Coliban WATER

Water efficiency projects in Victoria



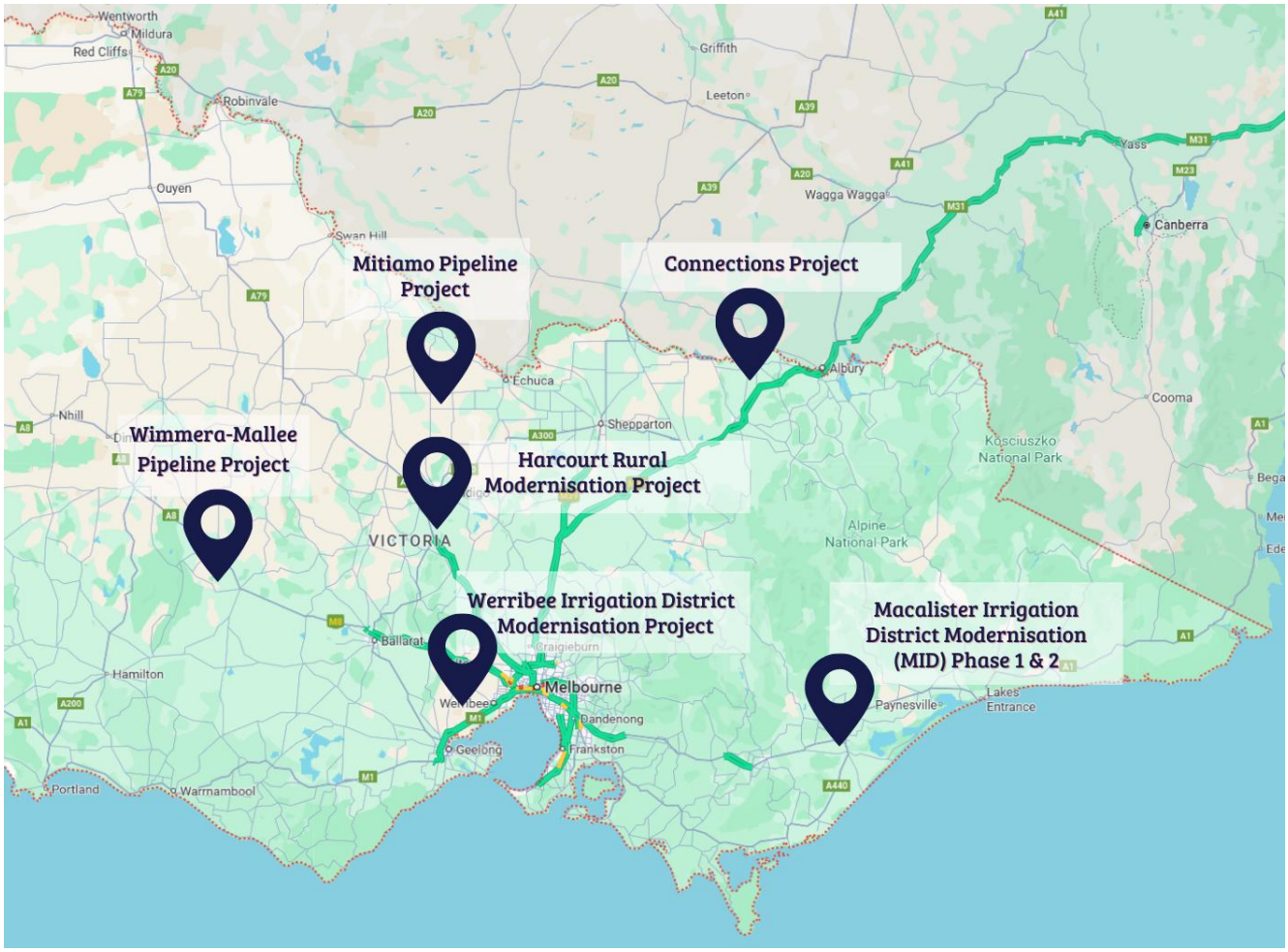
Summaries & key themes

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A look at water efficiency projects in Victoria

As irrigation assets age across Victoria, a number of water network modernisation projects have made water delivery more efficient for farms, orchards, and rural properties.

While every project is different, and the details of the Rural Water Efficiency Project's (RWEP) final design will depend on government funding and the outcome of ongoing planning, these summaries give us a useful preview of what might be ahead.



Locations of the six Water Efficiency Projects (WEPs) examined in this document.

