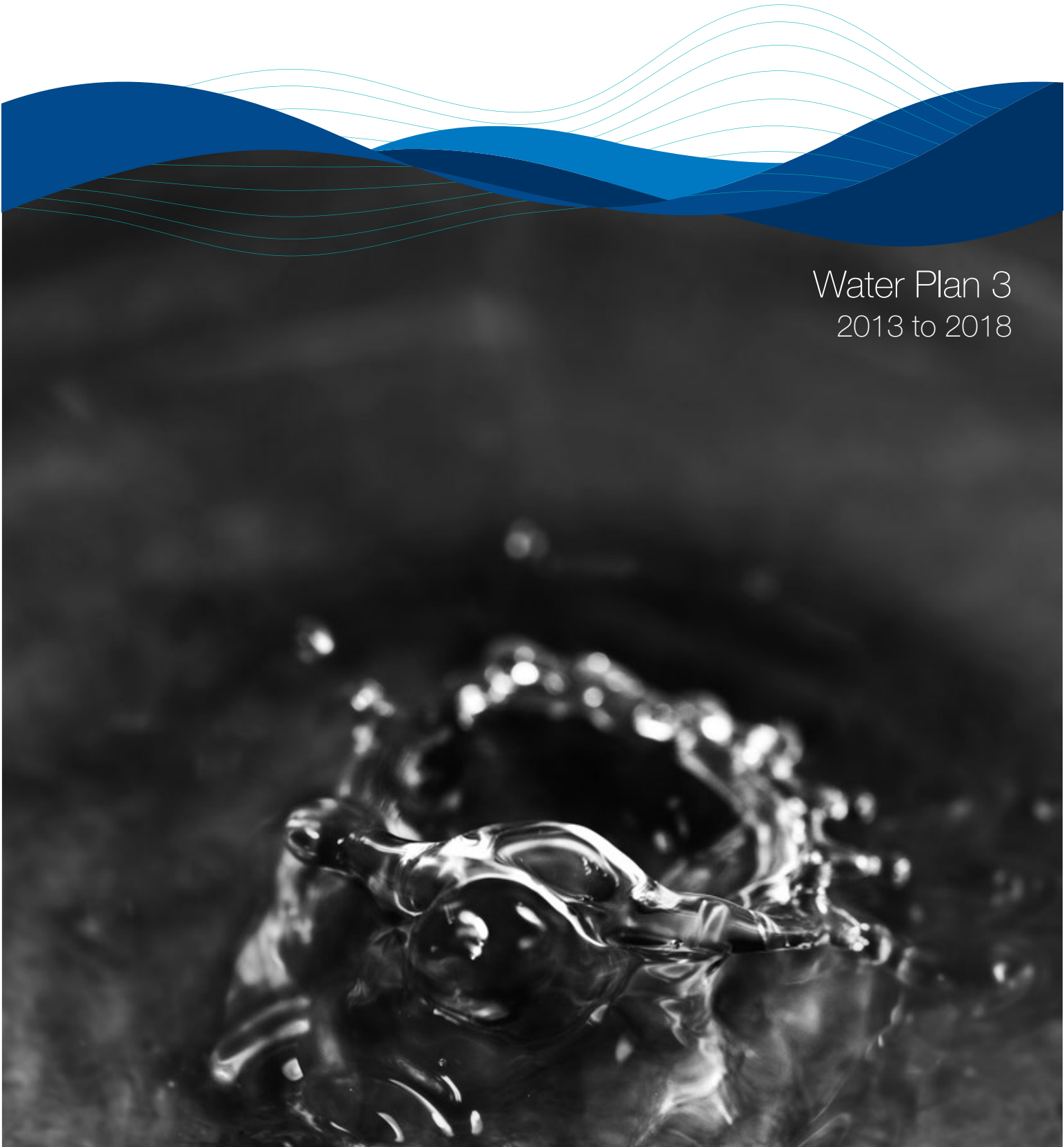




Water Plan 3  
2013 to 2018



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# Section 1

## Executive summary

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## Section 1 / Executive Summary

### Our business

Southern Rural Water (SRW) is a Victorian Government not-for-profit corporation with three primary business functions:

- **Irrigation Supply**– supplying an average of 150,000 ML for the Macalister Irrigation District near Maffra, 4,000ML to the Bacchus Marsh Irrigation District and 10,000ML to the Werribee Irrigation District and associated rivers for irrigation and stock and domestic use
- **Licensing access to water from groundwater and rivers** – administering around 7,800 licences for surface and groundwater diversions, and licensing construction of bores and on-stream dams. We act on behalf of the Minister to regulate licensing and use
- **Managing Large Dams and Weirs** – with seven dams and eight weirs in the Werribee, Maribyrnong, Latrobe and Macalister basins to harvest, store and deliver bulk water entitlements for our own irrigation customers, urban water authorities and Latrobe Valley power generators

These functions trigger different obligations, drivers and priorities. In this Water Plan we have indicated the expenditure and pricing issues relevant for our separate customer groups.

### Our strategic focus

Our vision is to deliver:

#### **Outstanding rural water management for a prosperous Southern Victoria.**

We are the custodian of rural water in southern Victoria. This water is used for irrigation, industrial and urban supply, and we seek to ensure that it is managed sustainably and responsibly to maximise its economic value with minimal environmental impact.

We also have assets of approximately \$1.2 billion under our management. We are committed to ensuring that our dams meet acceptable public safety standards and that all of our assets allow our customers to make the best use of their water. This will require significant capital expenditure.

To aid our strategic focus, we have expanded our vision into eleven goals. These goals describe how we would like our business to be in the year 2020:

- We are environmentally sustainable
- We are efficient, capable and resilient
- Our people love working with SRW
- Our customers believe we provide great service at a fair price

- Our communities understand their water issues, what we do and why we do it
- We add value to our stakeholders and customers and they value our relationship
- Our tenacity creates sensible outcomes in tough situations
- We influence our regulatory and legislative environment to balance environmental, economic and social outcomes.
- Our irrigation districts are adaptive, efficient and sustainable
- Our dams and distribution assets meet agreed levels of community safety and are managed to high professional standards
- We understand the science of our catchments and aquifers and we apply this to the benefit of our communities

These goals drive the main initiatives and capital expenditure for this Water Plan. The approach is framed in a current strategy map, which describes the focus for the years 2012 to 2015. We have developed a further draft strategy map for the remainder of the Water Plan period, which will be finalised as we approach the later years of Water Plan 3.

### Our outcomes

From where we are today to the end of Water Plan 3, we expect to achieve a number of major milestones working toward the goals above:

- Public safety risk for all of our dams will reach the “Limit of Tolerability” under the ANCOLD dam safety guidelines
- A step change in service and efficiency in the Macalister Irrigation District through the \$26 million MID 2030 leading works project
- Commencing the modernisation of the Werribee Irrigation District starting with the 4/1 channel
- An increase in our communities’ understanding of groundwater through the production of Groundwater Atlases for Gippsland and for the Port Phillip and Westernport areas
- Developing our first on-line aquifer based groundwater information tools
- Improving the way we manage assets by implementing a new asset management system, and developing maintenance strategies
- Improved economic and environmental outcomes across our region through working with our catchment partners to implement policies and actions from the Gippsland and Western Sustainable Water Strategies
- Increased water trading across southern Victoria through actions to free up trade and improve information availability

- Progress toward compliance with the National Metering Standards for our groundwater and rivers business (with completion planned in Water Plan 4).

Supporting this is an expectation of continuous improvement in all aspects of our business.

We also plan to make bids for state government funding for infrastructure investment in our Irrigation Districts. If we are successful in these bids, we may need to seek a re-opening of our determination to recognise our co-contribution for these works.

## Indicative tariff changes

The proposed tariff changes for this Water Plan are relatively modest, despite some significant capital works. Moving away from a renewals annuity in our pricing for irrigation districts has eased price impacts for this Water Plan.

To avoid volatility in pricing, the renewals annuity charge will be progressively reduced over the course of Water Plan 3, and the renewals fund balances used to fund capital works in the irrigation districts until the balance is exhausted.

Indicative tariff changes for this Water Plan are shown in the table below. These tariff changes are average annual changes relative to 2012-13, and do not include CPI. Changes in storage operator charges will reflect not just cost changes, but also changes in cost shares resulting from amendments to Bulk Entitlements. For Gippsland Water and Western Water there will also be a realignment of charges to actual costs, as we move away from the fixed charge agreements that were in place for Water Plan 2.

### Average tariff changes

Macalister Irrigation District	0.45%
Werribee Irrigation District	1.44%
Bacchus Marsh Irrigation District	(1.93%)
Surface water licences	No change
Groundwater licences	No change

### Storage operator charge changes

<b>Gippsland power generators</b>	
Change in underlying costs	0.02%
Change from increase in share of costs	4.11%
<b>Average change in annual charges</b>	<b>4.13%</b>
<b>Western Water</b>	
Change in underlying costs	4.4%
Realignment to actual costs	(1.7%)
<b>Average change in annual charges</b>	<b>2.7%</b>
<b>Gippsland Water</b>	
Change in underlying costs	0.53%
Change from increase in share of costs	6.98%
Realignment to actual costs	3.46%
<b>Average change in annual charges</b>	<b>10.97%</b>

Table 1: indicative tariff changes - annual - ex CPI

These changes reflect repayment of under-recovered revenue for Water Plan 2, and charges for our proposed capital works program. In our irrigation districts, these charges are partly offset by the transition away from renewals pricing.

There is very little additional expenditure proposed in this plan for new initiatives or new obligations.



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## Purpose

Southern Rural Water is required to prepare a five year Water Plan for the period 2013-18. This plan is used by the Essential Services Commission to assess the revenue we will require over that period, and to approve or determine the manner in which our prices will be set.

## Form of regulation

Southern Rural Water has a long history of close and effective engagement with customer consultative committees – particularly through our annual planning and pricing processes. Committee members are selected for their diverse and competent input, and we are proud of the sense of ownership shown by the members on behalf of their communities in seeking to maintain their districts or regions as profitable and financially viable. We are also proud of our relationships with our committees. We are always transparent in presenting financial information, and we work together in setting annual tariffs.

We have always sought to ensure that regulation does not undermine or disempower our customer committees, and so far this has been aided by using a revenue cap as our primary form of regulation. Under this model, the ESC approves the total amount of revenue that we can recover over the period of the Water Plan. We then work with customers annually in setting tariffs – which must not raise more revenue than our “cap”.

In setting our annual prices, we have regard for our annual budgets, and only price to recover our expected costs for the coming financial year. We also only price for the cost of capital works that have been delivered – or are reasonably expected to be delivered in the coming year. Over the past four years, we have typically priced below our revenue cap, and below the indicative tariffs published in our second Water Plan.

Customers provide input on, for example, whether tariff changes should be smoothed, adjusted in a single year, or deferred to later years. These decisions often reflect regional economic circumstances which may change from year to year.

The effectiveness of our annual pricing and our close customer engagement is demonstrated by our pricing outcomes across Water Plan 2. Our tariffs for 2012/13 range from 9% to 18% below the levels indicated in our 2008-13 Water Plan.

To the extent that any pricing below our revenue cap reflects cost savings, then we will have no need to recover the remainder of our revenue cap. If the pricing reflects a decision to defer the impact of a cost change, or lower than budget usage charges, then we may need to carry a deficit forward as additional revenue to be recovered.

For Water Plan 3 we propose to strengthen price certainty for customers within this revenue cap model. For irrigation

and groundwater and rivers customers we plan to carry forward some of the un-used Water Plan 2 revenue requirement. This revenue will be used to build a modest business ‘resilience’ fund so that we can absorb any unforeseen cost or revenue changes without amending our indicative price path. For example, water ordered in the Macalister Irrigation District was significantly below budget in 2010/11 and 2011/12. In order to recoup this revenue, and in consultation with our customers, we have increased the tariffs for the following year. Under our proposed approach, tariffs would remain unchanged with the lost revenue absorbed by the business resilience fund.

Whilst a revenue cap is suitable for the majority of our revenue, there are some exceptions:

- Application fees
- Recycled water charges
- Recoverable capital expenditure
- Termination fees

### Application fees

Our costs for processing applications are influenced by demand - with increased application volumes requiring additional resources which a revenue cap would not provide for. For Water Plan 2 these were regulated as specified tariffs; however, during that period the mix of application types changed, and we found that we became more efficient in processing some types, and less so for others (particularly those applications that became less frequent). A tariff basket provides greater flexibility to manage these changes.

### Recycled water charges

Charges for recycled water include a significant portion of costs passed-through from Melbourne Water. With current uncertainty as to the future demand for recycled water, we propose to set prices annually on the basis of:

- Full cost recovery
- 50% of charge based on entitlement, with 50% based on usage
- Repayment over 20 years of the accumulated deficit associated with the scheme

This approach is consistent with the contracts that we have with in place for supplying recycled water to customers. These contracts were developed in consultation with recycled water customers.

### Recoverable capital expenditure

We operate Lake Narracan and Yallourn Weir on behalf of the Gippsland power companies, who are the sole entitlement holders. Our role is effectively that of a facilities manager, and all expenditure associated with operating

## Section 2 / Introduction

and maintaining these dams, including remedial or upgrade works, is recoverable from the entitlement holders in accordance with the Bulk Entitlement Conversion Orders. Whilst regular operating and maintenance expenditure is relatively stable and can be accommodated within a revenue cap, remedial and upgrade works can be lumpy and unpredictable. For example, during Water Plan 2 we identified works worth \$2 million to protect the integrity of the Yallourn Weir.

For Water Plan 3, we expect to continue to charge for these works as incurred, but will seek ESC endorsement of these charges prior to performing the work. This process will correspond with consultation with the bulk entitlement holders, and preparation of the associated business case.

### Termination fees

We set fees annually for the termination of delivery shares, based on a 15 times multiple of the annual fee for the delivery share. This fee is set in accordance with a Ministerial Direction on Delivery Entitlements, and protects other entitlement holders from price impacts of spreading fixed costs over a smaller entitlement base.

To date we have not had a delivery share terminated. If we were to receive such a fee, it could materially impact our revenue cap. We propose therefore to exclude any such revenue from our cap, and retain the pricing principle that the fee shall be set annually at 15 times the annual delivery share fee.

In the event that we do receive any such fees, we would propose to offset the revenue against our Regulatory Asset Base, as a mechanism to ensure that the revenue offsets our future prices for remaining customers.

## Planning approach

We have built our revenue requirement from the following components:

- Baseline recurrent expenditure – based on 2011/12 expenditure
- Productivity savings – consistent with ESC expectation of 1% of baseline expenditure
- New expenditure as required to meet new obligations or to improve service outcomes
- A rate of return on assets constructed or purchased since 2004 (excluding those funded by grants, special charges, or from irrigation district renewal funds)
- A depreciation charge on those same assets

We will review our baseline expenditure against our actual 2011/12 expenditure and may make some adjustment prior to finalising our Water Plan. However, 2011/12 has been a year of very low demand, which has reduced our revenue. In response, we have taken steps to reduce our expenditure to protect our cash and profit position. These actions are

temporary and cannot be maintained beyond 2011-12 as we risk deterioration in customer service if this expenditure is not restored to our 'business-as-usual' rate. Our Baseline Operating expenditure used to calculate prices for the 2013-2018 period includes the resumption of our usual expenditure profile.

This draft plan has been prepared in 2011/12 dollars, without any CPI adjustment for future years, and includes the following assumptions:

- Rate of return at 5.1%
- Real annual increase in construction costs at 1%
- Real increase in labour rates at 1% (offset by productivity savings)
- No real increase in electricity rates
- No real increase in fuel prices
- Regulatory asset costs repaid over the technical life of the asset

### Rate of return

A 5.1% real rate of return has been incorporated within our calculation of revenue requirement. This rate is consistent with advice provided by the Essential Services Commission for the preparation of this draft Water Plan.

This rate is primarily used for calculating our return on regulatory assets. The rate is also used as a discount rate for calculating indicative annual tariff increases.

### Construction costs

We have estimated that infrastructure construction costs will increase across the Water Plan period at 1% greater than general CPI. This estimate is consistent with cost trends experienced over recent years, and is broadly consistent with construction industry forecasts.

### Labour rates

We have assumed a 1% real increase in our labour costs, which reflects our current Enterprise Bargaining Agreement. This increase is offset by additional productivity savings against our non-labour costs, to ensure a saving of 1% against our baseline operating budget (after adjusting for growth).

This 1% productivity saving allows us to fund new obligations and service improvements with minimal impact on prices.

### Electricity rates

As most of our water supply is gravity fed, our electricity costs are mostly for office use and accordingly represent a minor expense for the Corporation. We expect to manage electricity



price increases within our general basket of external costs, and have not increased our revenue requirement for this cost pressure.

## Fuel prices

While we have an extensive fleet of 130 vehicles, we have not used this Water Plan to increase our revenue requirement to accommodate a provision for a real increase in fuel prices. As with other speculative price increases, we expect to manage cost change within our general basket of external costs. As with other external cost imposts that we are unable to control, should fuel prices significantly increase beyond our capacity to offset within our authorised revenue requirement, we expect that this would constitute legitimate grounds to re-open our price determination.

## Asset lives

We have proposed asset lives for pricing purposes (the period over which we depreciate the assets) as follows:

Pipeline repair	30 years
Channel repair	30 years
Channel automation	30 years
Road repair	20 years
Repair headworks mechanical, electrical or short life structural component	20 years
Repairs headworks earthworks & concrete	30 years
Repair headworks structural component	30 years
Headworks new component (Dam safety works)	60 years
Motor vehicles (using reducing balance depreciation)	4 ½ years
Other tools and equipment	10 years
Computer equipment	5 years
Software	7 years

These proposed lives recognise that:

- The works we undertake are often merely repairs or maintenance of an existing asset, and at an asset component scale, we have not extended the life of the asset
- While the works may represent a significant refurbishment that is unlikely to repeat in full at the end of the stated life, it is probable that we will perform some rehabilitation on this component at the stated interval
- A 60 year maximum reflects the uncertainty of future demand and technological change within the irrigation industry

## Asset management

As a corporation, we are entrusted with \$1.2 billion of assets, primarily relating to large dams, weirs and irrigation channels to deliver services to our customers. The assessment, replacement, renewal and maintenance of our assets form a large part of our activities.

As prescribed in our “Statement of Obligations” we commissioned an independent review of our asset management during 2011.

We were assessed as compliant in all areas of our business, with some improvement opportunities identified. The report stated “The audit findings demonstrate that Southern Rural Water has a commitment to Asset Management practices through a combination of strategic visions, organisational structure and procedures.”

## Capital planning

We propose to spend \$59 million in capital works over the Water Plan 3 period on:

- irrigation modernisation
- rehabilitation
- end-of life asset replacement, and
- a small amount of new assets (for example, SCADA systems which allow remote monitoring and control of water supply infrastructure)

Our capital expenditure plans are typically informed by:

- Asset condition inspections and ratings

Irrigation assets are inspected on a schedule determined by their importance to maintain supply, with inspection times varying from monthly to once every five years. Our large dams and weirs are also inspected on risk based schedule, ranging from weekly to once per ten years.

