



Harvey Fresh & Harvey Water Recycled Water Scheme

FAQ's

What is the project?

The project involves recycling treated water from the juice and dairy factory operated by Harvey Fresh back into the Harvey Dam from where it will be available for irrigation through the Harvey Water irrigation network.

Who is involved?

The project involves Harvey Fresh and Harvey Water infrastructure and personnel.

How much water will be transferred to Harvey Dam?

An average of 1 ML/d, or 365 ML/year of recycled water will be transferred from Harvey Fresh to the Harvey Dam.

To what standard will the water be?

The water will be treated to a very high standard, with water quality complying to the highest quality requirements as legislated by the Department of Health (DoH) and the Department of Water and Environmental Regulation (DWER). Ongoing monitoring of water quality from both Harvey Fresh and the Harvey Dam will be undertaken in accordance with licencing requirements. Any non-compliant water will be stored in on-site ponds at the Harvey Fresh site until it can be retreated to an acceptable quality prior to being pumped to the Harvey Dam.

Will this affect current Harvey Water delivery practices?

There will be no effect on current Harvey Water delivery practices, apart from an additional flow being introduced to the Harvey Dam that can be utilised for irrigation purposes.

Do northern members get a higher allocation as a result?

As is currently the case, the allocation to northern members will depend on storage levels in the Harvey Dam on a seasonal basis.

Will surrounding irrigators be affected?

There will be no effect on current Harvey Water irrigators, apart from additional flow being introduced to the Harvey Dam that can be utilised for irrigation purposes.

Why would Harvey Fresh not continue with existing practices by irrigating paddocks as opposed to considering transferring the treated water to the dam?

Consistent with the “Guidelines for the Non-potable uses of Recycled Water in WA”, Harvey Water considers treated water as a resource. Finding environmentally independent sources and continuing to build our water balance is part of our Collie to Coast project and assists with the long-term viability of Harvey Water. The salinity is not impactful when transferred to the Harvey Dam due to the dilution factor.

Why would Harvey Water undertake this project for 365ML per annum?

This acts as a pilot for future initiatives. We want to prove the process and capability. Finding environmentally independent sources and continuing to build our water balance is part of our C2C project.

How did this project come about?

Harvey Fresh first contacted Harvey Water in about 2018 to discuss their issue of water disposal.

Since then several options have been considered:

- Can the water go into the diversion?
- Can the water go into the Harvey River?
- Direct injection into the pipeline
- Pipeline to a brine waste pipeline
- Continued use of farmland

Discussions held with DWER in 2022 to establish the preferred option

Discussions were held with the Department of Health in October 2022 to start the approvals process

Discussions were held with the Shire of Harvey beginning in 2023 to find a preferred route with minimal impact on landowners, flora, fauna and natural amenities.

What is the treatment process to ensure the safe injection of the recycled water?

The treatment process involves several steps. Firstly, a dissolved air flotation (DAF) system removes any fats, greases and solids from the water from the dairy and juice operations. From there, a set of two sequencing batch reactors (SBRs) remove nutrients including nitrogen and phosphorus compounds, resulting in a clear recycled water product with low levels of solids and nutrients. Additional treatment steps installed as part of this project include ultraviolet disinfection and chlorination. These additional steps in the treatment process remove any bacteria, viruses, protozoa or other microorganisms that may have been introduced through any stage of the water cycle, prior to discharge into the Harvey Dam.

What is the safety of the recycled water ensured before injection into the dam?

The water is safe but remains non-potable. Harvey Water has a strict testing regime to adhere to for the Department of Health and has a self-imposed more extensive testing program to ensure that the water in the dam continually matches the quality of water before this project.

If a batch of water fails to meet the standard we will not accept the water and it will be recycled back to the holding ponds and tanks at the Harvey Fresh site for further treatment and testing.

What is the purpose of injecting recycled water into a dam?

Harvey Water needs to acquire climate independent water as part of the water balance that provides water for irrigation in the region, pressured by decreasing inflow into the dam. As such this is an ideal project as the volume is small but allows us to gain not only the experience but also to build up data that will inform future scenarios albeit these will not necessarily relate to the Harvey Dam.

How does the injection of recycled water affect the dam's water quality?

The water will be dispersed through a specially designed nozzle that ensures best dilution. The water modelling attached shows the expected results of the water quality and you will see that little changes and in some instances such as in coliforms and E-coli there is no change.

Will the injection of recycled water have any impact on the recreational use of the dam?

None. In terms of access to the dam, nothing changes. In terms of the fish and marron in the dam, nothing changes and we have been focused on ensuring that there is no residual chlorine imported into the dam as this can cause problems for fish.

How often is the recycled water injected into the dam, and at what rate?

About 8-12 litres per second.

Can the dam water continue to be utilised for irrigation or other non-potable uses after recycled water injection?

Yes, it is safe to use for non-potable purposes just as it is today.

What are the potential benefits for the local community from this recycled water injection project?

The volume of water in this project equates to the consumption of an average dairy farm for irrigation and washdown. Whilst in the immediate future this water does not improve the allocation of water to farmers over time and with a blend of other sources of water we expect to improve the water balance for the region by at least 10GL which is 25% of total water consumption for the cooperative.

How can I stay informed about the progress and updates of the recycled water injection project?

Harvey Water website. We will publish the laboratory results each month and the volume of water transferred into the dam. Additionally, all reports to the Department of Health and DWER will be publicly available via our website.

What are the control requirements if non-compliant water is released?

The water will not be accepted unless it meets the standards. If the water is non-compliant it will be rejected and sent to the holding ponds on the Harvey Fresh site.

What are the benefits of using recycled water for irrigation processes?

The advantage is purely based on the future proofing aspects of our responsibility. Given the changing climate and lower inflows, we need to support irrigation by building climate independent sources of water as part of our water balance.

How can we ensure that using recycled water correctly and safely is being conveyed?

Harvey Water has a duty and is bound by licence to ensure the safety of the water. We have a clear and strict regime for testing the water and an accredited independent laboratory to provide an analysis of the water. This project is overseen by DWER and DoH, who will ensure the water is continually treated to the agreed upon quality for the continuation of the licence.

Is there a risk of contamination from using recycled water?

There is no greater risk of contamination from recycled water than there is from non-potable water.

As the dam is an unconfined catchment all inflow comes with runoff from the land travelled over, The proposed additional inflow is not remarkably different from the existing water quality.