LOWER MURRAY WATER

SUNRAYSIA MODERNISATION PROJECT

Community Display & Information Sessions

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 project is currently at concept stage and a detailed design has not yet been undertaken. Professional cost estimations have been obtained to give some confidence in the project estimates

You are invited to come and speak to our staff on a face to face basis about the proposed project and find out how it relates to your irrigation district. You will be able to raise any particular question that you may have about the project and you will either receive a direct answer or have your query taken for later reply if we cannot answer your question at the time.

Separate information sessions are being held for irrigation customers in each of the three districts. These information sessions will be repeated over the two week period shown below to allow customers the opportunity to attend. You should allow between 30-45 minutes.

INFORMATION SESSIONS TIMES AND VENUES

Town	Location	Date	Time
Red Cliffs	Red Cliffs Club Function Room	Monday 17th August 2009 Tuesday 25th August 2009	Anytime between 4pm - 7pm Anytime between 3pm - 6pm
Merbein	Merbein Citizen Club	Wednesday 19th August 2009 Wednesday 26th August 2009	Anytime between 4pm - 7pm Anytime between 3pm - 6pm
Mildura	Settlers Club - McKenzie Room	Thursday 20th August 2009 Thursday 27th August 2009	Anytime between 4pm - 7pm Anytime between 3pm - 6pm

RON J LEAMON
MANAGING DIRECTOR

LOWER MURRAY WATER

SUNRAYSIA MODERNISATION PROJECT

Customer Information Sheet 1

SUNRAYSIA MODERNISATION PROJECT - WHAT IS IT?

The Sunraysia Modernisation Project (SMP) is an irrigation infrastructure upgrade program that will modernise the irrigation supply infrastructure in the Merbein, Mildura and Red Cliffs Irrigation Districts providing uninterrupted supply of irrigation water 365 day a year to it's customers. The SMP will deliver better quality water to irrigation and domestic and stock customers.

The SMP involves the comprehensive upgrading and/ or replacement of the major components of the pumping and delivery systems under a three staged development plan. Customers within each sub-system will have the option to move to a high pressure system in stage 3 on a user pays basis.

PROJECT DETAILS

LMW has considered a range of project options and in consultation with key stakeholders proposes to roll out the SMP under three stages, those being:

- **Stage 1** Upgrading of the major components of the pumping and delivery system.
- **Stage 2** Upgrading the sub-systems
- **Stage 3** Pressurisation of the sub-systems to deliver high pressure water to the farm gate of all customers.

These stages have been devised so that they can be delivered either on a stand alone basis or concurrently based on the level of Government funding that may become available. The stages have also been configured to maximise benefits to customers on a progressive and cumulative basis.

There are no additional cost impacts on irrigation customers from Stage 1 or Stage 2. Stage 3 will only occur should irrigation customers choose to proceed with this option. It will be funded as a direct charge to benefiting irrigation customers. The total project cost is $401 Million.

Stage 1

Stage 1 involves the replacement of the major pumping equipment at the three pump stations at Merbein, Central (Mildura) and Red Cliffs. It also involves the reshaping, lining, covering and fencing of all the open channels in the three irrigation districts. Telemetry based metering of all outlets will also occur as part of this stage.

The estimated cost of this work is $120 Million and will be funded from the Commonwealth grant of $103 Million plus $17 Million from the existing LMW Water Plan.

There are no additional price impacts on irrigation customers in this stage as the LMW component is already funded.

All irrigation customers will benefit under this stage from:

- the introduction of 365 day service.
- improved water quality via the exclusion of wind borne debris, removal of silt via silt traps and the prevention of aquatic weed growth and algal contamination resulting from the exclusion of sunlight by the covered channel system. The system also reduces the degree of fouling of the water by water birds and other stock.
- reliability of supply via the new infrastructure.
- greater operational and water delivery flexibility due to total channel control.
- significant operational and maintenance cost savings.

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Stage 2

There are currently 19 subsystems that convey water from the main channel / pipeline system to each irrigation customer supply point.

Stage 2 involves the progressive replacement of the distribution pipelines in each of the 18 subsystems that serve the three districts. (the 19th subsystem has recently been replaced as a high pressure system by the former FMIT). The new pipelines will replace the existing pipeline layouts. The new pipes will provide the same levels of pressure as exists today however they will be high pressure rated pipes such that high pressure can be provided later under stage 3.

The subsystems are being ranked and prioritised based on several factors including their age, the levels of serviceability that they currently provide (ie how many times the system is off due to leaks or bursts) and the level of maintenance costs.

As an example the Mildura L system is the highest ranked subsystem for replacement.