- Dam design reviews

Design reviews are conducted on a risk based timeframe typically every fifteen years in accordance with guidelines published by the “Australian National Committee on Large Dams”

- Risk assessments

Through risk assessments, certain assets may have an unacceptable risk identified. This may relate to asset integrity or design, service or the safety of staff or the public.

- Identified opportunities to improve service and water efficiency.

We have identified a range of options and projects for improving both service and water efficiency through our strategic projects, MID 2030 and Western Irrigation Futures. These projects guide our large investment in asset modernisation and are supported by separate customer consultations.

During Water Plan 2, we introduced a new capital planning process to provide greater analysis and rigour. All capital expenditure proposals over \$100,000 begin with a Problem Statement. This ensures an agreed understanding of the

## Section 2 / Introduction

issue prior to designing solutions. It specifies:

- What is the problem?
- What is the impact of the problem on customers, stakeholders and the business?
- What are the options for addressing the problem?
- What is the preferred solution?

Problem Statements are scrutinised by management to assess:

- the relevance and importance of the problem
- the justification of the recommended solution
- the appropriateness of the proposed timing.

Projects then progress to a business case, approval and procurement.

A range of cost estimation techniques are used for projects depending on the nature of the project and information available. This includes unit rates (e.g., cost per km for channel upgrade) and / or construction costs (e.g. escalated historical costs for new flume gates and emplacements, external benchmarking, or recent contract rates). Contingencies have been built from the bottom up based on the nature of the project and level of risk. Probabilistic analysis is conducted on our largest strategic projects (eg MID 2030).

We have also taken a portfolio approach to reviewing and prioritising the capital program for Water Plan 3. Projects were scored for value and risk mitigation.

All proposed projects over \$100,000 were scored against eleven weighted criteria of value under the headings:

- Business obligations
  - *Legislation and common law*
  - *Shareholder expectations*
  - *Minimise environmental impacts from operations*
- Customer service
  - *Maintain current standards of service and supply*
  - *Increase current standards of service and supply*
  - *Improve security of water supply*
- Economics
  - *Net Present Value*
  - *Customer productivity leading to regional economic growth*

- People
  - *Staff safety*
  - *Staff satisfaction*
  - *Staff productivity*

## Pricing for capital - moving away from renewals (irrigation)

SRW has traditionally priced for replacement and refurbishment of irrigation district assets using a renewal annuity. This seeks to smooth pricing by calculating an annual payment to fund future capital. We used condition ratings on our assets to predict their remaining life, and therefore our capital requirements over a 40-year window.

A renewal fund should accumulate a positive cash balance when replacement works are predicted towards the end of the forecast period, but will run into deficit when the majority of expenditure is in the early part of the period. For our three irrigation districts, we have been in an accumulation period, and are forecasting significant renewal fund balances at the end of Water Plan 2 - as listed in the table below (alongside the current annuity charges).

District	Annual charge	Forecast fund balance
Macalister	\$1,370	\$15,112
Werribee	\$374	\$5,026
Bacchus Marsh	\$104	\$2,418
<b>Total</b>	<b>\$1,848</b>	<b>\$22,555</b>

Table 2: renewal funds (\$000, nominal)

We propose to transition away from the use of renewal accounting from 1 July 2013, and to price for future capital expenditure through a depreciation charge and return on investment. Making this change requires that we deal with the accumulated renewal balances, and also the pricing outcomes.

In consultation with customer consultative committees, there was a clear preference to not have prices temporarily decrease, only to rise steeply as we renew and replace assets. This is a particular concern where investment programs, such as MID2030 and Western Irrigation Futures, may already be putting upwards pressure on prices.

In agreement with our customer consultative committees, we propose to:

- add future renewal works (which aren't part of modernisation projects) to our Regulatory Asset Base
- maintain a charge equivalent to the renewal annuity in the Macalister and Werribee districts, and reduce that charge

as depreciation and return on investment amounts increase

- offset accumulated renewal balances and the reducing annual charge against modernisation expenditure (in the Macalister and Werribee districts)

In Bacchus Marsh, where the future is less certain and there is no current business case for significant investment, we propose to offset the renewal balance against capital expenditure, and to set Water Plan 3 prices to reflect the removal of the renewal annuity.

## Allocation of shared costs

We use activity based costing to directly attribute expenditure to individual customer groups and tariffs. Around one quarter of our expenditure cannot be directly attributed to an individual customer group. This includes our office facilities and utilities, corporate services such as Human Resources and Finance, as well as executive and Board costs.

In order to equitably share these costs between our customer groups and tariffs, we use causal drivers wherever possible. For example, our human resources costs are allocated by headcount, and our information services costs by computer use.

Where it is either impractical or impossible to determine a causal basis, such as for governance charges, costs are allocated in proportion to direct expenditure.

This approach also determines our allocation of costs to non-prescribed services.

## Dealing with uncertainty

We have prepared this Water Plan with our best estimates of revenue and capital and recurrent expenditure requirements. Revenue has been estimated on the basis of known fixed revenue along with estimates of variable revenue based on historical averages and future predictions. Recurrent cost estimates have been built from the bottom up - based largely on current staffing and business costs, plus initiatives, offset by a 1% per annum productivity factor (moderated by growth).

Capital expenditure has been subject to a detailed review through problem statements, prioritisation review and resource analysis, as discussed above.

The business has sufficient resilience to manage seasonal revenue variation (the revenue cap approach assists with this), and we are building a limited capacity within our business funds to accommodate unexpected expenditure.

However, there are two scenarios which could trigger a request for the re-opening of our determination:

- Government support for irrigation modernisation. Within our Macalister and Werribee Irrigation District we have

allowed some expenditure for modernisation, fully funded by customers. During the Water Plan period we will be discussing with government the potential to future invest in modernisation in both districts on a cost share basis. Should the government agree to contribute to modernisation, dependant on the timing and the amount, we may seek a re-opening to recognise our 50% contribution

- Natural Disaster – while SRW has insurance for major events, the deductible is in the order of \$2 million for major assets and relies on a “like for like” replacement. This cover is also limited to events within the design capacity of the reservoir. While we were able to accommodate in excess of \$4 million of damage from the 2007 floods, it is possible that a widespread event may trigger costs beyond our capacity to manage in one Water Plan period.

## New and changed obligations and costs

We are not aware of any significant changes to our obligations for the forthcoming regulatory period. However, we expect some impact to our operations from the national harmonisation of workplace safety legislation, and also from new record keeping standards currently being developed by the Public Records Office of Victoria.

We expect an increase in our insurance premiums – driven by market conditions. Recent floods have seen an increase in insurance premiums for water businesses – particularly those with large dams. We have drafted this plan on the basis of our 2012-13 premium estimate, and this will be reviewed for the final plan once actual premiums known.

The most significant initiative driven by obligations within this plan relates to national metering standards. National standards have been written for meter manufacture, installation and maintenance, and for data handling of meter reads. The standards have been adopted by COAG, and SRW was required to prepare an implementation plan to DSE showing how we will comply with the new standards. The plan shows full compliance for our unregulated surface and groundwater licences by 2020, with work being undertaken during Water Plans 3 and 4.

In our Irrigation Districts, we have chosen to “grandfather” our Dethridge wheels - meaning that we will continue to use them until they wear out and require replacement - unless upgrade is funded by an approved modernisation project, or government funding becomes available.

Finally, we have also provided within this plan for an expected increase in our environmental contribution to government from \$281,000 to \$440,000 from 2013/14.

## Section 2 / Introduction

## Service and productivity

Within our vision and strategy, we describe our desired outcome for customers as “great service at a fair price”. If the service we provide is our business output, and the cost of the business inputs to deliver that service is reflected in our price, then the phrase “great service at a fair price” describes the basic productivity equation of outputs divided by inputs.

The challenge we face as a business is in measuring our output. We are not a manufacturing business measuring output by the number of units produced. We are a service business. Whilst the volume of available water is important to our customers - this is not the “product” that we deliver. In our irrigation districts, we deliver the services of harvesting and storing available water, and making this water available to customers at a time, location and rate of flow that allows the customer to optimise their own performance and profitability. In our Groundwater and Rivers business, we provide licensing and compliance services.

### Our approach

In Water Plan 2, we outlined a methodology for describing service / cost outcomes, and exploring the trade-off between service and price. This relationship can be graphed (as shown below), with service improving as we move upwards on the vertical axis, and price decreasing as we move left to right across the horizontal axis.

The best performers will be those in the top right quadrant, with low cost and high service.

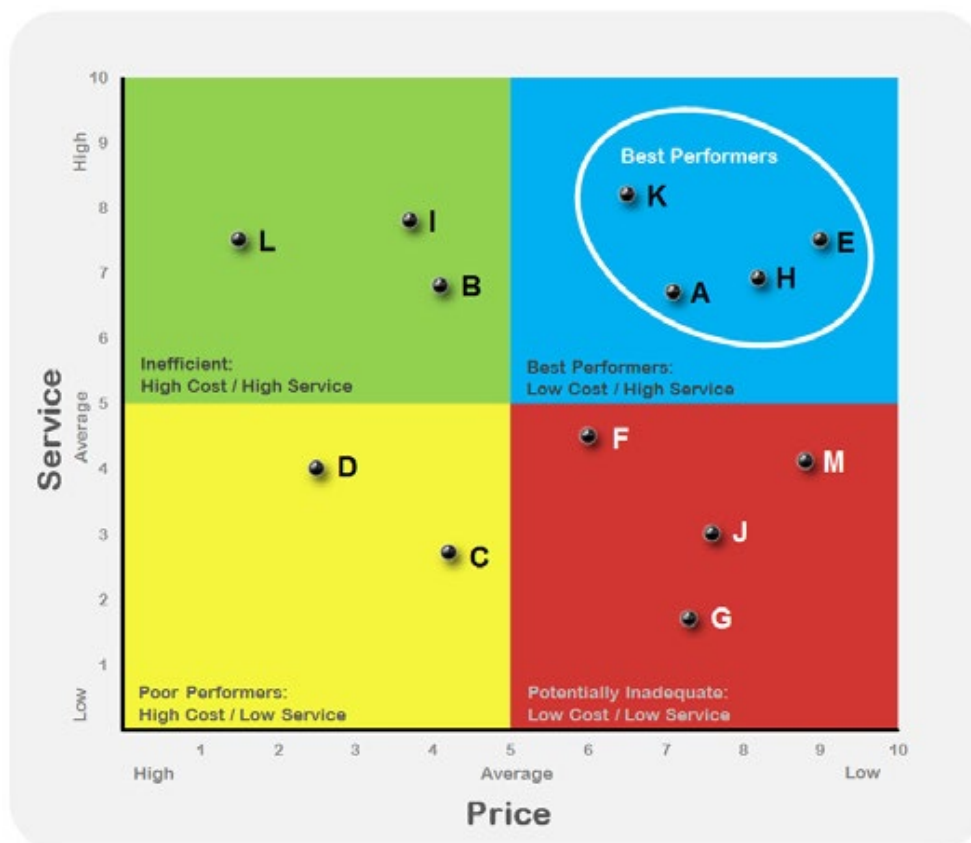
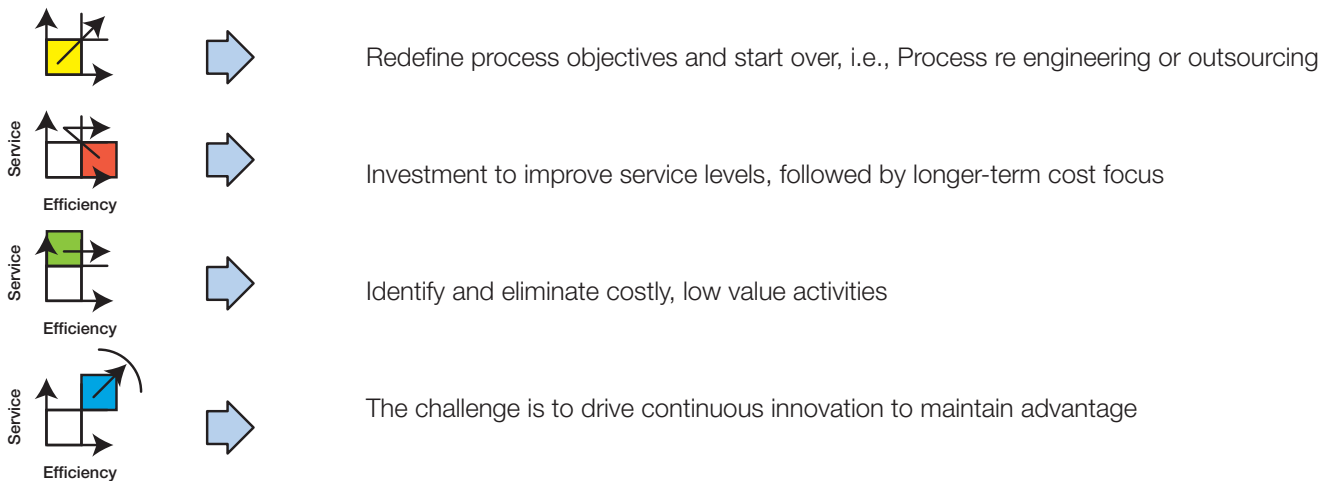


Figure 1: service and price - sample (drawn from UMS Group approach to benchmarking)

A range of strategies can be employed to move towards best performer status. They can be displayed graphically in terms of the improvement pathway they describe on the four-quadrant performance matrix shown above.

These strategies are summarised on the following page.



The level of performance measurement in the rural water industry has been limited in the past and there has not been universally accepted and adopted benchmarking frameworks, with normalisation factors available, to undertake the sort of analysis which would ideally support the above framework. We are, however, able to work with our customer groups to make an informed if not benchmarked assessment of service level based on agreed performance measures and targets.

We have included performance measures and targets within this plan based on our most recent discussions with customer groups. We will continue to refine these measures and targets in consultation with customers, and we will publish annual targets in our Corporate Plans.

## Our objective

Our objective is to move into the best performing quadrant at the top right of the model. This is most significant in our Irrigation businesses, where we continue to seek investment and re-investment in service improvement – in preference to reduction in prices. For these proposals, we are seeking a government contribution to reduce the overall project cost and price impact to irrigators.

We believe that reaching the top quadrant is achievable for the Macalister, where the MID2030 project provides the catalyst for step changes in performance improvement, with an irrigation district which already has a reasonable size. In service improvements projects such as MID 2030 we have undertaken affordability studies and extensive customer consultation through our Consultative Committee and direct customer workshops.

In our Headworks business, the major activity will be investment in the dam safety risk mitigation works which are large capital projects, with continuous improvements in operations and compliance activities.

Continuous improvement and some initiatives in our Groundwater and Rivers business will see improvements in our service performance without major cost increases.

## Productivity / cost measurement

Southern Rural Water is committed to continuous improvement and to ensuring greater productivity in terms that matter to customers. Our customer and stakeholder survey results generally indicate that we have been achieving this over time. We understand the ESC's desire to mandate a 1% "productivity dividend" reduction on operating costs. This is challenging for us given the escalating costs of doing "business as usual", and the history of price freezes in the rural water sector mean that there is very limited discretionary expenditure to be reduced before service levels would be impacted or effective maintenance practices compromised.

We have applied a 1% productivity dividend through the Water Plan period, adjusted for growth and known cost increase in obligations, and incorporated this into our financial estimates. However, as outlined above, the product that we provide is not measured in megalitres of water. It is measured through the services we deliver to customers: for example in the reliability of our delivery systems, in our ability to deliver water at particular flow rates, our ability to deliver water at the time of day that suits our customers, and in a number of other measures discussed in this document.

We believe that improving the relationship between our service and price is a better indicator of productivity than merely reducing costs.



## Section 2 / Introduction

## Working with customers & stakeholders

We prepared a formal engagement plan for Water Plan 3 using a framework developed by the International Association for Public Participation. The framework prompts thinking about the different interests and levels of influence for customers and other stakeholders.

The following table from our engagement plan identifies our stakeholders, the interests they represent, and their level of engagement during development of our Water Plan.

Stakeholder	Interest	Engagement during development	Engagement during review stage
ESC	Regulator	Inform	Collaborate
EPA	Regulator	Inform	Consult
DoH	Regulator	Inform	Consult
Minister's office	Shareholder	Inform	Inform
DSE	Shareholder	Involve	Involve
DTF	Shareholder	Inform	Inform
CCCs	Customer reps	Collaborate	Collaborate
Other customer interest groups	Customers	Involve	Involve
Other licence holders	Customers	Inform	Consult
BE holders including WW and GW	Customers	Collaborate	Collaborate
Management	Project manager	Empower	Empower
Staff	Contributors	Involve/Inform	Involve/Inform
LGAs intensive	On behalf of customers	Consult	Consult
LGAs other	On behalf of customers	Inform	Consult
CMAs/MWC	Environment/Supplier	Consult	Consult
DPI	On behalf of customers	Inform	Consult
VFF	On behalf of customers	Inform	Consult
Metros	Policy issues	Inform	Inform

Table 3: engagement plan – levels of engagement

The following table from the engagement plan summarises the techniques we used for different levels of engagement:

Engagement level	Audiences	Techniques
Inform	All, other than customers	<ul style="list-style-type: none"> <li>Newsletter or articles in existing newsletters, as required</li> <li>Media releases</li> <li>Website updates</li> <li>Internal staff newsletter</li> </ul>
Consult	Individual customers; other organisations	<ul style="list-style-type: none"> <li>Customer focus groups</li> <li>Hotline for feedback</li> <li>Offer to mail out hard copies</li> <li>YouTube presentations</li> <li>Briefings</li> <li>Piggy-backing on relevant VFF CCCs group meetings</li> </ul>
Involve	Staff	<ul style="list-style-type: none"> <li>Staff workshops</li> <li>One-on-one discussions</li> </ul>
Collaborate	CCCs	Workshops and engagement meetings with active committees

Table 4: engagement plan – engagement techniques

Our customer consultative committees continued to provide our primary engagement throughout the planning process – with monthly meetings allowing a depth of understanding and analysis that would be difficult to achieve by other means.

In addition to our regular meetings, we took two opportunities to bring representatives of our customer committees together for planning workshops. The second of these workshops also included other stakeholders.

Other engagement activity included:

- Media releases inviting input into our planning
- Invitations for input in newsletters
- Externally facilitated focus groups for Werribee South irrigators and Gippsland licence holders to explore expectations and Water Plan 3 proposals
- Separate consultative groups and engagement processes for our major strategic projects – MID2030, Western Irrigation Futures and Southern Groundwater Futures
- Meeting with representatives of the Victorian Farmers Federation

Following release of our draft Water Plan, we mailed a summary of the plan to all of our customers - along with a short questionnaire seeking feedback on our:

- price changes
- service measures and targets
- projects and initiatives

These documents were tailored to our different customer groups, and the feedback we received from each customer group is summarised in the relevant section of this Water Plan.

