

# Sustainable water management program helps Tiwest to halve its water consumption

**Water Corporation through its Key Customer Relationship Management program (KCRM) has developed a range of partnering initiatives with key customers aimed at improving their water management process.**

To date 138 customers have participated in the diagnostic sessions and the ongoing support programs.

Tiwest Joint Venture is one of the selected customers in the KCRM program and a success story.

Tiwest Joint Venture has consistently pursued cleaner production and eco-viability principles in all areas of energy, materials and water efficiency to ensure the operation's sustainable future.

Tiwest's Group Leader Environment, Risk and Systems Karen Boyce says in establishing itself as a fully integrated titanium minerals processing project in Western Australia, Tiwest has committed itself to approaching sustainability as a business objective.

In 2001 Tiwest used 2266ML of scheme water, which was 1% of Perth's drinking water at the time. One of the company's objectives is to minimize scheme water use from the metropolitan integrated water supply system that supplies the Perth metro area by diversifying its water supply sources. This is being done by reusing and recycling water and by using technological alternatives.

"Tiwest's water consumption after its first year of operation in 1991 peaked at nearly 57kl/tonne of finished pigment product produced," said Karen. "In 2006, this figure was less than 40% of that, with 22kl of water consumed per tonne of finished pigment product.

"During this time our production increased from a rated production

of 56,000 tonnes/year to more than 105,000 tonnes/year of fully finished product."

## Water Management Audit

An in-house water audit in 1995 identified the site's major water uses and opportunities for reducing the use of drinking water supplies.

The initiative resulted in a long-term agreement with the Water Corporation to purchase high quality recycled water from the Kwinana Water Recycling Plant. The amount of Perth's drinking water replaced through this initiative is equivalent to the average annual usage of 3259 Perth homes.

"To reduce Tiwest's demand on drinking water and improve water use efficiency, the company examined a number of alternative water supply options, including a ground water initiative that has replaced approximately 900 ML/year of scheme water that previously supplied the Plant," Karen said.

"Among other reduction initiatives are the increased efficiency of pigment washing, water reuse in adjacent process areas, recycling of discarded processed water for specific applications and the use of alternative off-site water sources.

"Tiwest now uses use pigment contaminated and brackish water for wash downs. It has also installed a reverse osmosis plant to process boiler feed water and a tank to allow use of the reclaimed treated waste water."

## Future initiatives

Tiwest will continue to pursue a number of initiatives including wastewater contaminant removal, a further water audit, and maximising reclaim from the process wastewater cycle.

The Company will also work with other local industries to find new

opportunities for industry wastewater exchange, reuse and the potential to reclaim and reuse contaminated groundwater.

Onsite water use efficiency and recycling of wastewater internally and collaboratively with associated industries has provided alternative water sources that the company can manage, independently of the community's water supply.

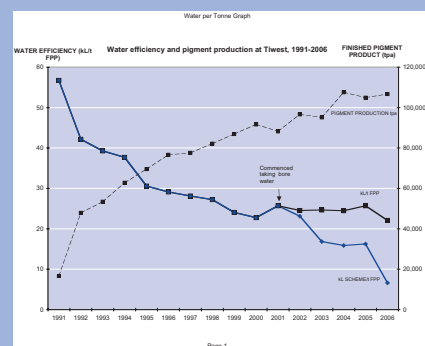
Water Corporation Relationship Manager Max Viskovich said that Tiwest's achievements in replacing precious drinking water supplies through increased use of recycled water has set a fantastic example for other large water users.

Tiwest received a major award from the Minister for Water Resources in 2006 for its significant achievement in water recycling.



**Left to right:**

Max Viskovich (Water Corporation)  
Mitch Little and Tony Martin (Tiwest)



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