What's ahead: The Rural Water Efficiency Project

In March 2025, we submitted a funding application to the Australian Government's Resilient Rivers Program and we're currently waiting on their final decision. If our application is successful, we will know how much funding support we will receive and can finalise the project design, detailed costings and planning approvals.

If our application is successful, we'll send all customers new information packs with detailed project updates. Once we have established a full project team, we will begin holding information sessions across the region. This will mark the start of more in-depth engagement program, and we'll be asking for your input on key aspects of the project.

Summaries

Water efficiceny projects across Victoria

Mitiamo Pipeline Project

Location: Mitiamo township, located in the northern part of Victoria, Australia, within the Loddon Shire It is situated in north-central Victoria, about 222 kilometres north of Melbourne and 67 kilometres north of Bendigo.

Project lead: Goulburn-Murray Water (GMW) in partnership with the Victorian Government (through the National Water Infrastructure Development Fund).

At a glance: The $29 millionm Mitiamo Pipeline Project was luanched in November 2018 and successfully completed in July 2021. The project replaced an open channel network that was considered to be a high loss, low quality and inefficient supply of stock and domestic water to GMW customers in the Mitiamo region It involved the construction of an offseason lagoon, pump station and more than 300 kilometers of pipelines with 334 customer metering points.

Customer outcomes: Farmers were able to access efficient and reliable access to stock and domestic water all year. Local landowners were given greater security over their water supply.

Water savings: Historically, more than 80% of water supplied via the stock and domestic channels in the region was lost before use and farmers had been incurring high water cartage costs. Public and private water losses were reduced by more than 1000 megalitres a year.

Economic and environmental benefits: The Project made Mitiamo township a more attractive destination for sea changers. The water saved is being used to improve the health of rivers and wetlands in line with Victoria's obligations under the Murray Darling Basin Plan.

Wimmera-Mallee Pipeline Project

Location: The project spanned the Wimmera and Mallee regions in northwestern Victoria.

Project lead: Grampians Wimmera Mallee Water (GWM Water), the regional water corporation. The project was funded in partnership with the Australian Government (under the National Water Initiative) and the Victorian State Government.

At a glance: A massive, $688 million water infrastructure project replacing approximately 17,500 kilometres of open earthen channels with ~9,150 kilometres of piped water distribution system. Construction began in November 2006, with final pipe laid in April 2010.

Customer outcomes: The project enabled~7,000 rural customers and 36 towns to receive high-quality, reliable water supply, replacing inefficient channels.

Water savings: The project delivers average savings of 103,000 megalitres of water each year that would otherwise be lost through seepage and evaporation. Of this, up to 83,000 megalitres are returned to government for environmental purposes, along with an additional 1,000 megalitres dedicated to supporting environmentally significant wetlands within the region.

Economic and environmental benefits: The project has created up to 10,000 megalitres of additional water for regional economic growth, enabling sustainable on-farm diversification and supporting new industries through a modern water system built for future demand. A further 3,000 megalitres have been supplied to regional recreational lakes, generating substantial tourism and community benefits. With reduced system losses, water is now contributing to environmental flows - helping Victoria meet its Murray–Darling Basin Plan obligations while strengthening both local economies and ecosystems.

Werribee Irrigation District Modernisation Project

Location: Werribee, Victoria, a key agricultural region located about 30 km southwest of Melbourne.

Project lead: Southern Rural Water (SRW) in partnership with the Australian Government (through the National Water Grid Fund), and the Victorian Government.

At a glance: The project, with a total investment of $42 million, replaced the district's aging and inefficient open-channel irrigation network. The work was completed in five stages from 2016 to 2024. The open channels were replaced with over 39 km of modern pipelines and approximately 208 automated customer outlets.

Customer outcomes: The new system provides a secure, pressurised water supply that is available 24 hours a day, seven days a week. This provides growers with greater flexibility, enabling them to irrigate on their own schedules (eg at night to reduce evaporation). The new automated outlets also provide more accurate water measurement.

Water savings: The project successfully generated an estimated 5,000 megalitres of water savings per year. This is a significant gain, as the old system was estimated to lose up to 35-40% of its water to evaporation and seepage. The water savings are used to enhance local irrigation and improve the health of the Werribee River.

Economic and environmental benefits: The modernisation has improved water reliability and security, helping farmers become more resilient to a hotter, drier climate. This supports the local economy, particularly the region's specialty in high-value vegetable crops like lettuce and leafy greens, which have a farm-gate value of over $187 million per year.