# Section 3

## The corporation

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## Overview

Southern Rural Water (SRW) is a Victorian Government not-for-profit corporation with three primary business functions:

- **Irrigation Supply**– supplying an average of 150,000 ML for the Macalister Irrigation District near Maffra, 4,000ML to the Bacchus Marsh and 10,000ML to Werribee Irrigation Districts and associated rivers for irrigation and stock and domestic use
- **Licensing access to water from groundwater and rivers** – administering around 7,800 licences for surface and groundwater diversions, and licensing construction of bores and on-stream dams. We act on behalf of the Minister to regulate licencing and use
- **Managing Large Dams and Weirs** – with seven dams and eight weirs in the Werribee, Maribyrnong, Latrobe and Macalister basins to harvest, store and deliver bulk water entitlements for our own irrigation customers, urban water authorities and Latrobe Valley power generators

## Our vision

Our vision is to deliver:

*Outstanding rural water management for a prosperous southern Victoria*

We are the custodian of rural water in southern Victoria. This water is used for irrigation, industrial and urban supply, and we seek to ensure that it is managed sustainably and responsibly to maximise its economic value with minimal environmental impact.

We also have assets of approximately \$1.2 billion under our management. We are committed to ensuring that our dams meet acceptable public safety standards and that all of our assets allow our customers to make the best use of their water. This will require significant capital expenditure.

## Our goals

To aid our strategic focus, we have expanded our vision into eleven goals. These goals describe our business in 2020, and drive our improvement plans:

- We are environmentally sustainable
- We are efficient, capable and resilient
- Our people love working with SRW
- Our customers believe we provide great service at a fair price
- Our communities understand their water issues, what we do and why we do it
- We add value to our stakeholders and customers and they value our relationship
- Our tenacity creates sensible outcomes in tough situations
- We influence our regulatory and legislative environment to balance environmental, economic and social outcomes.
- Our irrigation districts are adaptive, efficient and sustainable
- Our dams and distribution assets meet agreed levels of community safety and are managed to high professional standards
- We understand the science of our catchments and aquifers and we apply this to the benefit of our communities

## Our values

Our values are:

- Listening deeply to work effectively
- Caring about safety, the environment, our customers and communities, and each other
- Creating solutions that lead to sustainable outcomes
- Delivering timely, effective service
- Demonstrating our high personal standards
- Reflecting to improve what we do

## Section 3 / The corporation

## Our strategy

We have developed a strategic direction to guide corporate priorities over the next two to three years. This strategy is summarised in our “strategy map”, which describes, at the bottom, the areas we need to focus to improve our business in order to deliver our outcomes for customers and stakeholders at the top of the map on the following page.

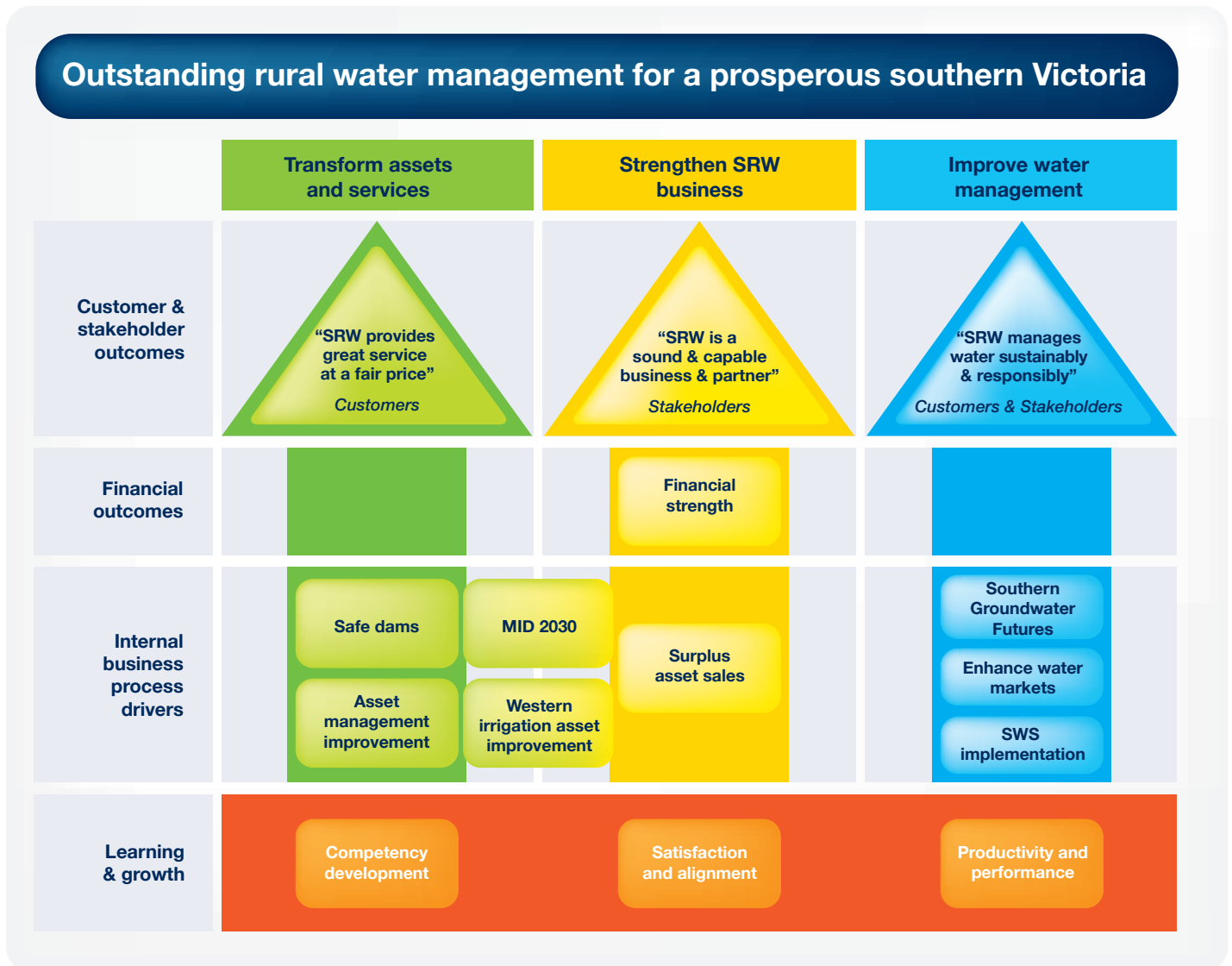


Figure 2: strategy map

There are three themes which represent areas of focus:

- Transform Assets and Service - transform the performance of our assets to improve the service we provide
- Strengthen SRW Business - secure, strengthen and grow our business and our people for tomorrow
- Improve Water Management - implement actions to the improve the management of water under our care

Delivering improvement in these areas requires development and growth in people and systems. The learning and growth objectives (at the bottom of the map) represent investments in people and information technology. These are the foundation for our performance.

The process improvement objectives (second layer from the bottom) are the heart of our improvement plan. They determine the actions we are taking to improve our business to deliver value for our customers and stakeholders – both in the short and medium term. These are our areas of major investment.



As a not for profit corporation, financial strength (third layer from the bottom) provides us with the means to deliver value to our customers and stakeholders.

Finally, our customer and stakeholder outcomes (the top layer of the map) are set in the words of our customers and stakeholders and are what we would expect people to say about us if we are achieving our vision.

All of these objectives have measures which allow the Board and management to track performance and progress toward our vision.

The next section outlines the major initiatives we are taking toward achieving “outstanding rural water management for a prosperous southern Victoria”.

## Strategic theme one: transform assets and service



Southern Rural Water holds assets with a current value in excess of \$1.2 billion. For many parts of our business, they are critical to delivering service and value to our customers. We also have important requirements under our statement of obligations relating to dam safety and asset management.

### Safe dams

The current draft Statement of Obligations (Clauses 5.1 and 5.2) states:

*The Corporation must develop and implement processes to identify, assess, manage and prioritise improvements to, and periodically review the safety of, dams...hav(ing) regard to the ANCOLD Guidelines and have particular regard to:*

- (a) *prioritising risks posed by the Corporation's dams over all dams, components of dams and the types of failure;*
- (b) *giving priority to reducing risks to life above other risks;*
- (c) *basing the urgency of reducing the risk posed by a dam on the relativity of risks to the tolerability limits as defined in the ANCOLD Guidelines;*
- (d) *basing programs for reducing risk on the concept*

*“As Low As Reasonably Practicable” as defined in the ANCOLD Guidelines; and*

- (e) *where feasible, progressively implementing risk reduction measures to achieve the best outcomes for the available resources.*

DSE released a guidance note in 2011 to support these requirements, particularly in relation to ANCOLD risk guidelines.

We have undertaken a program of dam safety upgrades to meet these requirements over the past 15 years. During the next few years, we are planning to reduce dam safety risk to within the “Limit of Tolerability”, consistent with DSE's guidance note (2011).

Achieving this requires work at two of our dams:

- Melton Reservoir – strengthening the right abutment with concrete to enable the dam to withstand floods up to a 1 in 100,000 frequency. These works are underway and are expected to be completed in 2012.
- Lake Merrimu – raising filters and strengthening the clay core of the embankment to enable the dam to withstand floods up to a 1 in 100,000 frequency. These works will be conducted during the Water Plan 3 period.

We must also complete an investigation of the downstream embankment at Melton Reservoir. This may identify additional safety work.

### MID2030 leading works

The supply system in the Macalister Irrigation District loses around 30% of water during delivery, and provides poor service to many customers - inhibiting on-farm productivity. In 2007 we finalised our MID2030 strategy - an infrastructure improvement strategy to transform the efficiency, service levels and environmental footprint of the Macalister Irrigation District.

During 2011, in consultation with customers and relevant agencies, we developed a business case for phase 1 of these works. This \$117 million program (2011/12 dollars) included:

- piping one full supply zone
- further automation of channel regulating structures in three zones
- constructing a balancing storage
- some outlet modernisation and rationalisation, and
- establishing at least one end-of-drain wetland

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These works will fully automate 40% of the district, provide service benefits to 85% of the district, and save 28 GL of water. Given funding \$117 million of upgrades is beyond our customers' capacity to pay, we have proposed a co-funding investment model, with government funding 50% of the initial capital investment and irrigators providing the remaining 50%, and with irrigators retaining water savings for productive use. This would increase the average water price in the order of 25%. The government would gain value from this investment through the increased economic output from the region and improved environmental outcome

We have commissioned an independent assessment of affordability following the expected 25% price rise. This study concluded that, in most instances, the value of new production from water saving and on-farm productivity improvements will outweigh our higher water charges.

While funding for the full program has not yet been resolved, SRW and our customer base are committed to the realising the potential of the Macalister Irrigation District and increasing the regional economic output from the district. We have proposed a program of leading works, representing \$26 million of expenditure over the next six years, which can deliver significant water savings and service improvement.

Work started on this program in the 2011/12 financial year, and will continue until at least the end of Water Plan 3. These works are justified in their own right and will be funded from pricing, however we will seek government recognition of this expenditure as part of our contribution to the broader MID2030 project.

#### Western Irrigation asset improvement

In 2011 we finalised our Western Irrigation Futures strategy, which provides a number of actions to improve the water security, quality and viability of our Werribee and Bacchus Marsh irrigation districts.

For both districts, the preferred primary supply remains river water. In Werribee, water from the metro pool can be mixed with recycled water to reduce salinity in dry years, satisfying an important requirement of both our irrigators and our regulator. For Bacchus Marsh, there is still no affordable alternative supply – meaning the district remains vulnerable in very dry periods. We continue to work with agencies to identify alternative supply options.

The following actions have also emerged from our work on the strategy:

- We have implemented new allocation rules which put water aside earlier for the following year
- We are continuing to develop an individual carryover proposal for discussion with our customers during 2012/13

- We have put in place new recycled water / metro water contracts for Werribee irrigators which will be complemented by new shandy rules - improving both quality and quantity of water in dry years.

We did significant work during 2011/12 on a business case for channel lining, automation and metering to improve water efficiency in the Werribee district. Government advised that it was not in a position to consider funding for the proposal at the time, but we are continuing to develop and refine the business case for submission to a future budget process. This proposal has the potential to yield increased water availability, improve water security, reduce the cost of supplying recycled water and reduce environmental impacts for the area and Port Phillip Bay. In the meantime, we are proposing to commence modernisation of the district, starting with piping or lining the 4/1 channel.

In Bacchus Marsh, we have completed a cost and feasibility study on reconfiguration of the irrigation district. This assessed the closure of the main channel and moving some customers to river supply, along with some other minor upgrades. This study provides us with a basis for discussion with customers and stakeholders, however investment of this scale will likely be beyond our customers' capacity to pay and so would require significant external funding. We will continue to explore this option, however in the meantime our asset strategy will focus on ensuring continuity of supply from the ageing asset base.

#### Asset management improvement

The current draft Statement of Obligations (clause 7.1.1) for Southern Rural Water states:

*The Corporation must develop and implement plans, systems and processes to manage its assets in ways which:*

- (a) *maintain the standards and conditions of service:*
  - (i) *specified by the Commission in a Code issued under section 4F of the Act; or*
  - (ii) *included in a Water Plan and approved by the Commission; and*
- (b) *minimise the overall whole of life cost of providing the service."*

This objective supports that obligation by seeking to optimise the performance of our existing asset base. It includes four main projects:

#### Asset management system

We currently have an asset management system for our irrigation assets, and several non-integrated maintenance management systems across our operating businesses -

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all with differing levels of sophistication and effectiveness. Workforce scheduling, work order generation and maintenance history recording is currently very limited.

We have budgeted to implement an asset management system in 2012/13 and we expect the improvements to start during the Water Plan 3 period. To achieve these improvements, we have budgeted for two extra staff members to manage the new system.

### Improving asset management and maintenance practices

Southern Rural Water was audited by Beca (engineering consultancy) as part of the industry-based Asset Management Audit in 2012. SRW was assessed as fully compliant in some areas and “compliant but needs improvement” in others.

As outlined above, SRW has budgeted to implement an asset management system in 2012/13. Management has also assessed the need to undertake an evaluation of best practice management of our main classes of assets, to determine the best approach to condition monitoring, preventative maintenance, breakdown maintenance and asset replacement.

We plan to start this work during the 2012/13 financial year. We expect this will mean a greater workload in condition monitoring and data analysis to ensure an effective maintenance program. In turn, this should ensure timely maintenance and rehabilitation of assets to maintain service standards.

### Asset management plans

Asset management plans provide a comprehensive summary of how we operate, maintain and manage our assets, within our regulatory and legislative environment. They summarise service standards and identify actions to improve asset performance against those standards.

An asset management plan has been completed for the Macalister Irrigation District and work has started on the Werribee and Bacchus Marsh Irrigation District plans, which are due to be completed in the 2012/13 financial year.

We will also look at the value of developing plans for our large dams in a similar format, recognising they are served by a range of plans and manuals already.

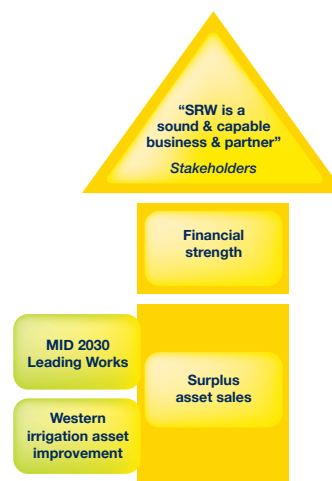
### Meter compliance plan

There has been considerable work to develop and agree to national standards for rural metering throughout Australia. Victoria developed and submitted an implementation plan in 2010, to which Southern Rural Water was a contributor.

Implementing our actions under this plan will see all of our unregulated surface water and groundwater systems achieve full compliance by 2020.

In our Water Supply areas, due to the pricing impact, we are “grandfathering” the existing meters unless there is external funding provided or the meters are replaced as part of an automation project. In the MID, we are implementing an outlet rationalisation program to reduce future capital costs and improve service levels to our customers.

## Strategic theme two - strengthen our business



To continue to deliver value for our customers and the state of Victoria, we need to have a sound and capable business. For us this means having strong finances, operating an effective business model to deliver effective service to our customers, and maintaining effective stakeholder relationships.

### Financial strength

Our financial planning approach is under-pinned by two important concepts:

- We are a not-for-profit state government corporation regulated by the Essential Services Commission.
- We have proposed to transition from a renewal annuity to the full regulatory asset funding model. As such, we will no longer receive funding in advance of capital works, and must now borrow in order to complete infrastructure rehabilitation, replacement or upgrade works. Our debt balances are expected to grow from \$18 million to over \$44 million across Water Plan 3.

We manage this dynamic by ensuring that we generate adequate cashflow from our operations to support our debt obligations. We take particular care to ensure that we have a positive net operating cash flow, and that our cash interest cover ratio remains greater than 2 – meaning that we have twice as much net cashflow from our operations than is required to meet our interest payments.

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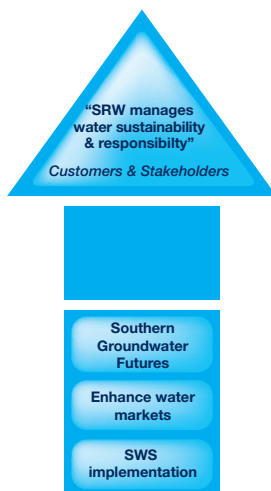
### Surplus asset sales

Selling surplus assets and water savings can provide a source of funds to invest in prospective projects and opportunities. We have identified a number of parcels of land and two buildings which are surplus to our needs, and we are looking to dispose of these during 2012/13 and into Water Plan 3. These assets are not included in our Regulatory Asset Base.

We also have new water shares available in the Macalister Irrigation District, resulting from physical works to improve system efficiency. We plan to auction the balance of unsold water shares in 2012/13, and there may be opportunities for further water sales during the Water Plan 3 period.

Alongside these activities, we will also consider business development opportunities as they arise. We are currently partnering with Melbourne Water, South East Water and local government on the Bunyip Food Belt project – a proposal to use around 26GL of recycled water per annum from the Eastern Treatment Plant for agriculture.

### Strategic theme three - improve water management



The current draft Statement of Obligations guiding principles states at 1.6:

*In performing its functions, exercising its powers and carrying out its duties, the Corporation must have regard to the sustainable management principles in section 93 of the Water Act 1989.*

Amongst other matters, these sustainable management principles refer to enhancing environmental outcomes and collaborating in integrated water management initiatives.

Part of our vision is to manage water sustainably and responsibly - recognising social, economic and environmental demands. In support of this vision, we have planned the following initiatives.

#### Southern Groundwater Futures

Southern Groundwater Futures aims to build and share the best available knowledge about groundwater across southern Victoria through the development of regional atlases. A collaborative process is being used that combines our innovative 3D groundwater mapping, the most up-to-

date science, and contributions from stakeholders and the community.

The project is being rolled out in three regions; South West Victoria (completed), Gippsland (underway) and Port Phillip & Westernport (planned). Overseeing the process in each region is a Stakeholder Reference Group comprising licence holders, government agencies, urban water authorities and industry representatives.

To support development of the Gippsland Groundwater Atlas, we will hold a series of community forums for people to learn about groundwater and offer input into the final atlas product. These forums occurred in July 2012, with the launch of the Gippsland Atlas planned for 'Water Week' in October 2012.