The total cost of this stage is estimated to be $227 Million. An application is being made to the Victorian State Government for this stage. The application will seek funding in three rounds such that the higher ranked, maintenance intensive subsystems can be replaced without undue delay while the younger more reliable subsystems can be replaced as a follow on program.

The engineering group within LMW are still working through this prioritisation process to develop the full replacement schedule. The schedule may include some localised replacement in lower ranked subsystems where there are unusually high recurrent maintenance issues or where tight laterals are causing supply problems.

There will be no cost impacts on irrigation customers in this stage.

Irrigators will see benefits including an increase in reliability, greater access to water and an increase in the application rate to 10.5 mm per day. In the worst cases this would see an improvement by as much as 35 %.

Stage 3

Stage 3 is the final stage where each subsystem can be converted to high pressure.

Conversion to high pressure will involve the installation of a high pressure pump station at the feed point to each subsystem. Irrigation customers in each subsystem will be consulted and will decide whether they wish to convert to a high pressure supply.

Should irrigation customers choose to move to high pressure it will be on the basis that the capital cost of this conversion will be met by growers in their subsystem. This would be through an annual price increase that would service loan funds for the works and operating costs to provide high pressure.

The total cost to pressurise all 18 subsystems is estimated to be $54 Million

As each subsystem is different, LMW are unable to predict the incremental costs at this time. These will be determined as the detailed planning for each subsystem replacement is occurring such that growers can make an informed decision regarding pressurisation.

As a guide, price increases in the Robinvale district resulting from the current upgrade to a high pressure system are $36 per ML. However, these increases are offset by significant savings of about $25 per ML on farm through the removal of pump and power costs. The incremental costs in Sunraysia will be less than those in Robinvale due to the lesser per capita capital requirement that is needed for each conversion. The consolidation of pumping into a single pump station for each subsystem will allow better power costs to be attained under LMW's bulk power tariff arrangements. There may also be opportunities under the new Carbon Pollution Reduction Scheme to generate carbon credits as part of this consolidation.

The pressure stage in each subsystem could proceed in conjunction with the subsystem replacement stage should irrigation customer choose to take up the high pressure option.

Irrigation customers will benefit from a high pressure supply through the added flexibility of water on demand, removal of on property pumping and the ability to reconfigure irrigation systems either on existing or additional land holdings

THE AREA TO BE SUPPLIED

The area to be serviced by the project is the area within the three irrigation districts plus existing licensed commitments, including domestic and stock, outside the districts that are currently serviced by agreement via the existing irrigation infrastructure. The new works will not be upsized to service new areas.

THE BUSINESS CASES

A business case focusing on Stage 1 works must be provided to the Commonwealth Government with the intent being to access the pledged $103 Million. This business case addresses specific Commonwealth due diligence criteria. These criteria are available on the LMW website at the address shown at the bottom of this brochure.

An extended version of the Business Case will be provided to the Victorian State Government seeking funding for Stage 2 works.

Professional estimators have prepared the project cost estimates such that all parties can have confidence in the estimates.

WATER SAVINGS

It has been agreed that the Commonwealth Government will receive 50% of the water savings achieved as a result of the works under Stage 1. The balance of the savings in both Stage 1 and Stage 2 will be part of the funding negotiations with the Victorian State Government. A preliminary desktop assessment has estimated that the total savings from both stages will be in the order of 8 GL.

KEY DATES

The Commonwealth Government have agreed to accept the business case application for funding at the end of August 2009.

The Commonwealth Government will assess the submission and is expected to provide an answer by late 2009.

The extended Business Case is to be lodged with the Victorian State Government during September 2009. This is a part of the Estimates Review Committee process that considers requests for Victorian State Government funding each year. The outcome of this request will not be known until the announcement of the May Budget in 2010.

TIMING OF WORKS

Subject to receiving Commonwealth Government funding the Stage 1 works will most likely commence during the winter of 2010 and would be completed during the winter of 2013.

Timing of Stage 2 works is totally dependant on the outcome of the Victorian State Government funding application.

WHY HAVE LMW CHOSEN LINING, COVERING AND FENCING OF CHANNELS?

Two options were considered for the main arterial supply lines being:

- pipelining
- lining, covering and fencing existing channels

While both systems achieve the project objectives the preferred lined, covered and fenced option achieves the objective at a $200+ Million lesser cost.

The preferred option has an estimated life expectancy in excess of 30 years and can be replaced some five times over for the equivalent cost.

