

# SUNRAYSIA MODERNISATION PROJECT

the Business Case. This group consists of senior government departmental officials. This committee is being aided by a technical support group. Consultation with Customer Service and Advisory Committees has commenced. Horticultural sector representatives will also be consulted as part of the consultation process. Direct grower consultation in each subsystem supply zone will proceed once the level of external funding has been determined and if sub system upgrades are to be considered.

## Work Underway

### System Design and Cost Estimates

LMW has engaged engineers Kellogg Brown & Root Pty Ltd (KBR) and URS Australia Pty Ltd (URS) to develop and evaluate supply system configuration options. Additionally, Optimatics have been engaged to identify the most efficient combination of pipe sizes and flow rates.

### Business Case

LMW has engaged Osborne Management and Marsden Jacob Associates to prepare the detailed Business Case for the project including a full cost benefit analysis and NPV (Net Present Value) assessments of engineering options and economic benefits and flow on effects. Selected grower interviews have taken place as part of this work to provide case studies that will support the Business Case.

### Deloitte

Deloitte has been commissioned by LMW to assist with the identification of the key strategic issues and articulation of a high-level vision for the project consistent with the expectations of the State and Commonwealth Governments.



## KEY DATES

On the information to hand at May 2009 the following key dates are known or will become pertinent:

- business case completed August 2009
- outcome of application to State Government Expenditure Review Committee advised by May 2010
- grower consultation completed by mid 2011
- detailed project design and permits finalised by late 2011
- construction commencement by mid 2012
- project completion to be determined based on final works option chosen

## PROJECT INFORMATION

Project information will be posted on LMW's web site and will be updated as planning and background work proceeds. Visit: [www.lmw.vic.gov.au](http://www.lmw.vic.gov.au)

Version 1. Issue date; 9th June 2009

## THE SUNRAYSIA MODERNISATION PROJECT: WHAT IS IT?

The Sunraysia Modernisation Project (SMP) is an infrastructure upgrade program that will modernise the irrigation supply infrastructure in the Merbein, Mildura and Red Cliffs Irrigation Districts to provide a year round supply to customers.

This will involve the comprehensive upgrading or replacement of the major components of the pumping and delivery systems. The quality of water and reliability of supply will be substantially enhanced.



The second phase of the project involves sequentially renewing the subsystem delivery networks to the farm gate as these assets deteriorate or as funds become available. This will then permit the delivery of a high pressure supply to the farm gate.

The ultimate objective is to supply water 365 days per year at a pressure of 35m head (350kPa). The application rate will be improved to 10.5 mm per Ha per day.

Following the success of modernising other irrigation systems, including the current Robinvale project, the expected benefits of a viable irrigation sector have been identified for the proposed modernisation of the three Sunraysia systems.

## WHY DO WE NEED IT?

### Current Infrastructure

Much of the irrigation infrastructure in the Sunraysia region was designed and installed 50 to 100 years ago to provide service levels below those that are now necessary for today's modern on farm irrigation systems and for specific crop requirements. This places excessive demands on the existing channel and pump station systems. While there are some areas of high quality assets (for example the new 17th Street high pressure subsystem in the Mildura Irrigation District) overall the supply infrastructure is generally in poor condition and assets are expensive to maintain. The systems will require increasing levels of maintenance and hence costs as time goes on.

A major failure during summer in any of the pump stations or main channels would have disastrous effects on crops. Irrigators in the region are concerned with security of supply and in some areas rightly perceive the irrigation system to be run down and with limited residual life.

Thus these systems require significant modernisation if they are to support and promote a resilient irrigation sector for our regions future.

### Benefits of Modernisation

In general the existing systems only provide irrigation water to properties over a ten month irrigation season due to the need to undertake channel maintenance in winter. With a year round water supply there will be strong opportunities for increased output, greater crop flexibility, increased diversity of cropping including winter crops, and reduced variability in on-farm incomes. A high proportion of our regional produce is sent overseas thus there are substantial prospects of increased export income.

A high pressure delivery system will remove the requirement for on-farm pumping (with equipment and electricity savings) and promote efficient water application to crops.

Depending on the final design of the system, some of the existing open channels may be able to be removed, improving community safety and access to properties. It will also assist with enterprise reconfiguration and consolidation of properties.

Water savings will also be achieved, although they will not be the key driver of the project.

The project will also create an estimated 100+ jobs during the construction phase. Each new job in the horticultural sector leads to two flow on jobs.