Work will begin on the development of Port Phillip & Westernport Groundwater Atlas in late 2012 and continue into 2013/14. The large urban presence in this region will require a tailored approach to accommodate different engagement needs and information requirements. We anticipate working in partnership with other agencies to dovetail with other initiatives.

#### Implement actions from the Sustainable Water Strategies

Southern Rural Water was an active partner in developing the Gippsland and Western Sustainable Water Strategies. These strategies have created various policy enhancements for Victoria along with a number of specific actions for the south of the state.

We will partner with DSE and other agencies to fully develop and implement these policy changes over the coming years. We will also be a lead agency in delivering a number of actions, which include:

- Replacing a number of Water Supply Protection Areas with local management plans
- Creating the potential to harvest high flows outside of winterfill periods
- Implementing multi-year trade opportunities
- Establishing the operational arrangements for the recreational use of Lake Narracan
- Facilitating the sale of new water entitlements in designated systems

#### Enhancing water markets

We regularly hear from our customers and their representatives that they would value Southern Rural Water taking a stronger role in enabling water trading.



While our role precludes us from taking a direct involvement in trading, we believe that we can take a more proactive role in enhancing trade, within the constraints of privacy legislation.

We believe that the policies and actions outlined in the Sustainable Water Strategies will address a number of barriers which currently restrict water trading. These include:

- Un-declaring water supply protection areas
- Creating local management plans for groundwater
- Creating the ability for “limited term trades”
- Streamlining Water Act 1989 section 40 assessments as part of local management rules

From 2012/13 and continuing into Water Plan 3, we will take a number of actions to facilitate trade, including:

- Establish a process to record and disseminate information to active and interested buyers and sellers of water
- Prominently display this information at our offices and on our website
- Use technology such as SMS/email to promote trading opportunities
- Providing better information to potential buyers on the pathways to purchase water
- Contact customers who have traditionally used little or none of their entitlement to explain the opportunity of trading water and identify any barriers to trading
- Take a more proactive role in encouraging and supporting brokers operating in southern Victoria
- Help stimulate demand by sharing outcomes from our affordability study (MID 2030) that highlight the productive value available from using extra irrigation water on-farm

## Learning and growth



Our learning and growth objectives are the enablers of our business. We will focus in the following three areas:

### Competency development

During 2011 Southern Rural Water started a major development activity which engaged over 30% of our staff in post-secondary education with Chisholm Institute of TAFE, focusing on business and water related units.

Our future initiatives will include:

- Defining competency requirements
- Enhancing our succession planning
- Developing integrated training and development plans

We will also shortly review our classification structure, to ensure it will serve our needs through the next generation of the organisation.

### Alignment and satisfaction

This objective recognises the need for staff to be happy in our workplace and aligned with corporate and business unit directions to be effective in helping SRW work toward its vision.

We have several initiatives planned here including implementing programs to enhance SRW’s culture, further developing management and supervisory competencies, and building an intranet to share information.

### Productivity and performance

A big driver for our organisation is to continually improve the productivity of staff to improve the performance of the organisation. As a not-for-profit organisation, productivity savings will be recognised in one of two ways:

- direct cost reductions which translate into reduced prices, or
- devoting time saved into improved services for our customers

During the Water Plan preparation process we have developed a service/productivity framework. This is based on a comprehensive set of service measures for each part of the business, along with cost measures to determine productivity.

We have also identified several productivity improvement initiatives which will both reduce direct costs and improve service to our customers. The rollout of these initiatives will take place over the next several years.

## Strategy – 2015-2018

A new strategy map, with new objectives and initiatives, will be developed for the second half of Water Plan 3. We have already started developing this, and so far we envisage that this can be funded without the need for additional revenue or resources.



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## Financial tables

## Significant capital projects

We have 9 projects proposed across the Water Plan period costing \$1 million or more. Most of these projects are within our MID2030 Leading Works Program.

Area	Project	Total
Macalister Irrigation	MID2030: Southern Cowwarr Balancing Storage	\$6,400
Macalister Irrigation	MID2030: Nambrok Denison Regulator Retrofit	\$4,701
Werribee Irrigation	WIF: Piping or lining 4/1 Channel	\$4,000
Macalister Irrigation	MID2030: Outlet Rationalisation	\$3,742
Merrimu Reservoir	Interim Flood Capacity design	\$2,932
Macalister Irrigation	MID2030: Eastern Regulator Retrofit	\$2,697
Melton Reservoir	Replace Conduit	\$2,000
Macalister Irrigation	MID2030: Heyfield Regulator Retrofit	\$1,583
Macalister Irrigation	Carp Damage Channel Rehabilitation	\$1,500
<b>Total of projects greater than \$1m</b>		<b>\$29,555</b>
<i>Total of projects less than \$1m</i>		<i>\$26,251</i>
<b>Total Water Plan 3 Capital Expenditure</b>		<b>\$55,806</b>

Table 5: capital projects greater than \$1m (\$000, \$11/12)

The following table summarises our capital expenditure by area for each year of the Water Plan.

Area	2013/14	2014/15	2015/16	2016/17	2017/18	Total
Macalister Irrigation	\$5,235	\$6,638	\$4,743	\$4,321	\$5,034	<b>\$25,971</b>
Werribee Irrigation	\$1,354	\$908	\$1,743	\$1,744	\$247	<b>\$5,995</b>
Glenmaggie/Cowwarr	\$1,914	\$623	\$578	\$548	\$758	<b>\$4,421</b>
Merrimu Reservoir (inc Lerderderg)	\$250	\$3,012	\$280	\$695	\$405	<b>\$4,642</b>
Corporate	\$355	\$484	\$567	\$389	\$164	<b>\$1,960</b>
Melton Reservoir	\$2,260	\$80	\$65	\$45	\$5	<b>\$2,455</b>
Yallourn & Narracan (Recoverable Works)	\$222	\$547	\$594	\$522	\$197	<b>\$2,082</b>
Groundwater & Rivers	\$575	\$345	\$418	\$310	\$310	<b>\$1,958</b>
Pykes Creek Reservoir	\$455	\$300	\$460	\$120	\$275	<b>\$1,610</b>
Bacchus Marsh Irrigation	\$492	\$246	\$161	\$226	\$171	<b>\$1,296</b>
Rossllynne Reservoir	\$145	\$220	\$565	\$160	\$40	<b>\$1,130</b>
Blue Rock Reservoir	\$235	\$185	\$359	\$120	\$25	<b>\$924</b>
Recreational Facilities	\$43	\$100	\$75	\$132	\$260	<b>\$610</b>
Non Prescribed Activities	\$241	\$169	\$120	\$121	\$103	<b>\$753</b>
<b>Total</b>	<b>\$13,776</b>	<b>\$13,856</b>	<b>\$10,728</b>	<b>\$9,452</b>	<b>\$7,993</b>	<b>\$55,806</b>

Table 6: capital expenditure summary (\$000, \$11/12)

The following table summarises our capital expenditure by funding source for each year of the Water Plan.

Funding Source	2013/14	2014/15	2015/16	2016/17	2017/18	Total
Price increases (Regulatory Asset Base)	\$8,376	\$6,681	\$6,741	\$6,342	\$7,040	\$35,180
Water auction	\$945	\$0	\$0	\$0	\$0	\$945
Renewal transition offset	\$3,952	\$6,420	\$3,233	\$2,427	\$614	\$16,646
Recoverable works	\$262	\$587	\$634	\$562	\$237	\$2,282
Non prescribed sources	\$241	\$169	\$120	\$121	\$103	\$753
<b>Total</b>	<b>\$13,776</b>	<b>\$13,856</b>	<b>\$10,728</b>	<b>\$9,452</b>	<b>\$7,993</b>	<b>\$55,806</b>

Table 7: capital expenditure by funding source (\$000, \$11/12)

## Revenue requirement

The table below summarises our total revenue requirement for Water Plan 3.

	2011/12	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total
Baseline operating expenditure	\$19,054	\$19,048	\$19,048	\$19,048	\$19,048	\$19,048	\$95,242
Obligations & initiatives	\$0	\$874	\$709	\$650	\$636	\$617	\$3,486
Productivity & growth	\$0	(\$123)	(\$247)	(\$371)	(\$497)	(\$623)	(\$1,861)
Re-allocation of shared costs	\$0	\$182	\$182	\$182	\$182	\$182	\$908
Renewal annuity	\$1,848	\$1,289	\$853	\$656	\$423	\$0	\$3,220
Capital expenditure charges	\$3,055	\$4,201	\$4,609	\$5,077	\$5,464	\$5,920	\$25,270
WP2 un-recovered revenue	\$535	(\$66)	\$268	\$487	\$617	\$811	\$2,117
<b>Total Revenue Requirement</b>	<b>\$24,492</b>	<b>\$25,404</b>	<b>\$25,421</b>	<b>\$25,729</b>	<b>\$25,873</b>	<b>\$25,955</b>	<b>\$128,382</b>

Table 8: total revenue requirement (\$000, \$11/12)

## Indicative tariff impacts

For all our areas of business, annual operation, maintenance and administrative costs are stable across Water Plan 3. We expect to meet most of the cost of new obligations and external cost pressures by achieving productivity savings in our baseline activity.

Price increases predominantly reflect capital expenditure, though in our irrigation districts there is some offset from the renewal annuity transition. The major drivers of the price changes in the table below are:

- For the Macalister Irrigation District, the renewal offset will fund two-thirds of the \$26 million of MID2030 leading works program. The renewal fund will be exhausted by 2016-17, and prices will increase to fund the remaining one-third of the investment program.
- For the Werribee Irrigation District, tariffs will increase to fund dam safety works at Melton Reservoir.
- Bacchus Marsh prices will reduce with the removal of the renewal annuity from 1 July 2013 (for Macalister and Werribee, the annuity diminishes across Water Plan 3).
- With minimal capital expenditure planned for Water Plan 3, surface and groundwater prices reflect our stable operating environment. Productivity savings will help to fund new obligations arising from National Metering Standards requirements.
- For all irrigation customers and licence holders, this plan utilises some of the un-used revenue requirement from Water Plan 2. This carried forward revenue initially repays deficit results from Water Plan 2, and is then used to build a modest 'resilience' balance for each customer group. This fund balance is then available to each customer group to absorb unforeseen cost and revenue changes, without the need to change a pre-determined price path - providing greater pricing certainty for customers.

### Section 3 / The corporation

- Changes in storage operator charges will reflect not just cost changes, but also changes in cost shares resulting from amendments to Bulk Entitlements.
- For Gippsland Water and Western Water there will also be a realignment of charges to actual costs, as we move away from the fixed charge agreements that were in place for Water Plan 2.

#### Average tariff changes

Macalister Irrigation District	0.45%
Werribee Irrigation District	1.44%
Bacchus Marsh Irrigation District	(1.93%)
Surface water licences	No change
Groundwater licences	No change

#### Storage operator charge changes

Gippsland power generators	
Change in underlying costs	0.02%
Change from increase in share of costs	4.11%
<b>Average change in annual charges</b>	<b>4.13%</b>
Western Water	
Change in underlying costs	4.4%
Realignment to actual costs	(1.7%)
<b>Average change in annual charges</b>	<b>2.7%</b>
Gippsland Water	
Change in underlying costs	0.53%
Change from increase in share of costs	6.98%
Realignment to actual costs	3.46%
<b>Average change in annual charges</b>	<b>10.97%</b>

Table 9: indicative annual tariff changes (real)

## Financial indicators

The table below describes important financial outcomes expected within Water Plan 3, and particularly:

- Maintenance of operating surpluses (EBITDA - Earning Before Interest, Tax, Depreciation & Amortisation):
- Consistent operating cash surpluses (the decline towards the end of Water Plan is on account of smoothed water charge revenue increases across the period and sale of water saving revenue forecast for 2013/14 and 2014/15)
- Escalating debt to \$44 million (2011-12 dollars, almost \$52 million after assumed inflation of 2.75% per year)
- Cash interest cover of 2.3 and greater, indicating a sound financial position to meet our debt obligations as they fall due

	2013/14	2014/2015	2015/2016	2016/2017	2017/2018
Water charges revenue	\$26,101	\$26,116	\$26,422	\$26,565	\$26,646
Total revenue	\$29,852	\$30,210	\$29,783	\$29,891	\$29,668
EBITDA	\$6,110	\$6,425	\$6,133	\$6,444	\$6,698
Cashflow from operations	\$5,074	\$5,128	\$4,656	\$4,386	\$4,373
Net debt	\$22,583	\$30,913	\$36,371	\$40,905	\$44,313
Cash interest cover	4.3	3.4	2.8	2.5	2.4

Table 10: financial indicators (\$'000, \$11/12)

## Risk management

Southern Rural Water operates a Risk Management system consistent with the International Standard ISO31000:2009 and with our requirements under the Statement of Obligations.

### Risk framework

Risks are recorded in our risk register, and assessed in accordance with our risk framework, using a likelihood and consequence table. This has regard to a range of factors (health and safety, environmental, governmental, financial, legal, water quality and service) and is subject to regular review and refinement.

Appropriate controls and treatments are established to manage risk. This is a continuous process, with existing risks being regularly reviewed, potential new risks being assessed, and risk occurrences being identified. Many of our current risks have been accepted based on the existing controls.

Changes are subject to Executive Risk and Board Committee review on a regular basis, with a full risk review conducted by management and the Board on an annual basis. A monthly attestation to the Board includes:

- Risk occurrence for the month;
- Changes to individual risk ratings; and
- Changes to risk mitigation strategies

### Significant risks

We manage a broad range of risks in carrying out our business operations. The most significant business related risks are associated with the large physical assets that we manage, and the water we manage as part of our role as a storage manager, irrigation water supplier and licensing authority of surface water and groundwater. These risks include:

- Large dam failure – failure of one of our seven large dams would cause major downstream flooding, potential loss of life, and long term service disruption
- Critical asset failure – failure of a critical piece of distribution infrastructure could interrupt supply of water for irrigation, urban water or industrial use
- Permanent damage or failure of a groundwater system – over extraction of groundwater could lead to saline intrusion into an aquifer, making the water unfit for most purposes
- Flooding – negligence in managing water flows from our dams or our irrigation supply networks could impact on communities or individuals
- Water quality – failure to adequately manage water quality could lead to the contamination of water and/or suspension of supply to customers
- Breach of delegated powers – failure to follow or correctly interpret delegated powers, government policy or established guidelines could lead to censure from government

There are other risks that apply more generally to all businesses which include fraud, financial mismanagement, and public and staff safety.

All such risks have been identified, documented and appropriate controls and treatments identified. When management and the Board are satisfied with the level of risk, each risk is then formally “accepted” in the risk register.

## Section 3 / The corporation

### Risk focussed capital planning

A central part of our capital expenditure development and prioritisation process is assessment of risk. As risks are identified that relate to our physical assets, they are recorded as potential projects, a problem statement developed and potential consequences identified.

The capital expenditure prioritisation process assesses both risk and benefits. The risk component assesses the level of change to risk associated with the implementation of the project. For example, a dam safety project may take the probability of failure from a 1 in 1000 year event, to a 1 in > 100,000 year event. This material change in the level of risk is then scored and all projects are ranked for benefit and risk reduction.

Many of our capital projects are directly linked to the risks identified above.

### Financial risks

Our financial processes are regularly reviewed by management, as well as by internal and external audit, for the prevention of financial risks associated with reporting failures, accounting errors and fraud. We believe that our systems are appropriate and meet contemporary accounting practice.

We currently follow Department of Treasury guidelines for the placement of debt facilities, and we are reviewing our treasury policy, so that we can better align our asset profile with our debt profile. Developing this policy response will strengthen our ability to manage our growing debt position and related interest rate risk. This is an important risk exposure to the business, as the mis-management of our debt obligations can quickly escalate to poor financial outcomes and reputation damage.

We have limited exposure to revenue variability, with our charges being largely entitlement based, and our ability to carry forward shortfalls within our revenue cap.

As noted earlier, this Water Plan is accompanied by indicators that validate our financial viability across this medium term planning period.



## Water Plan 2 outcomes

### Major initiatives

We planned a number of initiatives in Water Plan 2. Here is a summary of our progress.

#### Irrigated supply

<b>Unbundling water rights</b>	
Water Plan Proposal	The irrigation sector is undergoing major change, with policy initiatives to promote better use of scare resources. We will work with irrigators to implement the plan to separate the different component elements of the property right over water as from 1 July 2008, including developing a water register.
Action and Outcome	Successfully implemented, with no customer disruption.
<b>MID2030</b>	
Water Plan Proposal	MID2030 represents by far the largest and most significant focus of activity and expenditure by SRW and its customers over the Water Plan period. Works proposed include significant changes in the supply system including channel automation and piping of major areas. The final arrangements, including important questions about funding are still to be decided through our consultative processes.
Action and Outcome	Extensive work has been undertaken to refine the scope and estimate costs at a detailed level. Two gateway reviews and a business plan for phase 1 of the works has been completed and a bid for (50%) funding a future state government budget. In the meantime we are planning for \$26 million of MID 2030 “leading works” to be undertaken from 2011/12 to 2017/18.
<b>Western Irrigation Futures</b>	
Water Plan Proposal	In both the Werribee and Bacchus Marsh Irrigation Districts there are powerful drivers to develop a detailed long-term strategic infrastructure investment plan for SRW’s irrigation supply system. The Western Irrigation Futures Project will develop a strategy addressing these drivers commensurate with the financial capacity of current and prospective customers and third-party investors and the repayment period for which SRW can be confident.
Action and Outcome	The Western Irrigation Futures strategy was completed in 2010 and implementation is underway. A new allocation method has been implemented. Individual carryover and new recycled water contracts are in progress at present. A cost and feasibility study on an infrastructure reconfiguration at Bacchus Marsh is underway. A business case for the (50%) funding of modernisation of Werribee will be submitted to government for consideration in a future budget round.
<b>Werribee recycled water scheme</b>	
Water Plan Proposal	With the announcement that Melbourne Water would not build a desalination plant to reduce the salinity of the recycled water, SRW and other stakeholders will explore other strategies to ensure that water provided to the district is of a quality that will meet the sustainable needs of production and the environment.
Action and Outcome	The Western Irrigation Futures strategy considered this matter in depth. Recycled water will provide a supplementary supply in normal years and the base supply in wet years, with salinity being improved by the use of metro water. The interim arrangements were extended by two years. A new set of shandy rules have been endorsed by the EPA. Long term supply agreements for recycled water and metro water have been agreed. New customer contracts have been signed with irrigation customers.
<b>Metering and the National Water Initiative</b>	
Water Plan Proposal	Clauses 87-88 of the NWI identify the importance of improved metering and measurement of water, and make a commitment to develop and enact national meter standards and specifications by the end of 2007. The initiative will require replacement of Dethridge wheels, the main form of metering across large-scale irrigation districts, as they will not meet proposed measurement standards.
Action and Outcome	SRW has determined its approach to meeting the metering obligations which is set out in our part of Victoria’s Implementation Plan. This involves the “grandfathering” of existing Dethridge wheels unless there is external funding required or it is agreed as part of a modernisation plan.
<b>Performance monitoring</b>	
Water Plan Proposal	Under the National Water Initiative, governments have agreed to report independently, publicly, and on an annual basis, to facilitate benchmarking of pricing and service quality for urban and rural water delivery agencies. A new data collection, management and reporting suite will be required to meet this requirement. The facility will be integrated with and help support operational requirements.
Action and Outcome	We have contributed to the National Water Initiative performance report annually.  We are also currently implementing a data warehouse, which we expect will streamline our compliance with reporting obligations.