Some of the other key factors considered in choosing the preferred option include:

- pipelines have a higher ongoing operational cost due to the higher energy needs to pressurise the full network. This has implications for water prices as well as additional greenhouse gas impacts.
- the existing channel networks were very cleverly positioned by our forefathers to take advantage of gravity to move the large volumes of water throughout the districts at minimal costs. This strategic advantage will be maintained by the preferred option.
- large diameter pipelines will be difficult to construct near existing channels due to seepage and groundwater and would require some new alignments leading to property disturbance, land acquisition and compensation. These issues do not emerge with the channel option. Notwithstanding, there are access issues associated with the exiting channel networks that will be worked through in the detailed planning phase.

WHAT WILL A LINED, COVERED AND FENCED CHANNEL LOOK LIKE?

The lining system is a 2 mm thick high density polyethylene (HDPE) liner. This system has been developed in Queensland over 30 years and is currently being installed throughout the Northern Victorian Irrigation Renewal Project area. This project has already installed over 30 kilometres of liner and will eventually have in excess of 650 kilometres of lined channel.

Our channels will have silt traps constructed at strategic locations to capture sediment. The silt traps are designed such that they can be cleaned without emptying the channels such that irrigation supply is not interrupted.

The covering system proposed is an industrial strength high weave shade cloth that will be suspended on high tensile cables above the channels. The suspension cable system is anchored on each side of the channel at regular intervals. The cover will effectively seal at the edges with the HDPE liner such that wind blown debris and human access cannot occur. The covering system is sufficiently strong that it will easily support a fully grown adult. The shade cloth will prevent 90% of the sunlight reaching the water and will save on evaporation losses and prevent increase in water temperatures. As a combination, the liner and covers will prevent weed growth in the channels.

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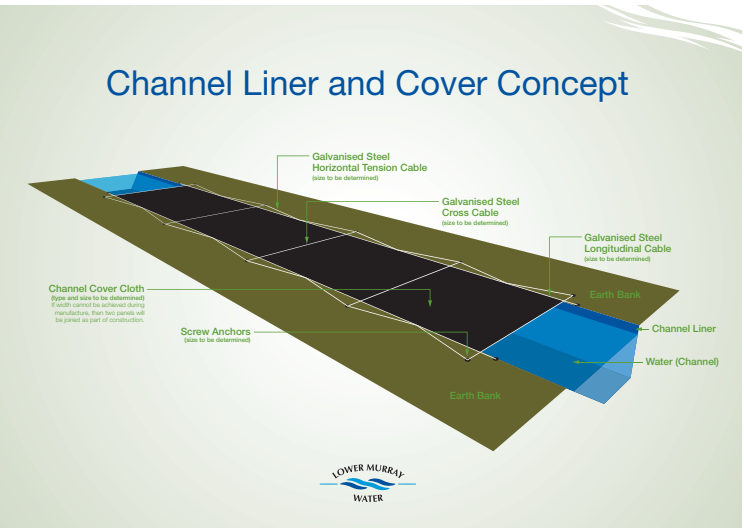

The covers will have regularly spaced entry and escape points.

The fencing is intended to secure the lined and covered channel from unintended human and animal intrusion. It will be in the order of 1.5 m in height possibly consisting of chicken wire and three separate barbed wires.

A lined and covered section of channel is to be constructed as a trial using different covering systems to assess the most appropriate format. This will be undertaken prior to a final configuration being adopted. It will also allow irrigation customers to view the arrangement in a field situation.

WHO HAVE LMW CONSULTED DURING THE PRELIMINARY STAGE?

Obtaining representative grower and community input on the project is essential. A Project Reference Group was formed in May 2009 to guide the development of the Business Case. This group consists of senior government departmental officials to ensure the project is aligned with Government policy and key departmental objectives. This committee is being aided by a technical support group consisting of various local agency representatives and technical consultants. The Customer Service and Advisory Committees have also provided value opinion regarding the options and issues associated with the project. Horticultural sector representatives have also been involved as part of the consultation process.

WHO WILL LMW CONSULT WITH IN THE FUTURE?

LMW will keep all irrigation customers and the general public informed of progress via further customer brochures, general newsletters and media releases.

We will continue to consult with our Customer Services and Advisory Committee as the project unfolds.

Open forum information sessions are to be programmed to keep all growers informed at key periods during the project.

Face to face consultation will proceed with irrigation customers in each supply subsystem provided that funding has been received for replacement of the subsystems. This consultation will be with irrigation customers in each subsystem as upgrades are being planned such that pipeline routes can be optimised and irrigation customers can consider the high pressure option.

FEEDBACK

LMW invite feedback to the project proposal which should be lodged in writing to PO Box 1438, Mildura, 3502 or by email to the following address **smpfbk@lmw.vic.gov.au**

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**

Issue date: 27th July 2009

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