Harcourt Rural Modernisation Project

Location: Harcourt, Victoria, a major fruit-growing region about eight kilometres north of Castlemaine.

Project lead: Coliban Water, in partnership with the Victorian Government.

At a glance: The project, with a total investment of $44 million, replaced the aging Harcourt rural irrigation system. The work began in 2014 and was fully commissioned in 2016. It replaced open channels with a new, pressurised pipeline network and installed two pump stations and a balancing storage tank.

Customer outcomes: The new system provides pressurised pipelines to enable farmers to apply water more efficiently without needing to pump it from the channel. Customers use a mix of on-farm storage tanks and dams to balance the continuous, low-flow delivery with their peak demand for activities like irrigation.

Water savings: The project saves around 3,000 megalitres of water per year. These savings include an estimated 950 megalitres of water loss and a further 2,000 megalitres from water licences that rural customers sold to Coliban Water in 2013.The conserved water is used to secure the region's water supply.

Economic and environmental benefits: The modernisation has significantly improved water efficiency and reduced operating costs for irrigators, supporting the local economy's fruit and wine industries. The project also provides a reliable water source for drought resilience and helps protect local waterways by reducing nutrient and sediment runoff associated with the old channel system.

Connections Project

Location: The Goulburn-Murray Irrigation District (GMID), a vast region across northern Victoria from north of Bendigo to the New South Wales border.

Project lead: Goulburn-Murray Water (GMW), in partnership with the Australian Government and the Victorian Government.

At a glance: The $2 billion Connections Project is one of the largest irrigation modernisation projects in Australian history. Launched in 2007, the project sought to upgrade the GMID's century-old irrigation infrastructure. The project involved decommissioning 1,700+ kilometres of channels, remediating 310 kilometres of channels, replacing open channels with 2,300+ kilometre pipelines, installing automated flow control devices, and upgrading farm outlets and water meters.

Customer outcomes: The new automated system provides a more flexible, reliable, and on-demand water supply. Farmers now have more control over when and how they irrigate. The upgraded water meters provide highly accurate data, giving irrigators a clear picture of their water usage, which helps them save money and manage their allocations more effectively.

Water savings: The project generates 433,000 megalitres of water savings per year. These savings are a major contribution to the Murray-Darling Basin Plan and are shared between irrigators, the environment, and urban water supplies.

Economic and environmental benefits: By boosting water efficiency and reliability, the project has secured the future of agriculture in northern Victoria, particularly the dairy, fruit, and cropping industries. The water savings have helped restore environmental flows to stressed rivers and wetlands in the Murray-Darling Basin, improving the health of these vital ecosystems.

Macalister Irrigation District Modernisation (MID) Phase 1 & 2

Location: Gippsland, Victoria, near the towns of Maffra and Sale.

Project lead: Southern Rural Water (SRW), in partnership with the Australian Government (through the National Water Infrastructure Development Fund) and the Victorian Government.

At a glance: The MID underwent a multi-stage, multimillion modernisation. The $32 million first stage began in 2012 and was completed in 2017. The $60 million second stage began in 2020 and achieved practical completion late 2024 . Both phases focused on replacing channels built in the 1920s and 1950s through channel automation and installing pressurised pipelines, and modernising outlets that distribute water to farmers.

Customer outcomes: The new pressurised system provides a more reliable and secure water supply, which is critical for the region's high-value dairy and cropping sectors. The ability to receive a more consistent and on-demand supply allows farmers to apply water more efficiently and reduces the operational challenges of a gravity-fed channel system.

Water savings: The first stage of the project generated a total water saving of 11,500 megalitres. per year and Phase 2 is expected to save 10,400 megalitres per year These water savings are used to improve irrigation reliability and support environmental flows.

Economic and environmental benefits: The project's major benefit is securing the future of the region's agricultural industry, which plays crucial role in the state's agricultural economy with major products including milk, dairy products, fodder crops, vegetables and beef. The increased water efficiency helps farms become more productive and profitable. Environmentally, the project reduces water lost from the system and minimises nutrient and sediment runoff into local waterways.

Common customer benefits and impacts

Less system losses

Older rural systems often lose significant amounts of water through seepage, evaporation, and delivery inefficiencies. Modernising or replacing open channels with pipelines, pressurised systems, or automated delivery dramatically reduces these losses, leaving more water in the system.