## Section 3 / The corporation

## Storage Operation

Dam safety	
Water Plan Proposal	We will develop and implement a dam safety program in line with the ANCOLD Guidelines and Clause 14 of our Statement of Obligations. Priority works will be at Melton, Glenmaggie and then Blue Rock.
Action and Outcome	Work continued on the dam safety program with a major project being completed at Pykes Creek (from Water Plan 1) and Glenmaggie. The project at Blue Rock was assessed as not required after detailed technical analysis, and the Melton project is currently underway.
Environment and recreation responsibilities	
Water Plan Proposal	SRW proposed a number of initiatives to improve the management of reservoir surrounds.
Action and Outcome	Plans are in place for all storages. Several practical on ground activities have been completed including fencing of some lands around storages, establishment of walking tracks at Blue Rock Lake, closure of an unsafe recreational area and minimising illegal access and boat launching at Melton reservoir.

## Surface and groundwater licensing

Supporting policy development	
Water Plan Proposal	We will recruit an extra member of staff to take the lead in developing legislative and management responses to policy issues.
Action and Outcome	We have had a management re-organisation which has increased the capacity of the organisation to respond to policy requirements. SRW had extensive involvement in the Gippsland and Western Sustainable Water Strategies (SWS's). The objective of this initiative has been met.
Streamflow and groundwater management plans	
Water Plan Proposal	We will promote streamflow management plans for six river systems, and establish management plans in priority Groundwater Management Areas. We will also develop practical strategies to promote groundwater trading in consultation with users.
Action and Outcome	Three groundwater management plans have been completed. No further are planned as the Sustainable Water Strategies have established a new direction. The SWSs have a number of policy initiatives that will further assist groundwater trading. No further streamflow management plans have been planned or undertaken.
Metering	
Water Plan Proposal	Response to National Metering Plan
Action and Outcome	All licences over 10ML are now metered. Dairy shed metering is now also underway. SRW has a plan to upgrade required meters to meet the National Standards by 2020 as part of the Victoria's metering Implementation plan.
Southern Groundwater Futures	
We proposed a range of initiatives aimed at improving our understanding and management of groundwater resources across our region.	
Water Plan Proposal	Undertake 3D Hydrogeological Mapping of our groundwater data.
Action and Outcome	Complete. We believe we are the first groundwater manager to undertake this task in the country.
Water Plan Proposal	Publishing an atlas of groundwater systems in Southern Victoria
Action and Outcome	South West Atlas complete, Gippsland Atlas underway and Port Phillip and Westernport planned.

## Capital expenditure

Our capital plan for Water Plan 2 totalled almost \$33 million – plus \$1 million of recoverable works at Yallourn and Narracan. Combined with \$15.5 million of capital works carried forward from Water Plan 1, we had a total capital budget for Water Plan 2 of \$49 million. We are on track to deliver around \$53 million across the five-year period, which includes commencement of the MID2030 Leading Works program during 2011/12 and \$3 million of recoverable works at Yallourn and Narracan.

Area	Project	Carried forward	WP2 Proposal	Total Budget	Actual & Forecast	Difference
Macalister Irrigation	MID2030	\$0	\$0	\$0	\$8,223	\$8,223
Macalister Irrigation	Channel Automation (Government funded)	\$2,870	\$7,447	\$10,317	\$6,533	(\$3,784)
Pykes Creek Reservoir	Pykes Ck Upgrade Stage 2	\$4,912	\$0	\$4,912	\$5,177	\$265
Glenmaggie Reservoir	Southern Outlet Bypass Valve	\$0	\$0	\$0	\$2,130	\$2,130
Melton Reservoir	Melton Embankment Protection	\$970	\$900	\$1,870	\$2,825	\$955
Macalister Irrigation	Carp Damage Channel Rehabilitation	\$24	\$1,400	\$1,424	\$1,878	\$454
<b>Total of projects greater than \$1m</b>		<b>\$8,776</b>	<b>\$9,747</b>	<b>\$18,523</b>	<b>\$26,766</b>	<b>\$8,243</b>
<i>Total of projects less than \$1m</i>		\$6,743	\$22,775	\$29,518	\$23,052	(\$ 6,466)
<b>Total excluding recoverable works</b>		<b>\$15,519</b>	<b>\$32,522</b>	<b>\$48,041</b>	<b>\$49,818</b>	<b>\$1,777</b>
<b>Recoverable Works</b>						
Narracan		(\$214)	\$1,009	\$795	\$1,183	\$388
Yallourn		(\$7)	\$317	\$310	\$2,398	\$2,088
<b>Total Water Plan 2 Capital Expenditure</b>		<b>\$15,298</b>	<b>\$33,848</b>	<b>\$49,146</b>	<b>\$53,399</b>	<b>\$4,253</b>

Table 11: Water Plan 2 capital expenditure – significant projects (\$000, nominal)

The majority of our capital expenditure – almost \$30 million worth - was funded through our regulatory asset base and will have impacted prices across Water Plan 2. Around \$5 million represents our asset renewal expenditure, over \$7 million was funded from grants or other direct contributions, and \$3.5 million of works on Narracan and Yallourn are recoverable from the Gippsland power generators.

The modernisation works we are commencing in the Macalister and Werribee irrigation districts total over \$8 million, and will be offset against our renewal funds as we transition away from renewal-based pricing.

Funding Source	Carried forward	WP2 Proposal	Total Budget	Actual & Forecast	Difference
Price Increases (Regulatory Asset Base)	\$9,894	\$19,436	\$29,330	\$29,605	\$275
Renewals	\$661	\$5,040	\$5,701	\$4,585	(\$1,116)
Renewal transition offset	\$0	\$0	\$0	\$8,223	\$8,223
Grants and contributions	\$4,964	\$8,046	\$13,010	\$7,405	(\$5,605)
Recoverable works	(\$221)	\$1,326	\$1,105	\$3,581	\$2,476
<b>Total</b>	<b>\$15,298</b>	<b>\$33,848</b>	<b>\$49,146</b>	<b>\$53,399</b>	<b>\$4,253</b>

Table 12: Water Plan 2 capital expenditure – summary by funding source (\$000, nominal)

## Section 3 / The corporation

## Tariffs

Our tariff increases across Water Plan 2 have been below the level indicated in our Water Plan. These tariffs have been reviewed annually in consultation with our customer committees, and reflect:

- Changes in timing and size of our capital expenditure program
- Productivity savings
- Deferral of some deficit repayment – recognising drought pressures

The table below compares the annual tariff increases (real) indicated in Water Plan 2, against the average annual increases that we have applied across that regulatory period.

Customer Group	Water Plan 2 Proposal	Average Actual
Macalister	5.7%	4.4%
Werribee	8.7%	7.8%
Bacchus Marsh	10.1%	10.0%
Surface water	8.6%	6.7%
Groundwater	10.3%	7.7%

Table 13: Water Plan 2 average annual tariff increases (real)

## Renewal funds

Our renewal funds continued to accumulate during Water Plan 2, partly due to renewal work being minimised and through the interest on the fund balance.

Renewal works have been minimised while irrigation modernisation strategies have been finalised and planned in our irrigation districts. We have sought to avoid investing in assets that are subsequently made redundant by future modernisation works - unless there is a clear and imminent risk to service or supply.

The following table summarises the movement in our renewal funds across Water Plan.

	Actual				Forecast
	2008/09	2009/10	2010/11	2011/12	2012/13
Opening balance	\$11,968	\$14,027	\$15,732	\$18,045	\$20,286
Annuity charges	\$1,777	\$1,872	\$1,848	\$1,848	\$1,848
Asset renewal projects	\$741	\$1,187	\$535	\$939	\$1,066
Interest on fund balance	\$1,024	\$1,020	\$1,000	\$1,332	\$1,488
<b>Closing balance</b>	<b>\$14,027</b>	<b>\$15,732</b>	<b>\$18,045</b>	<b>\$20,286</b>	<b>\$22,555</b>

Table 14: renewal funds – corporation total (\$'000, nominal)

## Financial outcomes

The most significant change to our financial position over Water Plan 2 is a significant increase in debt – from just under \$2 million to over \$18 million by the end of Water Plan 2. Otherwise, we have made a consistent operating and cash surplus on a stable revenue and expenditure base (noting an early spike in revenue for large recycled and other alternate water supplies provided at cost recovery tariffs for drought affected western irrigation districts). The following table describes this history.

	Actual				Forecast
	2008/09	2009/10	2010/11	2011/12	2012/13
Water charges revenue	\$25,398	\$26,724	\$24,910	\$25,988	\$26,053
Total revenue	\$31,301	\$33,405	\$28,446	\$28,800	\$30,264
EBITDA	\$2,891	\$4,879	\$4,444	\$4,163	\$6,191
Cashflow from operations	\$2,775	\$7,350	\$7,149	\$6,000	\$3,866
Net cash / (Net debt)	\$1,890	\$3,153	\$2,365	(\$2,461)	(\$13,471)
Cash interest cover	N/A	N/A	N/A	N/A	6.4

Table 15: Water Plan 2 financial indicators (\$000, nominal)

## Irrigation district deficits

In order to avoid cross-subsidisation between our customer groups, we monitor the financial positions of our irrigation districts and set prices to recover accumulated deficits (or reduce prices to return surpluses).

The protracted drought reduced delivery volumes in our irrigation businesses, creating a shortfall in revenue and challenging the delivery volumes upon which our budgets were based. In 2003/04 we took steps to address this by:

- establishing a 10-year repayment for accumulated sales deficits, ending in 2013; and
- reducing our budgeted delivery volumes.

These measures were endorsed by our Customer Consultative Committees.

Our first ESC Price Review included a “cost of debt” within our revenue requirement. This amount (\$1.9 million as set by the Minister for Water) incorporated around \$823,000 representing repayment, over 7 years, of accumulated deficits totalling \$4.7 million (as at 1 July 2006).

These deficits had been effectively borrowed internally against our accumulated renewal funds.

In Water Plan 2 we proposed to complete repayment of these deficits by 2013, at an annual cost of around \$848,000. As shown in the table below, we are on track to repay \$1.1 million of the \$1.9 million opening deficits. Unfortunately, with record low water usage in the MID over recent years, our deficit has increased for that district. Repayment of these deficits is incorporated within our indicative tariff impacts for Water Plan 3.

Carry forward of this revenue is supported by the un-used portion of our Water Plan 2 revenue cap.

	Opening Deficit	Estimated Closing Deficit	Change
Macalister Irrigation District	(\$546)	(\$877)	(\$331)
Werribee Irrigation District	(\$919)	\$195	\$1,114
Bacchus Marsh Irrigation District	(\$439)	(\$135)	\$304
<b>Total</b>	<b>(\$1,904)</b>	<b>(\$817)</b>	<b>\$1,087</b>

Table 16: irrigation district deficits (\$000, nominal)



# Section 4

## Macalister Irrigation District

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## Overview

The Macalister Irrigation District (MID) is the largest irrigation district in the south of Victoria. The district is situated around Maffra in central Gippsland and sources water from the Macalister River, via Lake Glenmaggie, and from the Thomson River, via Cowwarr Weir.

The district has secure water supplies supplemented by good rainfall. The average annual inflow to the district over the last 10 years has been approximately 220 GL.



Figure 3: Macalister Irrigation District location map

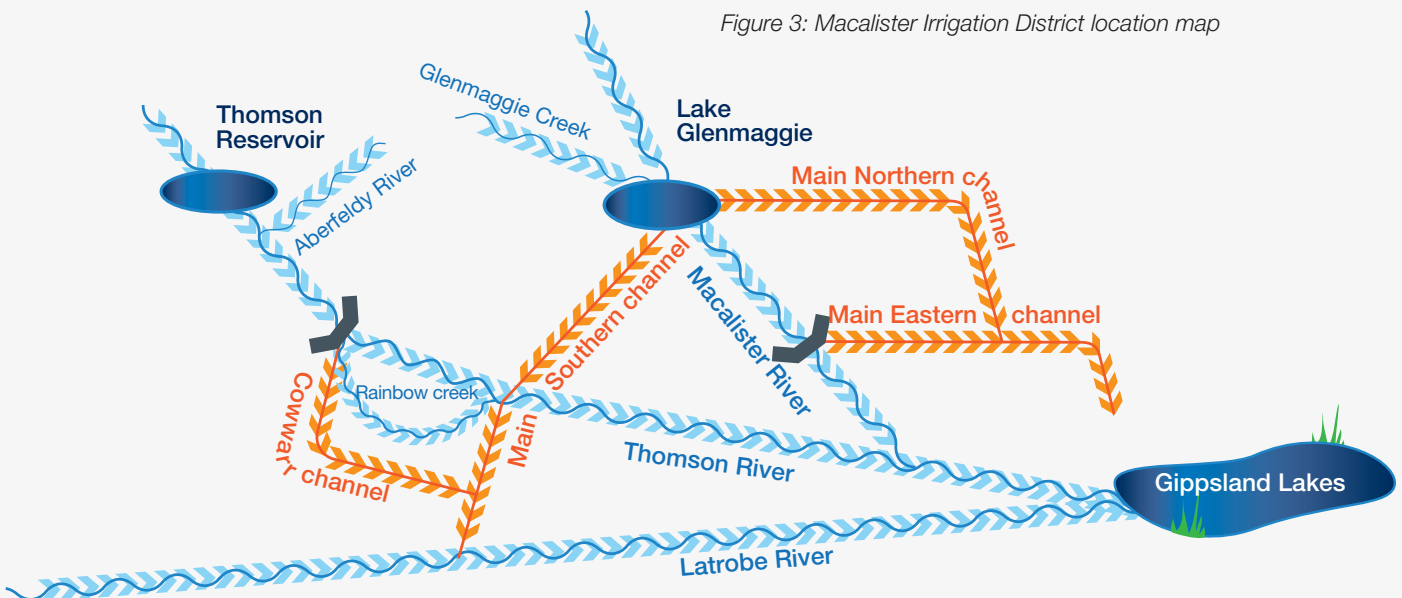


Figure 4: Macalister Thomson water system

The region has productive soils, a strong dairy sector, and developing vegetable and cropping industries. Approximately 33,500 ha are currently used for irrigation, and of this 90% is under pasture, with dairy being the dominant industry.

Facts and figures	
Total area of the district	54,753 ha
Total length of channels	592 km
Total length of pipes	39 km
Total length of drains	411 km
No of delivery outlets	2,159
No of customers	1167
Total of high reliability water shares	146,200ML
Total of delivery shares	1,419 ML/day

## Section 4 / Macalister Irrigation District

A study based on 2006 ABS data indicates that the value of agricultural commodity produced by the MID is between \$165 and \$180 million per annum. This represents an annual regional economic contribution between \$410 and \$450 million. The MID is therefore a significant contributor to Victoria's annual regional economic output.

The irrigation season runs from 15 August to 15 May, although if supply and weather conditions are favourable, early starts and extensions beyond the scheduled close down are arranged.

On average, SRW processes around 20,000 irrigation orders each irrigation season in the MID.

## What do we charge for?

### Water shares

A water share is a legally recognised, secure share of water allocated from an irrigation water system. For the Macalister Irrigation District, allocations are made from water harvested in Lake Glenmaggie and from Southern Rural Water's entitlement to flow in the Thomson River.

A water share is expressed in megalitres (ML), representing the amount of water that can be taken when an allocation of 100% is declared against that water share. So, a customer with a water share of 50ML will be able to use up to 25ML when an allocation of 50% is declared, and up to 50ML if the allocation is 100%.

There are two classes of water share – high reliability and low reliability. When the allocation reaches 100% for high reliability water shares, we start allocating any further water against low reliability water shares.

Water share tariffs are based on the megalitre volume of the share, regardless of any allocations made against the water share. These are annual fees, and reflect the costs of operating, maintaining, renewing and upgrading the reservoirs in which water shares are harvested and stored.

### Delivery shares

A delivery share is a share of the capacity of the delivery system - i.e. the channels and pipelines that deliver water across the irrigation district.

Delivery shares are linked to a property and stay with that property if the water share is transferred. Irrigators can continue to pay delivery share charges if they wish to retain their delivery share for the future, trade all or part of their delivery share to another property, or pay the relevant termination fee and surrender the delivery share.

A delivery share is expressed in megalitres per day, and when a delivery system is congested it provides a share of the available water flow.

Delivery share tariffs are based on the megalitre volume of the share, regardless of any allocations made against the water share. These are annual fees, and reflect the costs of operating, maintaining and renewing and upgrading the channel, pipelines and regulators that we use to deliver water.

We also apply service point tariffs against each service point associated with a share. This annual charge reflects the costs of operating and maintaining outlets or meters.

These shares are tradable - although there has been limited trade to this point.

### Usage

Water usage charges are calculated on the volume of water used, and are billed at the end of the irrigation season (August).

## Our strategy

Within the framework of the corporate strategy, we have developed a strategy map for Water Supply East - the part of our business that supplies water to the MID. This strategy provides a sharper focus on the customer expectations and business improvement opportunities that will help this part of the business deliver on our corporate strategy.



Figure 7: strategy map – water supply east

## Our external focus

Our planning framework for the Macalister Irrigation District has been developed in consultation with customers and staff across the organisation, and is targeted at delivering outcomes in two areas:

- providing great service at a fair price for our customers
- preserving environmental and community values

### Great service at a fair price

Providing great service at a fair price means:

- maximising the harvest of water and protecting water shares in our storages
- providing flexible and reliable water delivery to irrigators
- giving clear, relevant and timely information to our customers
- ensuring that prices are affordable, and that customers value our service above the price they pay

## Section 4 / Macalister Irrigation District

### Community & environment

Whilst delivering these outcomes for our customers, we must carefully manage the impact of our operations on the natural environment. We must also recognise that in our storages we have stewardship of significant assets, largely funded by taxpayers, with recreational and aesthetic values for local communities, but also with significant potential risks. Delivering our community and environmental outcomes means:

- protecting communities from any risks associated with our assets and activities
- providing safe amenities and recreational facilities to benefit local communities
- protecting water quality
- managing environmental water entitlements and river flows

### Our internal focus

To deliver these outcomes for customers, the community, and the environment, we will focus our actions in four areas:

- Transforming our business
- Improving asset management
- Improving customer communications
- Improving land and water management

### Transforming our business

The MID was developed in two primary stages during the 1920s and 1950s, and despite recent investment by the State and Federal governments to improve efficiency from approximately 67% to 72%, the district remains one of the least efficient irrigation districts in Australia. The network is still predominantly manually operated, resulting in:

- long order lead times
- low and inconsistent water flow rates
- water deliveries occurring outside of the targeted delivery time
- less than optimal on-farm practices
- high water losses through excessive seepage & outfalls
- nutrient run-off into rivers and the Gippsland Lakes

In 2005 we launched MID2030 - a comprehensive strategic review of the district and eventually a business case for investment in pipelining and channel automation at a cost of approximately \$310 million (\$2011). The program would:

- provide an additional 37 GL of water for irrigation use through reduced water losses
- provide improved service to customers allowing a similar or greater amount of water to be saved on-farm
- reduce nutrients flowing into Gippsland Rivers and the Gippsland Lakes

During 2011, in close consultation with customers and relevant agencies, we developed a business case for phase 1 of these works. This \$117 million program (2011/12 dollars) included:

- piping one full supply zone
- further automation of channel regulating structures in three zones
- constructing a balancing storage
- some outlet modernisation and rationalisation, and
- establishing at least one end-of-drain wetland



These works will fully automate 40% of the district, provide service benefits to 85% of the district, and save 28 GL of water. We have proposed a co-funding investment model, with government funding 50% of the initial capital investment and irrigators providing the remaining 50%, and with irrigators retaining water savings for productive use. This will increase the average water price in the order of 25%.