Sunraysia is ideally positioned to take advantage of the upgrade due to its position as a road transport hub, with the rail freight upgrade and a strong local skill and manufacturing base. Unemployment in the region is currently above state average but there are high employment multipliers from increased agricultural output that would result from year round water supply.

## OTHER SYSTEM UPGRADES

**Various irrigation systems in NSW, SA and Victoria have already been refurbished with state of the art supply systems.**



### Riverland (SA)

Central Irrigation Trust (CIT) is responsible for the areas of Berri, Barmera, Waikerie, Cadell, Loxton, Renmark, Myponga, Moorook and Kingston in the South Australian Riverland. All these systems are now fully automated piped schemes and offer computerised water on order.

### Western Murray (NSW)

Western Murray Irrigation is responsible for the operation of the Buronga, Curlwaa and Coomealla irrigation areas of NSW, adjacent to the Victorian region of Sunraysia. All the pumping stations operated by WMI are already fully automated, the supply system is fully piped and water is available on demand year round.

### Victorian Systems

There have been substantial government and irrigator funded upgrades of rural water supply systems in Victoria in recent years. The 8,800 km Wimmera Mallee Pipeline is nearing completion and is due to be finished in early 2010. This \$688M project will replace over 16,000 km of open channels and will save over 100 GL a year for farmers, households, future growth and the environment.

The Northern Victorian Irrigation Renewal Project (NVRP) project is underway. Stage 1 of the project has been funded to the value of \$1billion with the Victorian Government contributing \$600M, Melbourne Water \$300M and Goulburn Murray Water \$100M. The project consists of a combination of channel automation, channel lining, bank remediation, system reconfiguration and remodelling, and meter upgrades.

### Case Study: Robinvale

The 2,700 hectare Robinvale irrigation district is currently being transformed to a state of the art, high-pressure pipelined system that will improve system reliability and deliver water 365 days a year. Water savings of up to 1,500ML per annum are expected. The final cost of the project is expected to be in the order of \$47M, which is jointly funded by the Victorian Water Trust (\$20M) and LMW and Robinvale customers (\$27M), but the net increased cost to irrigators is relatively small as increased water prices will be offset by on-farm savings of pumping costs. Irrigators will realise substantial overall benefits through more reliable supply and increased on-farm productivity (e.g a high pressure system will allow targeted micro irrigation under vines during excessively hot periods to prevent heat damage to crops).

The project commenced in early 2007 and is due to be completed by November 2009.

LMW's involvement in this Robinvale infrastructure upgrade provides it with valuable project experience for use in the Sunraysia Modernisation Project.



## DESIGN OPTIONS

LMW is considering a range of project options and a Project Reference Group will advise LMW on these options, design data and other matters relating to the project. The following range of options is being considered and will depend on a number of factors, including funding:

- upgrading the main arterial supply lines only
- upgrading all the districts to medium or high pressure as a single project
- upgrading the entire system as a staged process
- upgrading different sub-systems to different service levels

## COSTS AND FUNDING

While estimated costs are still being determined, the final option will most likely depend on the eventual level of Government funding. Work is underway to better understand the costs associated with the various options.

In-principle funding support (subject to due diligence) of \$103M has been announced by the Commonwealth Government after the July 2008 COAG meeting through its *Water for the Future* program.

Additional funding is being sought from both Commonwealth and State Governments; however it is envisaged that irrigation customers will need to make some contribution to the cost of the project.

LMW will be considering all funding options, but notes that a single project would be more cost-effective than a staged program.

As a guide, price increases in the Robinvale district as a result of the upgrade are around \$35 per ML. However, there are also significant savings of up to \$25 per ML on farm through the removal of pumping power costs alone. There are also significant savings in LMW's system maintenance costs that will help offset any price increases arising from the capital cost of the project.

## WHAT LMW IS DOING



### State Government Process

LMW has met with Victorian Minister for Water Tim Holding to provide him with a briefing on the project. LMW has also commenced the State Government's 'Gateway Review Process' which aims to achieve better capital investment outcomes by reviewing major asset investment projects at key decision points. The first step of this process, known as the Gateway 1 Review, has been completed in preparation for the development of a full Business Case, which will be finished in August 2009. This Business Case will put the case to Government for funding and list the costs and benefits of the various options.

### Community Input

Obtaining representative grower and community input on the project is essential, both as part of the initial planning process and at later stages of detailed design. A Project Reference Group was formed in May 2009 to steer the development of