Additionally, with on-farm upgrades, landowners find their water use is more efficient, which allows them to reduce their rural entitlement and support our rural customer to do more with less.

BEFORE



- Poor water quality
- Inefficient system
- Customer paying for water losses
- Old/high maintenance public and private channel system
- Seasonal access to water

AFTER



- Improved water quality
- High efficiency system
- Customer incentive payments
- Pressurised pipe system
- All year water service

Examples from other projects

More water, same entitlement

- **Harcourt Rural Modernisation Project** – The upgrade to a pressurised pipeline eliminated open channel losses, delivering significantly more usable water for the same allocation, and in most cases providing the same usable water while allow customer to reduce their entitlement based on financial incentives.
- **Macalister Irrigation District Modernisation (MID) Project** – Pipeline conversions and automation cut losses and delivered year-round water with improved flow control, increasing effective water delivery for every customer.
- **Connections Project** – Modernisation delivered very large water savings of 433 gigalitres, and a significant portion of this saved water was allocated back to irrigators as permanent high and low reliability water shares.

Decisions customers made

While all water efficiency and modernisation project are different, customers are often given choices about their water entitlements and their ongoing participation in the system:

Keep their current entitlement: Thanks to on-farm reduced evaporation and seepage losses, landowners can expect to get more usable water from the same entitlement.

Reduce entitlement (and receive a financial incentive): With a more efficient system, many customers find they can reduce their water entitlement, benefit financially and still receive the same amount of on-property water due to increased efficiency.

Exit the system: Customers whose water needs have changed and no longer needed their entitlement at all can receive financial incentives to retire their licence and full water entitlement.

Change to an alternative water supply: Customers may be asked to transition to urban supply or a recycled water network.

Financial incentives to exit the system or reduce water entitlement

In many water efficiency projects, customers are given choices about their water entitlements and their ongoing participation in the system.

When customers chose to reduce their entitlement to match their actual water needs, it helps the water utility design a system that reflects actual network needs and keeps costs down by avoiding oversized infrastructure and high operational costs.

Example: Current proposal vs Harcourt Rural Modernisation Project

The Harcourt Modernisation Project was delivered in 2014-15 at a cost of approximately $40 million and recovered 1 gigalitre is water savings. The project involved extensive customer engagement to customer transition onto a new modernised pipe system and was supported by a financial incentive program to recovery water savings.

Reduction in water entitlements reduced the overall network demand, recalibrating for those who remained in the rural system and better reflecting the customer needs of the area.

Harcourt incentives (2013)

Customers in Harcourt who gave up their full licence received a higher value for the water to exit the system. They were paid a premium rate based on their water volume. Whereas a customer remaining in the system who reduced their licence volume received a lower rate per megalitre. There was no licence incentive payment available.

Current proposal incentives (2025)

Water volume	$2,000 per megalitre to exit the system
	$2,000 per megalitre to reduce licence entitlement
Licence	$7,500 per licence (regardless of volume held – exit only)

Tariffs and termination fees

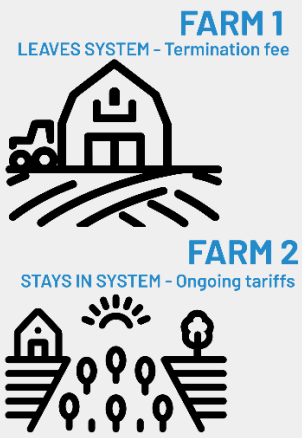
Modernised systems require signifciant investment to construct large lengths of pipeline, pump stations and to decommission old channel assets. This lowers annual operating costs long term, but requires a large financial investment upfront. Water utilities seek to recover these costs through tariffs (ie fees and charges).

Tariff rates will depend on:

- Total project cost and funding received.
- The size, scale and final designs of the infrastrucutre.
- Number of customers transitioning to the new modenised network.
- Individual entitlement volumes.

Termination fees are a standard feature of modernisation projects. If a customer commits to the new system but later decides to exit, a fee may apply. Termination fees make sure those who exit the system pay their fair share of costs, so that those who stay aren't unfairly impacted by increase tariffs.

Examples from other projects



- **Harcourt Rural Modernisation Project** – The final tariffs reflected the cost of the new pressurised system while also maintaining a subsidy from urban customers. Termination fees applied post-commissioning of the enw pipeline, with the current fee set at $2,457.70 per megalitre.
- **Werribee Irrigation District Modernisation** – Tariffs rose post-upgrade to fund automation and pipeline installation, structured based on land area and water usage. Termination fees were introduced, calculated per megalitre or as a fixed exit cost.
- **Mitiamo Pipeline Project -** Customers cannot exit the modernised system. Unlike Harcourt, where a termination fee applies, Mitiamo customers must remain in the Piped Water Supply District and cannot cancel their capacity share or water allowance.