Whilst funding for the full program has not been resolved, we remain committed to the project and plan to invest \$26 million in a MID2030 “Leading Works” program – which we will seek to have recognised as part of our 50% co-contribution against future government funding. We have held preliminary discussions with the Victorian Government on this basis.

This program of works includes:

- construction of a balancing storage
- fitting automated regulators in three supply areas
- rationalisation of outlets
- preliminary design of a pipeline and development of a prototype outlet for the Southern Tinamba area

In addition to implementation of these physical works, this project will transform the way that we deliver water across much of the district. This will require reskilling our workforce to meet the changing demands.

The expected regional economic growth from the phase 1 investment is approximately \$86 million per annum (MID2030 Modernisation - Economic Value of Investment, RM Consulting Group). We are completing a full cost benefit analysis in preparation for submission to a future state government budget process.

## Asset management

The MID relies on Glenmaggie to harvest water, diversion weirs at Cowwarr and Maffra to divert water, and a delivery network with over 600km of channels and pipelines, over 500km of drains, and around 4,000 structures.

Managing these assets well, to ensure that they continue to deliver service to customers, means understanding the condition of the assets and undertaking the appropriate maintenance and renewal works. To ensure value for money, we must understand when the right time is to intervene, and when to maintain an asset versus replacement. Often this will involve a trade-off between cost and risk to service performance.

Our priorities over the next few years to improve our asset management are:

- Implementing a new asset management system
- Addressing long-term maintenance issues
- Seasonal pro-active treatment of weeds in our channels
- Ensuring that we inspect and assess the condition of all assets at appropriate intervals

## Customer communications

Two consistent messages we have heard from customers through our consultation have been about more innovative communications, and doing more to encourage water trading.

In communicating, we will explore technological opportunities to provide more immediate and targeted communication – particularly targeted to smart phones so that customers can receive important messages on the farm. We will also look at cost effective opportunities to increase personal contact with our customers.

To encourage water trading, we will look at broad promotional opportunities, as well as targeted communication to customers with available allocation outlining the benefits of trading and the process to make it happen.

## Land and water management

Our land and water management focus includes a compliance program, to ensure that people are doing the right thing on and around our storages, as well as throughout the district. This is about ensuring the safety of the community, and also protecting water resources.

We will also continue our programs around Lake Glenmaggie to manage stock, vehicle and other access, as well as erosion control and other water quality protection measures.

## Section 4 / Macalister Irrigation District

## Financial tables

## Capital expenditure

Our capital expenditure proposal for Water Plan 3 totals just over \$30 million. Most of this is reflected in our MID2030 leading works program.

Project	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total	WP4
<b>Significant projects</b>							
MID2030 Leading Works	\$3,316	\$5,611	\$3,589	\$3,273	\$3,784	\$19,573	\$0
Channel Renewal Works	\$485	\$485	\$485	\$585	\$585	\$2,625	\$2,400
Cowwarr Remedial Works	\$795	\$190	\$0	\$135	\$265	\$1,385	\$0
Siphon Repairs	\$566	\$75	\$250	\$0	\$0	\$891	\$0
<b>Other projects</b>							
Other project - Macalister Irrigation	\$868	\$467	\$419	\$463	\$665	\$2,882	\$4,905
Other Projects - Glenmaggie Cowwarr	\$1,119	\$433	\$578	\$413	\$493	\$3,036	\$2,754
<b>Total</b>	<b>\$7,149</b>	<b>\$7,261</b>	<b>\$5,321</b>	<b>\$4,869</b>	<b>\$5,792</b>	<b>\$30,392</b>	<b>\$10,059</b>

Table 17: MID capital expenditure summary (\$000, \$11/12)

The MID2030 Leading Works will be funded from renewal funds as part of our transition away from renewals. The remainder of the capital program will be added to our Regulatory Asset Base.

Funding Source	2013/14	2014/15	2015/16	2016/17	2017/18	Total
Price increases (Regulatory Asset Base)	\$3,694	\$1,687	\$3,749	\$4,168	\$5,349	\$18,647
Water auction	\$945	\$0	\$0	\$0	\$0	\$945
Renewal transition offset	\$2,510	\$5,574	\$1,572	\$701	\$443	\$10,800
<b>Total</b>	<b>\$7,149</b>	<b>\$7,261</b>	<b>\$5,321</b>	<b>\$4,869</b>	<b>\$5,792</b>	<b>\$30,392</b>

Table 18: MID capital expenditure by funding source (\$000, \$11/12)

## MID2030 Leading works

The MID2030 leading works program started in 2011/12, and comprises just over \$26 million in capital expenditure. There are four components to the program.

Project	Water Plan 2	2013/14	2014/15	2015/16	2016/17	2017/18	Water Plan 3 Total	Program Total
Balancing Storage	\$476	\$316	\$4,740	\$1,344	\$0	\$0	\$6,400	\$6,876
Regulator Retrofit	\$5,233	\$1,583	\$0	\$1,631	\$2,749	\$3,018	\$8,981	\$14,214
Southern Tinamba Pipeline Study	\$0	\$175	\$275	\$0	\$0	\$0	\$450	\$450
Outlet Rationalisation	\$735	\$1,242	\$596	\$614	\$524	\$766	\$3,742	\$4,477
<b>Total</b>	<b>\$6,444</b>	<b>\$3,316</b>	<b>\$5,611</b>	<b>\$3,589</b>	<b>\$3,273</b>	<b>\$3,784</b>	<b>\$19,573</b>	<b>\$26,017</b>

Table 19: MID2030 leading works summary (\$000, \$11/12)

## Balancing storage

Our ability to implement automation on the Main Southern Channel is restricted due to the long distance from Lake Glenmaggie and the lack of control on the Cowwarr channel. This causes poor service to customers along the Southern Cowwarr supply system, and significant outfalls at the Thomson River siphon - estimated to be approximately 3,000 ML/annum.

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A balancing storage will act as a buffer between the constrained supply system and downstream demand requirements. This will provide service benefits for about 40% of our customers by reducing order lead times (in some cases currently exceeding three days), providing more consistent flow rates (critical for optimal irrigation for flood irrigators), and enabling further automation. We will also have the capacity to increase harvesting from the Thomson River using existing harvest rights – we currently have no capability to harvest and store this water.

Alternatives considered included alternative storage sites, in-channel storage, or increasing the volumes of water released to meet service demands. None of the alternatives achieved the combined benefits of the proposed balancing storage.

The risks to be managed during the project include land acquisition, construction cost and timeframe blowouts and contractor availability. Mitigation strategies have been planned to deal with these issues.

Regional benefits expected include increased economic activity (primarily through increased milk production from dairy) driven by the improved farm productivity from extra water and improved service levels.

The design is scheduled to occur during the final year of Water Plan 2, with construction during Water Plan 3.

### Regulator retrofit

This program involves the replacement of manual regulators with automated flume gates across three supply areas. In the Eastern and Nambrok-Denison areas this will extend previous automation, and will see the majority of major channels automated. In the Heyfield area, which has no automation currently, this program will automate all regulators.

The Eastern and Nambrok-Denison regulators will be undertaken in two stages. During the final year of Water Plan 2, we will fit 33 regulators in the Eastern area and , 26 in the Nambrok-Denison area, and commence 32 regulators in the Heyfield area (which will be completed in Water Plan 3). During Water Plan 3 will fit a further 42 regulators in the Eastern area and 68 in Nambrok-Denison.

Project	Water Plan 2	2013/14	2014/15	2015/16	2016/17	2017/18	Water Plan 3 Total	Program Total
Heyfield	\$913	\$1,583	\$0	\$0	\$0	\$0	\$1,583	\$2,496
Eastern	\$2,244	\$0	\$0	\$1,631	\$1,066	\$0	\$2,697	\$4,941
Nambrok Denison	\$2,076	\$0	\$0	\$0	\$1,683	\$3,018	\$4,701	\$6,777
<b>Total</b>	<b>\$5,233</b>	<b>\$1,583</b>	<b>\$0</b>	<b>\$1,631</b>	<b>\$2,749</b>	<b>\$3,018</b>	<b>\$8,981</b>	<b>\$14,214</b>

Table 20: MID2030 leading works – regulator retrofit (\$000, \$11/12)

### Southern Tinamba pipeline study

The MID2030 strategy proposes automating the main channel and converting other channels to pipelines in the Southern-Tinamba supply zone – an area with 348 outlets currently requiring varying flows and volume. This is estimated to save 16,500 ML per annum from reduced outfall, leakage, evaporation and seepage - and will allow large-scale conversion to spray irrigation, which is more suited to the soil types and will increase irrigation efficiency and productivity.

Two aspects of the design require investigation during Water Plan 3 in order to further refine design and cost of the proposed works. Firstly, one of the major costs of project is in replacing customer outlets, and the conceptual design assumes some rationalisation to reduce the number of outlets. Reducing outlets may also reduce the length of pipeline required. We propose to complete a desktop assessment to better understand the possible extent of rationalisation.

Secondly, the project will require a new type of outlet to allow for flood irrigation and direct pumping from the pipeline. Currently there are no known commercial outlets of this nature. A prototype outlet has been designed, and we propose to test this for performance and maintainability.

### Outlet rationalisation

The MID Rationalisation Program aims to reduce the size of the asset base required to service our supply area, and also to improve service through the use of automated outlets. In most cases rationalisation will involve replacing and reducing the number of Dethridge outlets. The new outlets will be capable of providing better service levels and will be compliant

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with measurement standards. In some cases rationalisation will involve eliminating parts of the supply system.

The benefits from rationalisation include deemed water savings from outlet upgrades, and avoiding future asset investment and maintenance costs.

### Channel renewal works

The capital program includes \$2.6 million across the regulatory period for renewal of channels, comprising:

- \$1.5 million to rebuild 2-3kms of channel per year undermined by European carp
- \$475,000 to remodel eroded channel banks in localised areas
- \$450,000 for a program to remove trees from alongside channels and remodel affected banks
- \$200,000 to address a heavily eroded 3.9km section of the Main Northern channel

Delivery of these programs relies on recurrent resources and asset availability. We have committed equal annual amounts for progressive works.

Project	2013/14	2014/15	2015/16	2016/17	2017/18	Total
Carp Damage Channel Rehabilitation	\$300	\$300	\$300	\$300	\$300	\$1,500
Remodel Eroded Banks	\$95	\$95	\$95	\$95	\$95	\$475
Remove Trees and Remodel	\$90	\$90	\$90	\$90	\$90	\$450
Main Northern Erosion Remediation	\$0	\$0	\$0	\$100	\$100	\$200
<b>Total</b>	<b>\$485</b>	<b>\$485</b>	<b>\$485</b>	<b>\$585</b>	<b>\$585</b>	<b>\$2,625</b>

Table 21: MID channel renewal works (\$000, \$11/12)

### Cowwarr Weir remedial works

Cowwarr Weir diverts water from the Thomson river to the MID via the Cowwarr channel. Remedial works over the regulatory period include:

- \$620,000 (plus \$55,000 during 2012/13) to construct a downstream weir to address 40 year old corroded sheet piling and protect the main structure from erosion by dissipating the energy of flood waters
- \$400,000 to strengthen gates on the spillway to increase overtopping capacity
- \$365,000 (plus \$50,000 during 2012/13) to repair scoured concrete spillway apron where reinforcing is exposed and corroding

Project	Water Plan 2	2013/14	2014/15	2015/16	2016/17	2017/18	Water Plan 3 Total	Program Total
Construct Downstream Weir	\$55	\$470	\$150	\$0	\$0	\$0	\$620	\$675
Strengthen Spillway Gates	\$0	\$0	\$0	\$0	\$135	\$265	\$400	\$400
Repair Concrete Apron	\$50	\$325	\$40	\$0	\$0	\$0	\$365	\$415
<b>Total</b>	<b>\$105</b>	<b>\$795</b>	<b>\$190</b>	<b>\$0</b>	<b>\$135</b>	<b>\$265</b>	<b>\$1,385</b>	<b>\$1,490</b>

Table 22: Cowwarr remedial works (\$000, \$11/12)

## Siphon repairs

The program of renewal works for the MID includes projects to repair two concrete siphons.

The Main Southern channel is the largest channel in the MID, and contains a 104m long concrete siphon. This 2.1m diameter siphon was constructed sixty years ago and serves nearly half of the district.

A condition assessment in 2011 identified some erosion of the concrete and reinforcement, and so the siphon requires repairs to extend its life.

Given the operating capacity of the siphon at 700 ML/day, bypass pumping would not be feasible if the siphon failed in a period of peak demand. Failure of this siphon could therefore disrupt supply to around half of the district for a week or more while the system was drained and repairs undertaken.

We propose to line the full length of the siphon at a cost of around \$700,000, which should extend the service out to 40 years.

Another siphon – one of three in succession on the Bundalaguah 1 channel - has a long history of leaks affecting vegetable crops on adjoining land. The historic use of concrete patches in some cases has made the situation worse as it adds localised weight to the pipe and prevents access to the original crack.

We propose to replace this siphon at a cost of \$350,000.

Project	Water Plan 2	2013/14	2014/15	2015/16	2016/17	2017/18	Water Plan 3 Total	Program Total
Main Southern - Siphon 5	\$150	\$541	\$0	\$0	\$0	\$0	\$541	\$691
Bundalaguah 1 - Huts Siphon	\$0	\$25	\$75	\$250	\$0	\$0	\$350	\$350
<b>Total</b>	<b>\$150</b>	<b>\$566</b>	<b>\$75</b>	<b>\$250</b>	<b>\$0</b>	<b>\$0</b>	<b>\$891</b>	<b>\$1,041</b>

Table 23: siphon repairs (\$000, \$11/12)

## Quantities

The bulk of our irrigation district revenue comes from fixed entitlements, which means that our quantities are static and our exposure to revenue variability is low.

We expect to create additional water shares from the water saved through automation and modernisation projects, and so our indicative tariff changes assume an additional 4GL of high reliability entitlement.

Approximately 10% of our MID revenue comes from a \$9/ML usage charge. As shown below, we have fallen well below our estimated usage volume in the last two years. However, we continue to budget for 163GL of usage as a reasonable long term average.

	2008/09	2009/10	2010/11	2011/12
Actual	184	162	101	87
Budget	163	163	163	163
<b>Excess / Shortfall</b>	<b>21</b>	<b>(1)</b>	<b>(62)</b>	<b>(76)</b>

Table 24: usage (GL) - MID



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## Revenue requirement

The table below summarises the revenue required for the MID across Water Plan 3 to deliver the outcomes proposed in this plan. The most significant changes are a reducing renewal annuity as we transition away from this pricing model, and the increasing cost of funding capital works – dominated by the MID2030 leading works.

	2011/12	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total
Baseline operating expenditure	\$7,470	\$7,470	\$7,470	\$7,470	\$7,470	\$7,470	\$37,349
Obligations & initiatives	\$0	\$349	\$333	\$333	\$326	\$316	\$1,657
Productivity & growth	\$0	(\$48)	(\$96)	(\$145)	(\$193)	(\$242)	(\$724)
Renewal annuity	\$1,370	\$1,144	\$843	\$656	\$423	\$0	\$3,066
Capital funding	\$1,259	\$1,641	\$1,915	\$2,101	\$2,333	\$2,840	\$10,831
Recovery of deficits	\$311	\$137	\$276	\$373	\$477	\$501	\$1,764
<b>Total Revenue Requirement</b>	<b>\$10,409</b>	<b>\$10,693</b>	<b>\$10,740</b>	<b>\$10,788</b>	<b>\$10,836</b>	<b>\$10,884</b>	<b>\$53,942</b>

Table 25: revenue requirement - MID (\$11/12)

## Indicative tariff outcomes

An annual tariff increase of 0.45% is required for the Macalister Irrigation District to meet the revenue required by this plan. The renewal offset will fund two-thirds of the \$26 million MID2030 leading works program, with the price increase funding the remaining one-third.

Actual tariffs will be set annually in consultation with our customers, and will typically match the annual change in our revenue requirement.

The table below provides the average charges for typical customers in the district, excluding CPI, and assuming an equal annual increase in prices.

		2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Small	5 ML	\$539	\$552	\$553	\$555	\$557	\$559	\$560
Medium	50 ML	\$3,362	\$3,943	\$3,958	\$3,979	\$3,999	\$4,020	\$4,040
Large	250 ML	\$16,298	\$19,192	\$19,267	\$19,373	\$19,474	\$19,579	\$19,678

Table 26: indicative customer impacts - MID (\$11/12)

## Service and price

### Overview

As outlined earlier, we have adopted a methodology for describing service / cost outcomes, and exploring the trade-off between service and price. The challenge we face as a business is in measuring our output – which for the Macalister Irrigation District is largely about the way in which we deliver water.

The service measures selected have been developed to a far greater degree of detail and customer engagement compared to table B.2 in the ESC's Guidance paper. While some measures are consistent, our work represents more meaningful indicators of service standards for each part of our business.

We have done much work recently in consultation with the Macalister Customer Consultative Committee to:

- identify a range of measures that describe our service
- establish a range of outcomes from those measures, graded from extremely poor (1) to excellent (10)
- weight the measures to describe the relative importance to customers of different aspects of our service

The weighted set of service measures allows us to calculate a single service index, which can be plotted against a measure of the service cost to explore the trade-off between service and price.

### Service measures

We have identified 9 measures of our service to the customers in the Macalister Irrigation District.

