

Water In and Water Out

Kwinana industries use scheme (tap) water, groundwater, stormwater, recycled water and seawater in their processes.

Industry uses site runoff water (limited by available area) as its preferred water supply, in an effort to best conserve and recycle available water. The next preferred source is wastewater from its own operations or another industry, followed by recycled water from recycling plants.

Uses range from drinking and steam making to washing raw materials and sites, cooling, dust suppression and transporting slurry.

The Kwinana Industries Council (KIC)'s policy is to encourage water efficiency and minimise water use, and where possible, reduce its use of high quality, scheme water to the absolute minimum.

KIC supports government policies that encourage groundwater recovery and wants to minimise the amount of wastewater it discharges.

Industry is therefore working with research agencies to find other uses for wastewater for industry and the community.



Recycled Water

The Kwinana Water Recycling Plant (KWRP) offers twice the benefits by increasing overall water efficiency while also reducing process waste discharges into Cockburn Sound.

A \$A25 million micro-filtration/reverse osmosis unit takes treated wastewater from the nearby Woodman point Wastewater Treatment Plant and recycles it to a level suitable for industry.

This water is then used by CSBP, Tiwest, Kwinana Cogeneration Plant, Hismelt and BP. It is used instead of scheme water for industrial processes.

These companies combine to use six gigalitres a year (equivalent to 2-3% of the total scheme water use of the Perth metropolitan area).

Benefit:

Six gigalitres of groundwater and scheme water a year is freed up for other use.



Seawater

Industries along the Cockburn Sound foreshore take seawater for cooling and in the case of the Perth Seawater Desalination Plant, use it to make fresh water to supplement Perth's scheme water supply.

Seawater used for cooling is taken under strict conditions and moves on a flowthrough process which leaves it with minimal changes.

KIC member companies are proud that their use of seawater and reduction in industrial discharge into Cockburn Sound has led to an improvement in marine water quality.

To quote from the 2007 report of Cockburn Sound Management Council report card:

"Between the 1950s and 1980s the environment and shores of Cockburn Sound underwent massive changes as industrial development grew rapidly.

During that time large tracts of sea grass meadows were lost, nutrient and contaminant levels in the water increased, and water circulation patterns were altered.

*However, following large-scale improvements in industrial practices . . . it is gratifying to see that the Sound has now improved to the point that it is in reasonably good health, a generally high standard of water quality."*¹

Water

KIC member companies would prefer to only use scheme (tap) water for drinking or showering and use recycled, bore or seawater for all industrial processes.

The current industry demand for water is 32.7 gigalitres a year, which could increase to 48.9 gigalitres over the next 15 years.²

Up to 45 gigalitres a year of Perth's wastewater flows through a large pipeline called the Sepia Depression Ocean Outfall Line (SDOOL) which crosses the Kwinana Industrial Area (KIA) on its way to an ocean outlet four kilometres off Point Peron.

KIC member companies take more than six gigalitres of water a year from this pipeline, which is treated to industrial use standard by the Kwinana Water Recycling Plant (KWRP). Members would like to see more opportunities to reuse Perth's wastewater for industrial processes.

Potential growth in demand could see industry take up to an estimated 70% of wastewater which is piped under the KIA on its way out to sea. This means there is greater potential that industry's future water needs could be largely met by using recycled wastewater, releasing more tap water for the community and giving groundwater back to the environment.

For more information about KIC's work in water management visit www.kic.org.au