Shared investment for shared outcomes

Modernisation and water efficiency projects are typically funded via a combination of government programs and utility sources, with customers contributing a smaller share than if the project were 100% funded by the water authority (ie customers).

New systems may also involve higher tariffs to help fund the project as well as the system's ongoing operations and maintenance costs. Landowners may also need to invest in on-property works, such as improving on-property storage or upgrading infrastructure, to connect to the new network.

To help offset these costs, incentives are typically available for customers who choose to reduce their entitlement or exit the system.

Modernisation projects are designed to pay for themselves over time through water/energy savings. Depending on funding and the circumstances of the individual project, water utilities may provide guidance, financing options, and case studies to help customers plan cost-effective upgrades.

Why co-investment matters

When it comes to water efficiency projects, partnerships between government, water utilities, and landowners enable:

- Higher quality, more reliable water.
- Safer and more efficient infrastructure.
- A better water system for the next generation.



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Australian Government + **Coliban Water** + **Rural customers**

= shared benefits for all

On-property investment requirements

In most modernisation projects, the water authority will deliver the project and key public infrastructure, but landowners would be responsible for on-property works to make the most of the new system. On-property features of individual modernisation projects vary, but generally, this includes:

- Connecting to new supply points at the water meter.
- Upgrading on-farm delivery systems.
- Installing high efficiency water storage (ie tanks) and/or improving the efficiency on existing water storage.
- Ensuring infrastructure matches the customer new entitlement, flow rate and property demands.

Examples from other projects

- **Macalister MID** – Southern Rural Water ran information sessions and provided technical guidelines for on-farm adjustments. Upgrading on-farm infrastructure allowed irrigators tofully leverage the pressurised system, delivering faster, more accurate water delivery and reducing waste. Farmers who adapted saw long-term efficiency gains and better alignment with modern irrigation practices.
- **Werribee Irrigation District Modernisation** – The project enabled smarter and more responsive water use. By adjusting on-property setups (eg pumps and filters), farmers could optimise flows, cut energy costs, and future-proof their operations, making the most of the upgraded network's precision and reliability.

Storage tank requirements

Modernised systems typically deliver water continuously at a low flow rate rather than 'on demand' at high volumes. This means landowners need storage tanks to buffer supply for peak times like spraying, stock watering, irrigation, or even system outages.

Examples from other projects

- **Harcourt Rural Modernisation Project** – The new system replaced the old, inefficient gravity-fed channels that lost water to seepage and evaporation with a sealed pipeline network. Because the new system delivered water at a continuous, low-flow rate, some landowners needed to invest in on-farm storage tanks. The stored water in tanks or dams could then be used to meet the property's peak demand flow rates.
- **Macalister MID** – The systems low flow rate required landowners to install adequate storage to match new operating patterns and meet the needs of the property. Southern Rural Water (SRW) provided design guidelines for tank sizing (eg 1–2 days' supply) and offered low-interest loans to ease upfront costs.

Engagement and support

Across all projects, successful delivery relied on strong customer engagement and transition programs. This included:

Examples from other projects



- **Harcourt Rural Modernisation Project** – A dedicated Water Services Committee guided decision making from 2008 through delivery.
- **Connections Project** – Comprehensive guides and tools were provided online.
- **Macalister MID** – community engagement focused on keeping irrigators informed and supported during the transition from the old, inefficient channel irrigation system to the new, automated piped irrigation system. This included field days, information sessions, and regular updates that gave customers practical guidance on changes to infrastructure and water delivery.

Further resources

Understanding your water needs

There is a useful resource available on the Agriculture Victoria website which could help you understand your future water needs, based on the size of your land and water uses: www.agriculture.vic.gov.au/farm-management/water/farm-water-solutions/how-much-water-does-my-farm-need

Grampians Wimmera Mallee Water have an excellent on-farm water reticulation guide available on their website which helps understand the concepts behind your water needs. This can be found at: www.gwmwater.org.au/past-information/20-projects/612-on-farm-water-reticulation-guide

The Coliban Rural Water Efficiency Project

Visit connect.coliban.com.au for project FAQs, maps, timeline and the latest community updates.