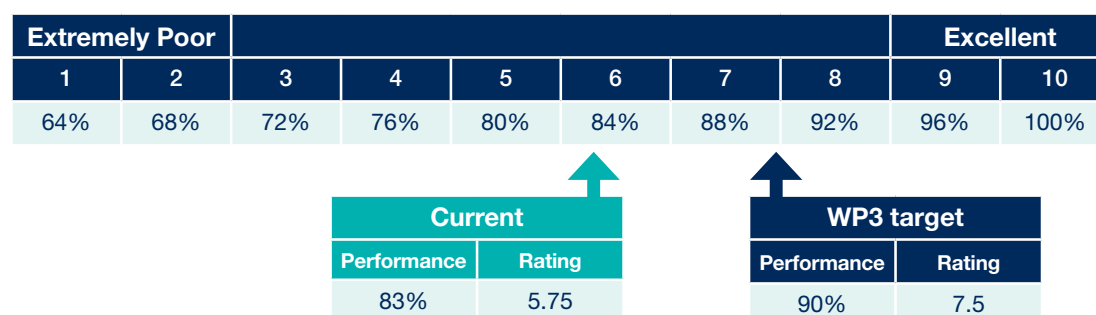
#### Measure No 1: flow rate consistency – automated outlets

By providing a consistent flow of water to a property during an irrigation, we allow our customers to better control the irrigation on farm - ensuring optimal water usage, improved farm productivity, and providing lifestyle benefits for farmers.

We measure performance as the percentage of time that the actual flow is within a defined range of the ordered flow rate. For automated outlets, we believe that performance less than 64% represents an unacceptable service level - and we strive for 100%.

Our current performance is 83%, and we expect to lift this to 90% by 2017/18.

Improvement in this measure will come from further automation of the channel system via the leading works program, other 2030 initiatives and targeting lowest performing outlets to better understand why their performance is below the line. Measures can then be taken with customers to address any underlying problems.



#### Measure No 2: flow rate consistency – manual outlets

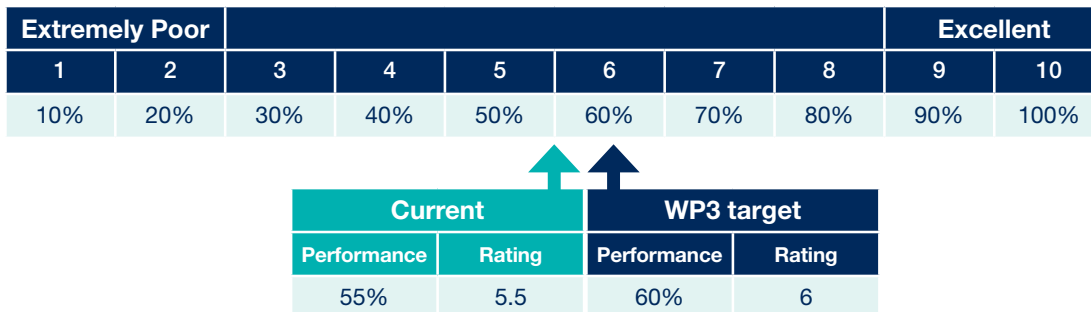
This measure is the same as measure no 1 – but relates to outlets that do not have automation.

Developing targets through the manual part of our system is problematic. It requires a special test rig which needs to be transported, installed, results extracted and analysed for each irrigation, before being again transported and installed at the next site. There is also a limited amount that can be done to improve flow rate consistency within a manual operation system, as monitoring and management actions are undertaken at much lesser frequency and with less refinement.

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That said, we have proposed a rating scale and an estimate of our current performance against that scale. The rating scale for manual outlets displays greater variability, reflecting the difficulty in managing flows to these outlets.

We have forecast a modest improvement, which will be delivered by increased automation of regulators on channels, and improved monitoring of orders against actual usage.



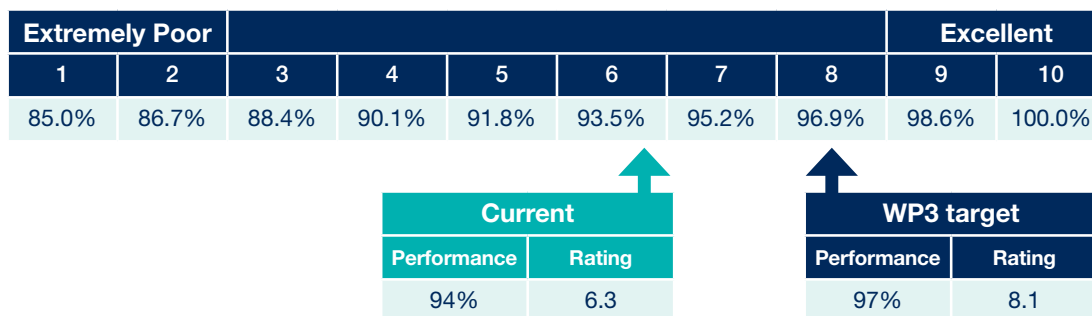
**Measure No 3: orders delivered within 1 day of requested**

Customers order water based on their judgement as to the best time to irrigate their pasture or crops, noting other on farm and lifestyle constraints. “Shifting” orders can impact on pasture growth and farm management.

We measure performance as the percentage of orders that are delivered within 24 hours of the time they are requested. We believe the less than less than 85% represents an unacceptable service level – and we strive for 100%.

We expect to improve by 3% on our current performance at 94%.

This improvement will come from increasing channels under automation allowing more customers to order water under our Demand Management System (DMS).



**Measure No 4: orders delivered within am or pm**

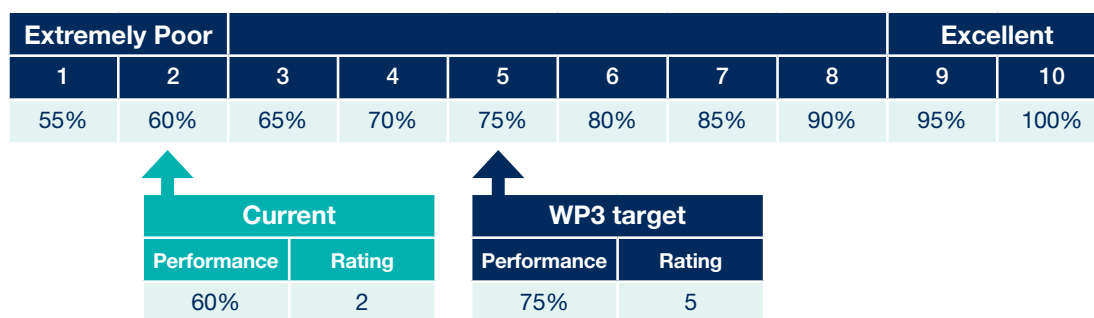
Customers order water for either the morning or afternoon, to fit in with other activities on the farm. Customers have advised that when an order is “shifted”, their preference is for the water to arrive at a similar time of day, to avoid disruption to other activities.

We measure our performance by tracking whether orders are placed for the morning or afternoon, and when orders are shifted, we aim to keep to the same time of day.

We currently achieve this for around 60% of orders, which we believe is close to the lower limit of acceptable performance.

We expect to lift this to 75% of orders by 2017/18.

This improvement will come from channel automation under the leading works program, which allows for constant regulation of channel systems (rather than once per day in manual areas), and introduction of the Southern Cowwarr Balancing Storage.

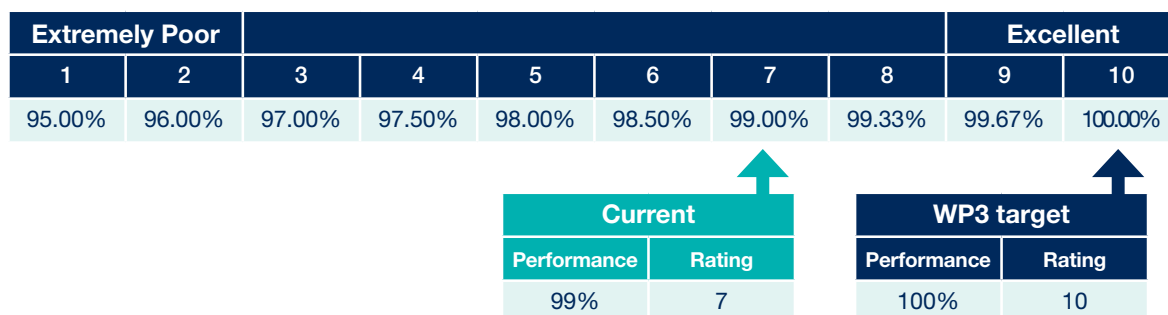


**Measure No 5: delivery reliability**

This seeks to measure the time that we cannot supply customers due to problems in delivery, such as channel breaks or weed growth - and is measured as the time that the delivery system is available to supply without constraint.

Our reliability has typically been around 99% - and we target 100%.

This improvement will come from regular inspections of our critical assets and a new asset management system to help identify and prioritise where remedial works are required. We also have major projects planned for continuation of our channel bank rehabilitation program, and a new project targeting tree removal from channel banks where there is a danger of damage to the channel.



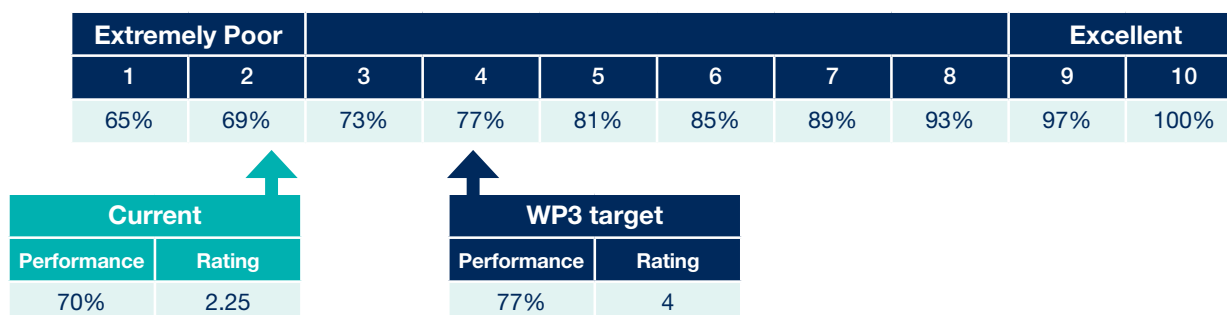
**Measure No 6: delivery efficiency**

To maximise the economic value from an irrigation district we seek to minimise losses caused by outfalls, seepage, leakage, measurement error, theft and evaporation.

We measure efficiency as the percentage of water released into the system that is actually delivered to customers.

Our delivery systems currently lose around 30%, though we expect to reduce this to 23% by 2017/18.

This improvement will come from increased channel automation which allows 24/7 system control and constant off-site monitoring of releases.



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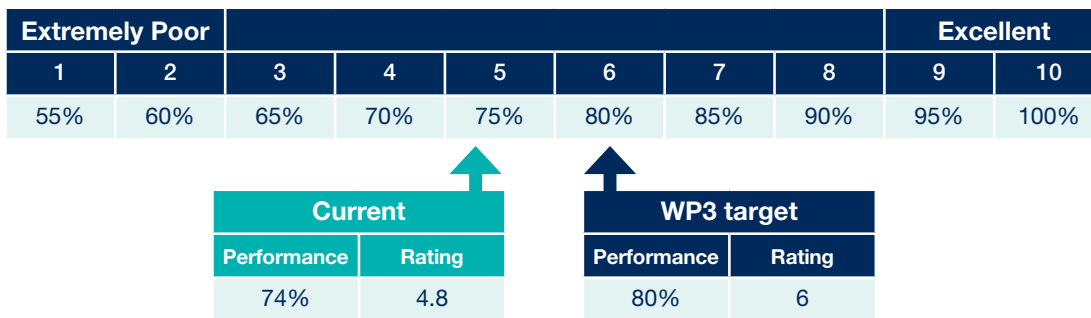
**Measure No 7: customer satisfaction**

In addition to meeting objective service targets, there are also more subjective aspects of our service, such as the way that we deal with customers, the information we provide, and the accuracy and suitability of our billing arrangements.

We measure this through a biannual customer survey.

Our most recent satisfaction rating was 74%. Our target rating is 80%.

Our plans to improve this rating include reviewing customer survey results and creating an action list to deal with issues raised. Improving our customer focus through better communication and feedback – particularly around maintenance issues – is also a priority.

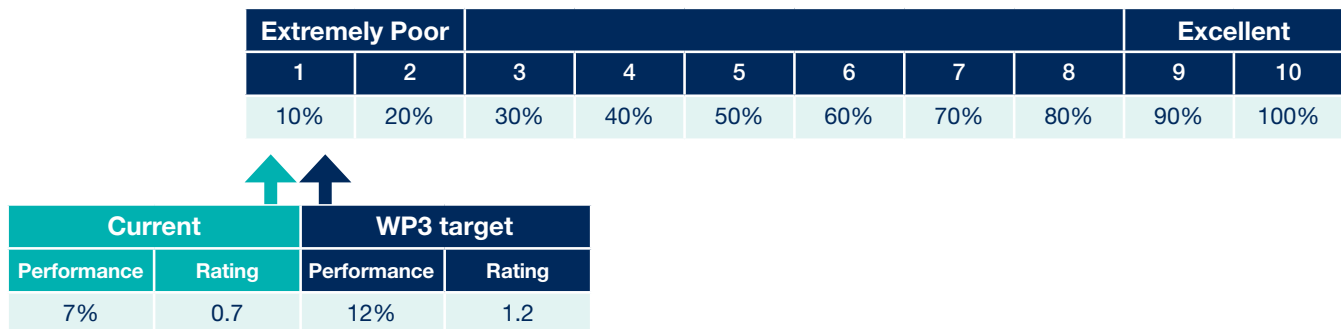


**Measure No 8: social benefit**

One of the reported benefits from customers on pipelines or automated channels is certainty around delivery times, reduced time to irrigate their land, and less effort on the farm to manage each irrigation. This makes pasture production (specifically dairy farming) a less socially isolating career, and may help to attract a younger farmer demographic - essential for the future health of the industry.

This social benefit is measured as the percentage of outlets that are automated (and therefore provides these benefits).

We currently have around 7% of outlets automated. This will increase slightly as we rationalise outlets.



## Measure No 9: application processing

We process transactions to allow customers to buy, sell and trade entitlement and water allocations. Processing these quickly is important to allow customers to undertake their business.

We have service standards in place for these transactions, which we currently meet in 97% of cases. We expect to increase this to 98% by tracking key performance indicators around timeframes for completing applications along with improvements in the Water Register application processes.

Extremely Poor								Excellent	
1	2	3	4	5	6	7	8	9	10
91%	92%	93%	94%	95%	96%	97%	98%	99%	100%

Current		WP3 target	
Performance	Rating	Performance	Rating
97%	7	98%	8

## Service measure weightings

The following weightings have been proposed as reflecting the relative importance of the nine service measures:

Measure	Weight
1 Flow rate consistency - automated outlets	9.5%
2 Flow rate consistency - manual outlets	9.5%
3 Orders delivered within 1 day of requested	15.3%
4 Order delivered within AM or PM	7.3%
5 Delivery reliability	15.3%
6 Delivery efficiency	20.5%
7 Customer satisfaction	10.5%
8 Social benefit	4.8%
9 Application processing	7.3%
<b>Total</b>	<b>100%</b>

Table 27: service measure weightings - MID

## Summary of service targets

The table below summarises our performance targets for each of the nine service measure across the five years of the Water Plan:

Measure	Current	2013/14	2014/15	2015/16	2016/17	2017/18
1 Flow rate consistency - automated outlets	83%	85%	85%	87%	87%	90%
2 Flow rate consistency - manual outlets	55%	55%	57%	58%	60%	60%
3 Orders delivered within 1 day of requested	94%	94%	95%	96%	97%	97%
4 Order delivered within AM or PM	60%	65%	70%	72%	75%	75%
5 Delivery reliability	99%	99%	99%	99%	99%	100%
6 Delivery efficiency	70%	74%	74%	74%	74%	77%
7 Customer satisfaction	74%	80%	80%	80%	80%	80%
8 Social benefit	7%	8%	9%	10%	11%	12%
9 Application processing	97%	97%	98%	98%	98%	98%

Table 28: service targets - MID



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### Measuring cost

Macalister Irrigation District customers own a number of entitlements, each with its own tariff. Typically, a customer will own some high reliability water share, some low reliability water share, and some delivery share with one or more associated service points. In addition to the fixed tariffs associated with these entitlements, customers will pay for any water used.

In order to derive a single indicator of cost, we have divided the total cost for the district by the quantity of high reliability water shares. This average cost per ML of high reliability water share is comparable to the “water right” tariff that existed prior to the unbundling of water entitlements in 2008/09.

### Price outcomes

As with our service measures, we have defined a range of price (cost) outcomes from \$50/ML, which we believe is at the lower end for irrigation water in Victoria based on comparison with Northern Victoria – and therefore an excellent pricing outcome for customers – to \$140/ML, which we believe would be pushing towards the upper limit of customer affordability. This assessment is supported by the RMCG affordability work conducted during MID 2030, and by our customer consultations conducted on MID 2030 in October 2012.

Extremely Poor								Excellent	
1	2	3	4	5	6	7	8	9	10
\$140	\$130	\$120	\$110	\$100	\$90	\$80	\$70	\$60	\$50

WP3 target		Current	
Performance	Rating	Performance	Rating
\$69	8.1	\$68	8.2

### Our performance improvement

Applying our performance measures and weightings, we can calculate the movement in our service and price for the Water Plan period.

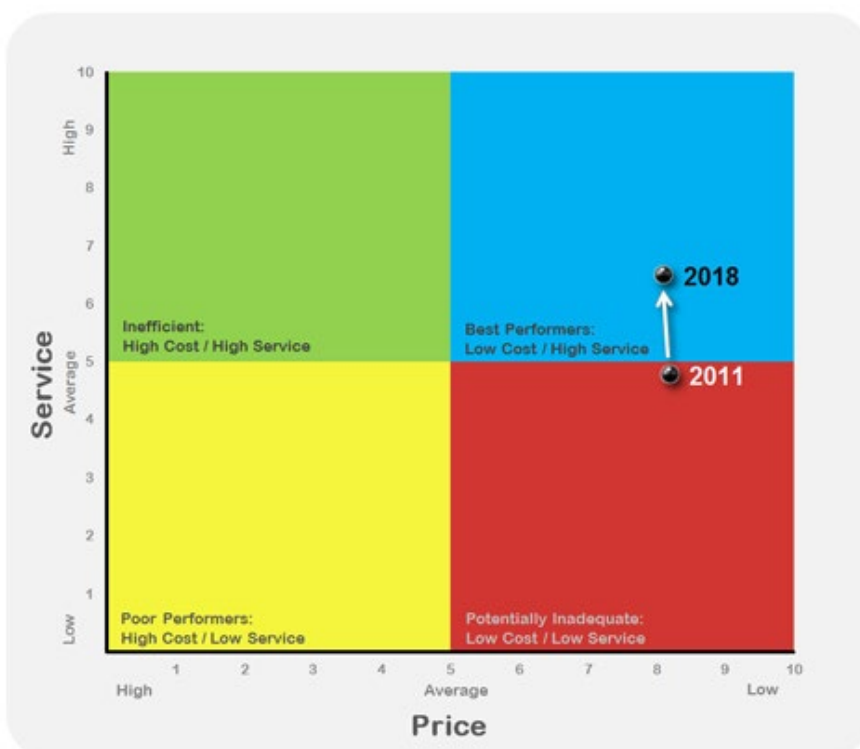


Figure 6: service and price outcomes - MID

## Consultation

In developing our draft plan, and throughout the consultation period, we have continued to work with our customer committee, as well as inviting comment from the broader customer base through direct mailing.

