



Greywater

Greywater refers to all household wastewater excluding toilet waste. The main sources of reuseable greywater are bath, shower water and laundry water. Greywater is usually sent directly to the sewer, however many households now divert their greywater to a greywater reuse system. Untreated greywater should not be stored for more than 24 hours.

Customers can save drinking water by watering their gardens using

greywater. Rebates of up to \$500 are available to customers who install greywater treatment systems to replace drinking water use in the garden or for flushing toilets.

See our website for further information (www.citywestwater.com.au).

Please refer to the EPA website (www.epa.vic.gov.au) or your local council for further information regarding the safe use of greywater.

Groundwater

Groundwater is stored naturally underground in the soil. Rivers, streams and rain feed underground basins, known as aquifers. It is possible to pump some of this water to the surface and use it in place of drinking water.

Groundwater quality varies depending on location. In some areas, the quality is so high people drink the water fresh from a spring, whilst in other areas the water is only suitable for watering livestock. Even if the groundwater is salty, it can be treated so it can be used for a variety of purposes – saving drinking water.

Aquifer Storage and Recovery

Aquifer Storage and Recovery involves using aquifers to store water when it is available, so that the water can be accessed when it is needed. City West Water is currently investigating the possibility of storing recycled water or

stormwater in aquifers during winter for use in summer, when demand is much higher.

Industrial Water

Many industries require large quantities of water for cooling towers, dust suppression, wash down and other activities. With large amounts of water being used onsite, there is also potential to capture and reuse large quantities of water. City West Water is helping many industrial customers to improve water efficiency by developing treatment systems within their businesses, in order to reuse industrial water. Reuse of industrial water saves industry money, can reduce greenhouse gas emissions and save millions of litres of drinking water.

City West Water has worked with Dow Chemicals to reduce their drinking water use by 35 million litres per year by reusing wastewater previously sent to the sewer for cooling towers and fire testing.

Similarly, the commercial laundry Ensign has cut its water usage by 35%, while a recycling scheme at Australian Vinyls' Laverton manufacturing plant is saving up to 325 million litres of water each year.

For further information on Alternative Water, contact City West Water on 13 16 91 or refer to our website: www.citywestwater.com.au



Alternative Water

Information Sheet



Alternative Water

Alternative water refers to water which does not come from the main drinking water supply.

Alternative water comes from a variety of sources, including treated sewage, stormwater, greywater, groundwater and industrial water.

It is always treated to high standards to ensure it is safe for a specific purpose such as irrigation, garden watering or toilet flushing. These standards are established in national and state guidelines for water recycling.

Using alternative water means we can save our precious drinking

water for the things we really need it for – like drinking!

City West Water is involved in a number of projects that will supply alternative water to our customers in Melbourne's western suburbs.

Recycled Water

Recycled water is produced using the wastewater from households, businesses and industry. The wastewater goes through an intensive cleaning process at a treatment plant to become recycled water. Recycled water can be used for garden watering, washing cars, toilet flushing and industrial processes.

