' Share Consultative Committee to aid discussion, based on a forecast of works to be completed. This estimate of 4 ML of high-reliability and 1.8 ML of low-reliability water shares remains subject to confirmation and may change depending on the final works completed.

The irrigators' share will be a mix of high-reliability water shares and low-reliability water shares, reflecting the combination of fixed and variable losses recovered through the modernisation works. The water shares will add up to 75 GL LTAAY.

The water shares will be from both the Murray and Goulburn systems, as water has been recovered from both systems from works undertaken in trading zones Murray 6, Murray 7 and Goulburn 1A/1B.

What about the other water recipients?

Stage 1 recipients – irrigators, the environment and the Melbourne retailers – will receive equitable mixes of water products including high and low-reliability and unregulated products, up to 75 GL LTAAY. The water entitlements distributed will not be identical as some products are better suited to specific recipients. For example, unregulated water, which irrigators cannot access, and water recovery resulting from the closing down on the Campaspe irrigation district have been issued to the environment.

While the Melbourne retailers have not yet been issued with water entitlements, the environments' share was

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issued in June 2019 to comply with Victoria's commitments under the Murray-Darling Basin Plan.

To make sure that the types of entitlement are fair and equitable, a review clause was built into the environmental entitlements that allows the package of water products to be rebalanced when the works are complete, and the irrigators and Melbourne retailers get their water entitlements.

The Melbourne retailers receive an allocation each year based on the confirmed volume of water recovered in the previous water year. This water has been made available on the northern Victorian water market each year that it has been allocated.

Water recovered against the irrigators' share is also confirmed following each irrigation season. This water is allocated to a special offset account where it is used to manage the impacts of issuing Stage 2 entitlements to the Commonwealth in advance of modernisation works. Doing this ensures that existing entitlements have remained fully protected while the Connections Project has been carried out.

When will irrigators get their water?

The Connections Project needs to be completed and the required water audits and verification undertaken, including confirming that the irrigators' share is no longer required to manage impacts of the advance issue of Commonwealth water shares. The project is on track for on-ground works to be completed in October 2020 as planned (Figure 2), with the water recovered to then be verified to confirm the full amount has been recovered and that entitlements can be issued.

The Department of Environment, Land, Water and Planning (DELWP) is currently working through approaches to make the irrigators' share available as soon as practical after the above requirements are met.

The Minister for Water will announce when and how the irrigators' share of water from the Connections Project will be distributed to GMID irrigators.

The Minister convened the Irrigators' Share Consultative Committee (ISCC) to recommend a distribution model. To learn more about the ISCC and what it is proposing, visit engage.vic.gov.au/irrigators-share.



Figure 2: The on-ground works for the Connections Project will be completed in October 2020, with the project on track to recover the full 429 GL LTAAY, including the irrigators' share.

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