



## Background

Over past decades there has been increased pressure for greater Water Use Efficiency (WUE) in Victoria's agricultural industries. The State Government wants to more clearly identify where significant improvements to WUE can be achieved.

In 1999 a DPI/DSE 'Coordinating Group on Water Use Efficiency' was formed to clarify and define on-farm WUE indicators. In 2004, these indicators were published in the 'Farm Water Use Efficiency Technical Reference Booklet' (**Table 1**). The Booklet also provided a framework for benchmarking farm WUE for irrigated industries within Victoria's major irrigation regions. The current project 'Irrigation Water Use Efficiency Benchmarking' is designed to review and implement the proposed WUE benchmarking framework.

**Table 1 – Victorian WUE Performance Reporting Indicators**

Water Use Indicator	Description
1. Farm Total Crop Water Use Indicator	<u>Crop Total Water Requirement (Irrigation + Rainfall) (ET<sub>c</sub>) (ML)</u> Total Water Supplied (Irrigation Water Supplied to the Farm Gate + Effective Rainfall) (ML)
2. Farm Irrigation Crop Water Use Indicator	<u>Crop Irrigation Water Requirement (Exclusive of Rainfall) (ET<sub>i</sub>) (ML)</u> Irrigation Water Supplied to the Farm Gate (ML)
3. Farm Total Crop Production Water Use Indicator	<u>Quantity of Produce generated from a particular irrigated crop (kg)</u> Total Water Supplied (Irrigation Water Supplied to the Farm Gate + Effective Rainfall) (ML)
4. Farm Irrigation Crop Production Water Use Indicator	<u>Quantity of Produce generated from a particular irrigated crop (kg)</u> Irrigation Water Supplied to the Farm Gate (ML)
5. Farm Total Crop Economic Water Use Indicator	<u>Long-term Average annual Gross Margin of a particular irrigated crop (\$)</u> Total Water Supplied (Irrigation Water Supplied to the Farm Gate + Effective Rainfall) (ML)
6. Farm Irrigation Crop Economic Water Use Indicator	<u>Long-term Average annual Gross Margin of a particular irrigated crop (\$)</u> Irrigation Water Supplied to the Farm Gate (ML)
7. Farm Total Crop Water Use Application Intensity Indicator	<u>Total Water Supplied to the Farm Gate (inclusive of Effective Rainfall) (ML)</u> Total Area Irrigated (Ha)

## Project Objectives

The main objectives of the Irrigation Water Use Efficiency Benchmarking Project is to benchmark WUE on farms in all metered irrigation regions in Victoria and to develop a planning framework for an on-going farm WUE Benchmarking program.



# Irrigation Water Use Efficiency Benchmarking

## Project Outline

The project will achieve this through the following activities:

- Report regional scale WUE benchmarks for farms in the Sunraysia Irrigation Region (pilot project).
- Report regional scale WUE benchmarks for farms in all metered irrigation regions in Victoria.
- Document a planning and implementation framework for a continuing regional scale WUE Benchmarking program for Victorian farms.
- Form and manage a WUE knowledge network featuring relevant players in WUE – agencies, industries, regions.
- Document a process to ensure effective investment in farm WUE and mechanisms to maximise policy, extension and research outcomes.
- Report on current WUE benchmarking projects – industry and region.
- Identify key information gaps and develop a strategy to address science requirements. A particular focus here will be the assessment of methodologies and technologies that will enhance regional scale WUE monitoring programs particularly the use of satellite based monitoring or ABS survey methodologies.

## Results, implications and benefits

This project will result in an increased capacity to:

- Compare WUE between Victoria's irrigated regions and industries.
- Identify priority industries and irrigation regions for investment in farm irrigation system improvements.
- Quantify the WUE benefits/costs of private and public investment in farm WUE improvements.

The project will also form a state-wide WUE Knowledge Network. The network will oversee development of regional and state-wide benchmarks, value-add to the reporting of these benchmarks and facilitate the identification of scientific issues and knowledge gaps to be addressed in the development of regional and state-wide WUE targets and reporting mechanisms.

## Contact Details

For more information regarding the Irrigation Water Use Efficiency Benchmarking project contact:

Daniella Csaky (DPI)

Ph: (03) 9210 9464

Email: [daniella.csaky@dpi.vic.gov.au](mailto:daniella.csaky@dpi.vic.gov.au)

Anne-Maree Boland (DPI)

Ph: (03) 9210 9203

Email: [anne-maree.boland@dpi.vic.gov.au](mailto:anne-maree.boland@dpi.vic.gov.au)

Andy McAllister (DPI)

Ph: (03) 9210 9203

Email: [andy.mcallister@dpi.vic.gov.au](mailto:andy.mcallister@dpi.vic.gov.au)



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