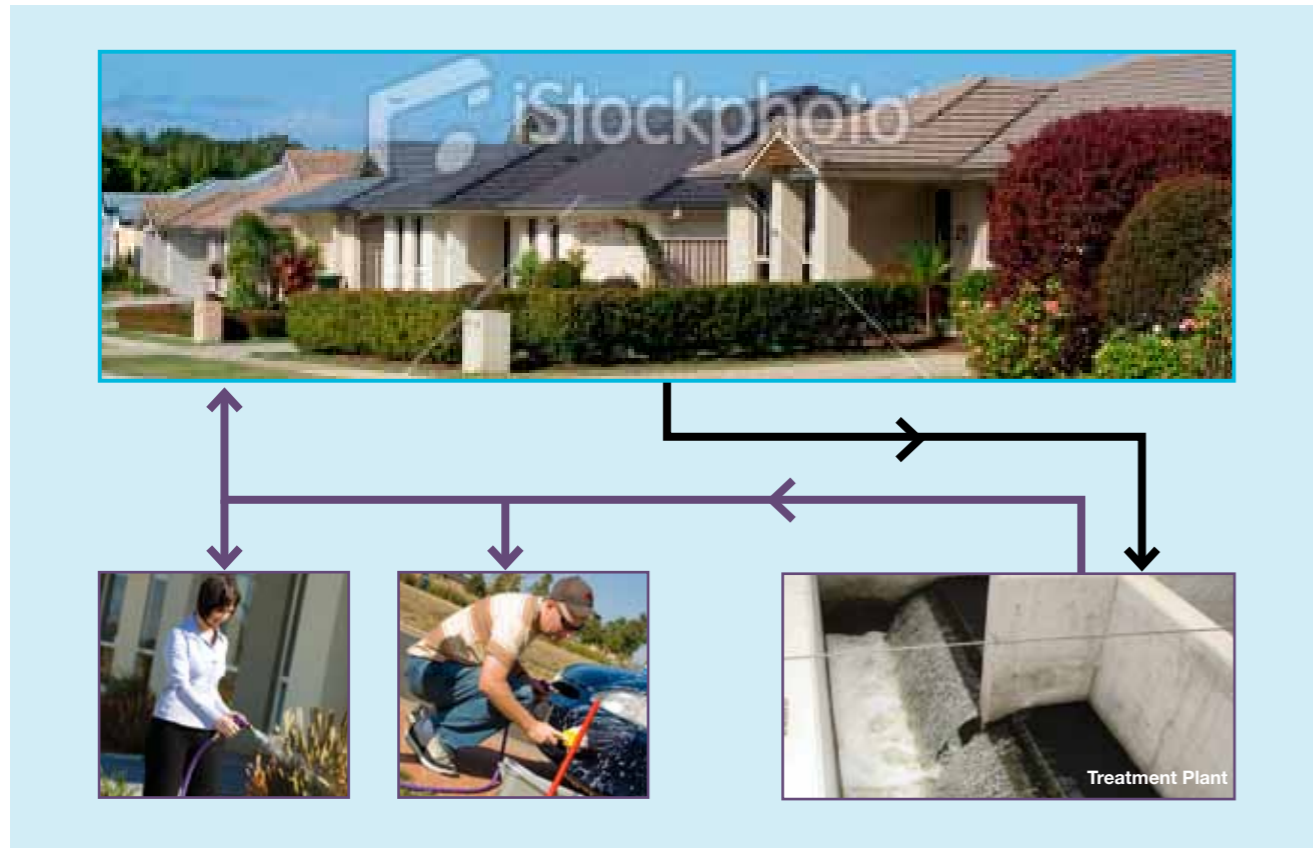


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The Recycled Water Process



Using Wastewater from a Treatment Plant

Melbourne Water's Western Treatment Plant is a major source of recycled water for City West Water customers to use for irrigation, domestic and industrial purposes such as garden watering and washing down animal pens.

City West Water currently supplies recycled water from the Western Treatment Plant to a number of customers including MacKillop College, the Werribee Employment Precinct and to registered water carters via standpipes in Werribee. Recycled water will be supplied to housing estates in Wyndham Vale, council parklands and Werribee Racecourse from 2013.

City West Water's own Altona Treatment Plant is being upgraded to supply industrial customer Qenos with around two billion litres of recycled water each year. Koorngal Golf Course, Sanctuary Lakes Golf Course and two recreational ovals at Altona Green will also receive recycled water from the plant.



The Sunshine Golf Course Recycled Water Sewer Mining Project

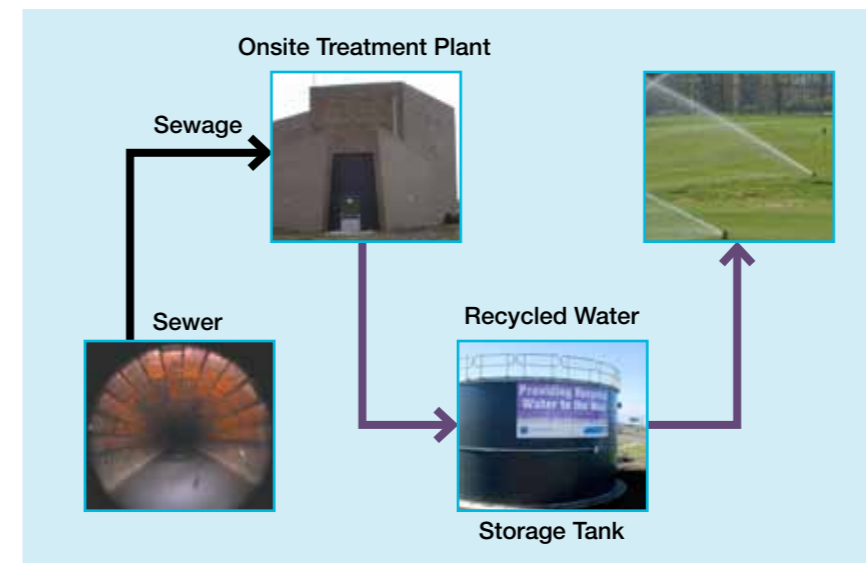
Sewer Mining

Sewer mining is another technique used to produce recycled water. It involves treating wastewater at a point in the sewer network before it reaches the final treatment plant. As shown in the figure below, this means recycled water can replace

various uses of drinking water without having to pump either the wastewater or recycled water over large distances.

Sewer mining schemes of various sizes have been developed and are supplying recycled water to single sites and entire communities.

The Sewer Mining Process



Sunshine Golf Course

The Sunshine Golf Course Recycled Water Sewer Mining Project is one of the first working sewer mining projects in metropolitan Melbourne. Recycled water is produced at an onsite treatment plant using the wastewater extracted from a nearby sewer to irrigate the golf course.

City West Water is assisting sewer mining investigations by the MCG and the Victoria Racing Club at Flemington. Recycled water will be used to keep these sporting venues lush and suitable for use, while saving valuable drinking water.

Stormwater Harvesting

Stormwater harvesting involves collecting runoff from surfaces such as roads, roofs and car parks for a variety of uses, including irrigation of public parks, golf courses, and industrial processing and manufacturing.

There are many reasons why harvesting rainwater and urban stormwater for safe reuse makes sense:

- it reduces drinking water use.
- it is a relatively simple method for reusing water that often doesn't require energy-intensive complex treatment techniques.
- it is usually captured close to where it will be used, reducing the need for pipes and pumping.
- capturing stormwater before it enters our waterways reduces the impact of pollution on the water quality of rivers and the bay.

City West Water has been involved in a number of stormwater projects, including the Schweppes rainwater harvesting scheme which saves about 7.5 million litres of drinking water each year and a rainwater harvesting scheme at City West Water's head office. City West Water is currently working with a number of local councils to provide stormwater to ovals and parks.