### Customer committee

Water Plan 3 has been discussed on a regular basis with our Macalister Customer Consultative Committee. We have workshopped the service measures and targets, along with the development of our strategy. The committee was very interested in the measures and had a good deal of discussion around the weightings for each measure. This is the first time we have attempted this process, and all agreed that it is something we can use on an on-going basis to get a picture of our price and service outcomes.

### Feedback forms

In June, following release of our draft water plan, we sent a summary of the Water Plan to all 1223 customers in the MID. Accompanying this was a return paid card asking for feedback on our prices, service targets and proposed projects.

We received 22 responses, representing just under 2% of the customers we mailed.

Of these, 18 gave feedback on prices, with eight supporting the proposal, eight unhappy, and two unsure.

Reliable delivery and delivery within 24 hours of requested time have been the highest rated service measure at 70% each. Consistent flow rates, orders at the correct time of day and reducing water losses have around 60% support. Automating outlets and processing applications quickly have little support at <30%.

Responses on the proposed service targets are very positive, with 14 respondents supporting the proposed targets, two disagreeing, and two unsure. One customer provided specific feedback that we should target 95% for customer satisfaction (rather than 80%) and 65% for flow rate consistency on manual outlets (rather than 60%).

In relation to the proposed projects, 22 customers have supported MID2030 leading works, improved asset management, and water management - rating these 50% or higher. Eight customers supported improved communications, and four customers supported enhancing water markets.

Comments accompanying the feedback include:

- Prices being too high
- More channel maintenance
- Fencing channels (at farmer cost)
- New dam above Glenmaggie and/or on Mitchell River
- More information before and during floods

### Our response

Nothing in the feedback we received has given us cause to alter our plans. The number of responses was very small - and did not provide a consistent view on price, projects or service measures.

We will continue to work with our customer committee to refine service measures, targets and weightings, and to set prices within the revenue cap proposed by this plan.

## Section 4 / Macalister Irrigation District

## Water Plan 2 outcomes

### Performance measures

The table below provides our performance outcomes (where available) against the targets we proposed in Water Plan 2.

For some of the measures we had proposed, we have not had reliable measurement over the Water Plan period.

Customer satisfaction dipped in 2008/09 due to issues with weeds constraining our channels, which caused delivery issues. There was also some concern with the transfer of water to Werribee to assist with drought management. We were pleased to see a bounce back in the most recent survey.

Delivery efficiency varies with seasonal conditions. Where the season is particularly wet or dry, efficiency suffers. Despite channel automation works eliminating most of the outfalls in targeted areas, wet conditions, and therefore low deliveries, caused delivery efficiency to be well below target in 2010/11 and 2011/12.

The flow rate consistency improvement is pleasing.

		2008/09	2009/10	2010/11	2011/12	2012/13
<b>Flow Rate Consistency - Automated System</b>						
	Target	75%	76%	77%	78%	79%
	Actual	76%	79%	85%	84%	
<b>Flow Rate Consistency - Manual System</b>						
	Target	TBD	TBD	TBD	TBD	TBD
	Actual	NA	NA	NA	55%	
<b>Average Order Lead Time</b>						
	Target	TBD	TBD	TBD	TBD	TBD
	Actual	NA	NA	NA	48hrs	
<b>Delivery Reliability</b>						
	Target	99%	99%	99%	99%	99%
	Actual	100%	100%	99%	100%	
<b>Delivery Efficiency</b>						
	Target	66%	67%	68%	70%	74%
	Actual	72%	70%	60%	61%	
<b>Customer Satisfaction Index</b>						
	Target	76%	NA	78%	NA	80%
	Actual	68%	NA	75%	NA	

Table 29: Water Plan 2 performance measures - MID

## Capital expenditure

We are on track to spend over \$27 million on capital works for Water Plan 2. \$8.2 million of this relates to MID2030, and \$6.5 million to government funded channel automation. The Southern Outlet bypass valve was proposed as part of the automation program, however the Federal government decided not to proceed with funding of this project.

Area	Project	Carried forward	WP2 Proposal	Total Budget	Actual & Forecast	Difference
Macalister Irrigation	MID2030	\$0	\$0	\$0	\$8,223	\$8,223
Macalister Irrigation	Channel Automation (Government funded)	\$2,870	\$7,447	\$10,317	\$6,533	(\$3,784)
Glenmaggie Reservoir	Southern Outlet Bypass Valve	\$0	\$0	\$0	\$2,130	\$2,130
Macalister Irrigation	Carp Damage Channel Rehabilitation	\$24	\$1,400	\$1,424	\$1,878	\$454
<b>Total of projects greater than \$1m</b>		<b>\$2,894</b>	<b>\$8,847</b>	<b>\$11,741</b>	<b>\$18,764</b>	<b>\$7,023</b>
Macalister Irrigation	Projects less than \$1m	\$756	\$3,240	\$3,996	\$4,484	\$488
Glenmaggie/Cowwarr	Projects less than \$1m	\$1,114	\$2,995	\$4,109	\$3,875	(\$234)
<b>Total Water Plan 2 Capital Expenditure</b>		<b>\$4,764</b>	<b>\$15,082</b>	<b>\$19,846</b>	<b>\$27,123</b>	<b>\$7,277</b>

Table 30: Water Plan 2 capital expenditure – significant projects – MID (\$000, nominal)

Our \$8.2 million investment in MID2030, most of which relates to leading works, will be offset against our renewal funds as we transition away from renewal-based pricing. We will spend almost \$4 million on renewal of district assets, and increase our regulatory asset base by \$7.8 million.

Funding Source	Carried forward	WP2 Proposal	Total Budget	Actual & Forecast	Difference
Price Increases (Regulatory Asset Base)	\$1,067	\$4,355	\$5,422	\$7,767	\$2,345
Renewals	\$476	\$3,281	\$3,757	\$3,844	\$87
Renewal transition offset	\$0	\$0	\$0	\$8,223	\$8,223
Government Contributions	\$3,220	\$7,447	\$10,667	\$7,289	(\$3,378)
<b>Total</b>	<b>\$4,764</b>	<b>\$15,083</b>	<b>\$19,846</b>	<b>\$27,123</b>	<b>\$7,277</b>

Table 31: Water Plan 2 capital expenditure – summary by funding source – MID (\$000, nominal)

## Renewal funds

The renewal fund balance for the MID will increase by around \$7 million across Water Plan 2. In part this reflects a natural accumulation phase for the fund – but also reflects our decisions not to renew assets that may be upgraded or rationalised under the MID2030 program.

	Actual				Forecast
	2008/09	2009/10	2010/11	2011/12	2012/13
Opening balance	\$8,194	\$9,583	\$10,752	\$12,326	\$13,678
Annuity charges	\$1,317	\$1,370	\$1,370	\$1,370	\$1,370
Asset renewal projects	\$627	\$898	\$478	\$922	\$935
Interest on fund balance	\$700	\$697	\$683	\$904	\$1,000
<b>Closing balance</b>	<b>\$9,583</b>	<b>\$10,752</b>	<b>\$12,326</b>	<b>\$13,678</b>	<b>\$15,112</b>

Table 32: MID renewal funds (\$000, nominal)

## Section 4 / Macalister Irrigation District

## Tariff outcomes

We forecast indicative annual tariff increases of 5.7% for the MID. In consultation with the customer committee, we increased prices by 7.5% and 5.4% in the first two years of the Water Plan. Prices for 2011/12 and 2012/13 were increased above CPI to recover revenue lost through low usage.

As the graph below shows, our average price at the end of the period remains well below the indicative price path

<b>Water Plan 2 indicative annual increase</b>	<b>5.7%</b>				
Actual increases	2008/09	2009/10	2010/11	2011/12	2012/13
	7.5%	5.4%	0.2%	1.8%	3.3%
<b>Equivalent actual annual increase</b>	<b>4.4%</b>				

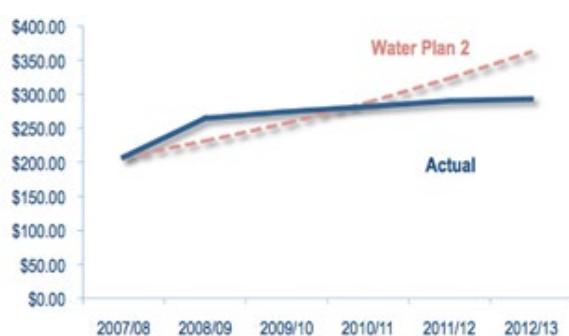


Figure 5: Water Plan 2 tariff outcomes - MID

## Financial outcomes

The table below summarises the revenue raised across each year of Water Plan 2 – as compared with the revenue required to meet the operating and capital costs of the business. We budgeted for a small surplus each year to repay the accumulated deficit carried forward from Water Plan 1, however wet conditions in 2010/11 and 2011/12 resulted in record low usage for the district, and revenue below budget.

	<b>Actual</b>				<b>Forecast</b>
	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>	<b>2012/13</b>
<b>Revenue</b>					
Annual entitlement charges	\$7,200	\$8,094	\$8,352	\$8,842	\$9,425
Usage charges	\$1,672	\$1,407	\$894	\$767	\$1,467
Other revenue	\$126	\$99	\$111	\$102	\$80
<b>Total revenue</b>	<b>\$8,998</b>	<b>\$9,600</b>	<b>\$9,357</b>	<b>\$9,711</b>	<b>\$10,972</b>
Revenue Required	\$8,967	\$9,499	\$9,625	\$9,973	\$10,541
<b>Under/Over Recovery</b>	<b>\$31</b>	<b>\$101</b>	<b>(\$268)</b>	<b>(\$262)</b>	<b>\$431</b>

Table 33: Water Plan 2 operating result - MID (\$000, nominal)

## Section 4 / Macalister Irrigation District

The MID opened with a deficit of over \$500,000 carried forward from prior years. With low revenue in 2010/11 and 2011/12, this deficit has increased. We estimate an opening deficit of almost \$900,000 to be recovered in Water Plan 3.

	Actual				Forecast
	2008/09	2009/10	2010/11	2011/12	2012/13
Opening balance	(\$546)	(\$558)	(\$493)	(\$827)	(\$1,186)
Operating result	\$31	\$101	(\$268)	(\$262)	\$431
Interest on fund balance	(\$43)	(\$36)	(\$66)	(\$97)	(\$122)
<b>Closing balance</b>	<b>(\$558)</b>	<b>(\$493)</b>	<b>(\$827)</b>	<b>(\$1,186)</b>	<b>(\$877)</b>

Table 34: accumulated deficit – MID (\$000, nominal)



# Section 5

## Werribee and Bacchus Marsh Irrigation Districts

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## Overview

The Werribee and Bacchus Marsh Irrigation Districts, located to the west of Melbourne on the flood plain of the Werribee River, together grow a large percentage of Victoria's production of many vegetables.

The districts receive their irrigation supply from both the Werribee and Lerderberg Rivers, via a combination of three storages at Pykes Creek, Lake Merrimu and Melton Reservoir.

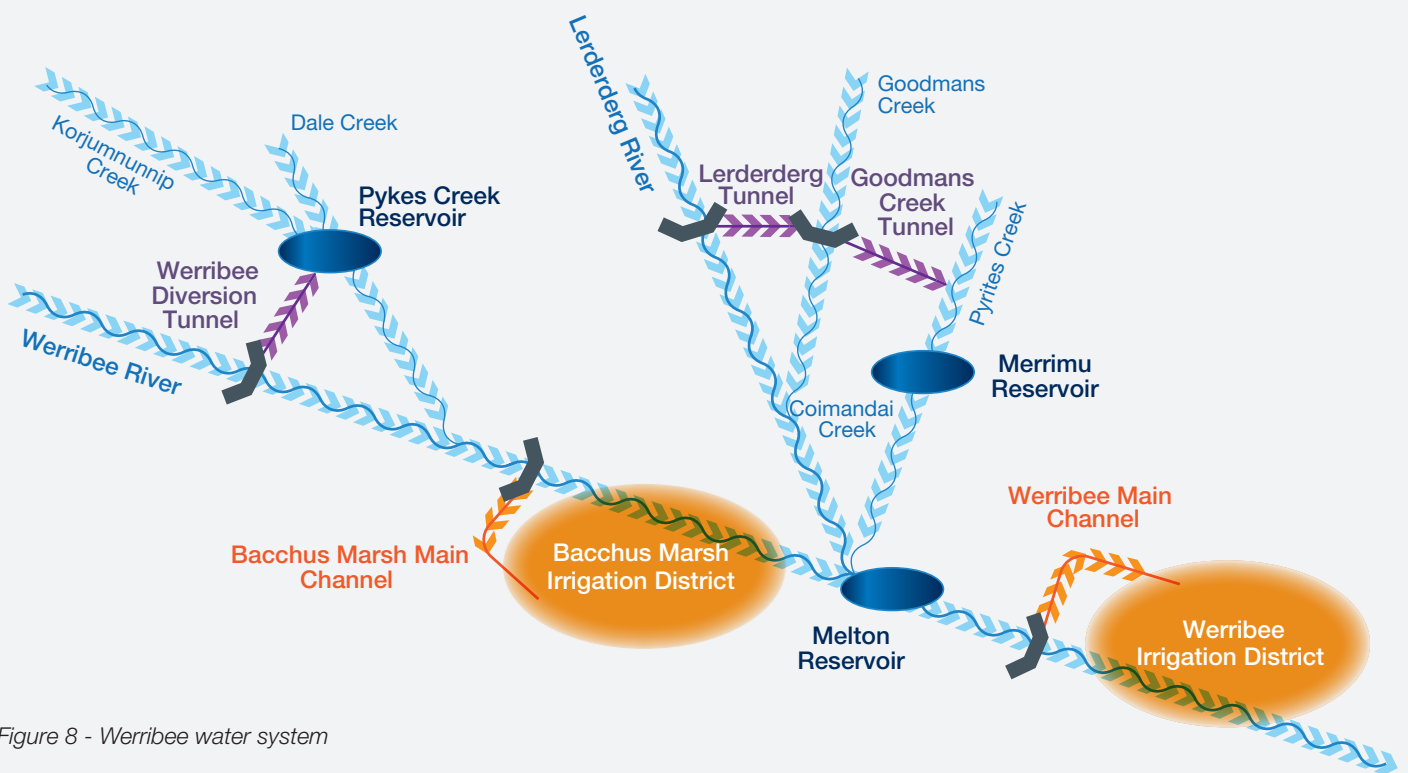


Figure 8 - Werribee water system

## Section 5 / Werribee and Bacchus Marsh Irrigation Districts

## Werribee Irrigation District

The Werribee Irrigation District is one of the premier vegetable growing locations in Australia, with broccoli, lettuce, cauliflower and cabbage the main crops, and annual aggregate production with an annual market value of around \$200 million. The WID generates a large percentage of the total annual Victorian production of many vegetables, growing 85% of the state's cauliflower and nearly 50% of the broccoli.

District irrigators also have access to Class A recycled water supplied from Melbourne Water's Western Treatment Plant. The recycled water is treated through the standard wastewater treatment system and two additional disinfection systems – chlorination and ultra violet light. This water is delivered through SRW's existing irrigation supply infrastructure.



Figure 9: Werribee Irrigation District location map

Facts and figures	
Total area of the district	2,981 ha
Total length of channels	52 km
Total length of pipes	12 km
Total length of drains	63 km
No of delivery outlets	366
No of customers	226
Total of high reliability water shares	11,152 ML
Total of delivery shares	156 ML/day

## Bacchus Marsh Irrigation District

The Bacchus Marsh region, which at the time of European settlement was a large swamp, is now a highly developed agricultural district, specialising in horticulture.

The district is dominated by several large-scale enterprises that produce a significant proportion of the total production. Vegetable growing and orchards are the primary businesses. The growers generate an annual commodity value of around \$16 million. There is considerable value-adding prior to market – particularly in the speciality salad crops - with total sales turnover of \$55 million.

SRW also supplies water to several major quarries in the region for sand-washing.

An important priority for SRW is to secure viable alternative water supplies if Bacchus Marsh faces a prolonged dry period again.



Figure 10: Bacchus Marsh Irrigation District location map

Facts and figures	
Total area of the district	1,368 ha
Total length of channels	15 km
Total length of pipes	28 km
Total length of drains	0 km
No of delivery outlets	196
No of customers	121
Total of high reliability water shares	3,818 ML
Total of delivery shares	71 ML/day

## What do we charge for?

### Water shares

A water share is a legally recognised, secure share of water allocated from an irrigation water system. For the Werribee and Bacchus Marsh Irrigation Districts, allocations are made from water harvested in Melton, Pykes Creek and Merrimu Reservoirs, and from Southern Rural Water's entitlement to flow in the Werribee River.

A water share is expressed in megalitres, representing the amount of water that can be taken when an allocation of 100% is declared against that water share. So, a customer with a water share of 50ML will be able to use up to 25ML when an allocation of 50% is declared, and up to 50ML if the allocation is 100%.

There are two classes of water share – high reliability and low reliability. When the allocation reaches 100% for high reliability water shares, we start allocating any further water against low reliability water shares.

Water share tariffs are based on the megalitre volume of the share, regardless of any allocations made against the water share. These are annual fees, and reflect the proportional costs of operating, maintaining, renewing and upgrading the reservoirs in which water shares are harvested and stored, and for the structures that divert water from the Lerderderg River across to Merrimu Reservoir (via Goodmans Creek). These costs are apportioned on the basis of water shares between the entitlement holders (and to DSE for the unallocated share of capacity in Merrimu Reservoir).

	Melton	Pykes Creek	Merrimu	Lerderderg
Werribee Irrigation District	64%	64%	13%	6%
Bacchus Marsh Irrigation District	29%	28%	5%	3%
SRW river diverters	7%	7%	1%	1%
Western Water	0%	1%	60%	70%
Unallocated (charged to DSE)	0%	0%	20%	20%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Table 35: bulk entitlement shares – Werribee system

### Delivery shares

A delivery share is a share of the capacity of the delivery system - i.e. the channels and pipelines that deliver water across the irrigation district.

Delivery shares are linked to a property and stay with that property if the water share is transferred. Irrigators can continue to pay delivery share charges if they wish to retain their delivery share for the future, trade all or part of their delivery share to another property, or pay the relevant termination fee and surrender the delivery share.

A delivery share is expressed in megalitres per day, and when a delivery system is congested it provides a share of the available water flow.

Delivery share tariffs are based on the megalitre volume of the share, regardless of any allocations made against the water share. These are annual fees, and reflect the costs of operating, maintaining and renewing and upgrading the channel, pipelines and regulators that we use to deliver water.

We also apply service point tariffs against each service point associated with a share. This annual charge reflects the costs of operating and maintaining outlets or meters.

## Section 5 / Werribee and Bacchus Marsh Irrigation Districts

## Our strategy

Within the framework of the corporate strategy, we have developed a strategy map for Water Supply West - the part of our business that supplies water to Werribee and Bacchus Marsh. This strategy provides a sharper focus on the customer expectations and business improvement opportunities that will help this part of the business deliver on our corporate strategy.

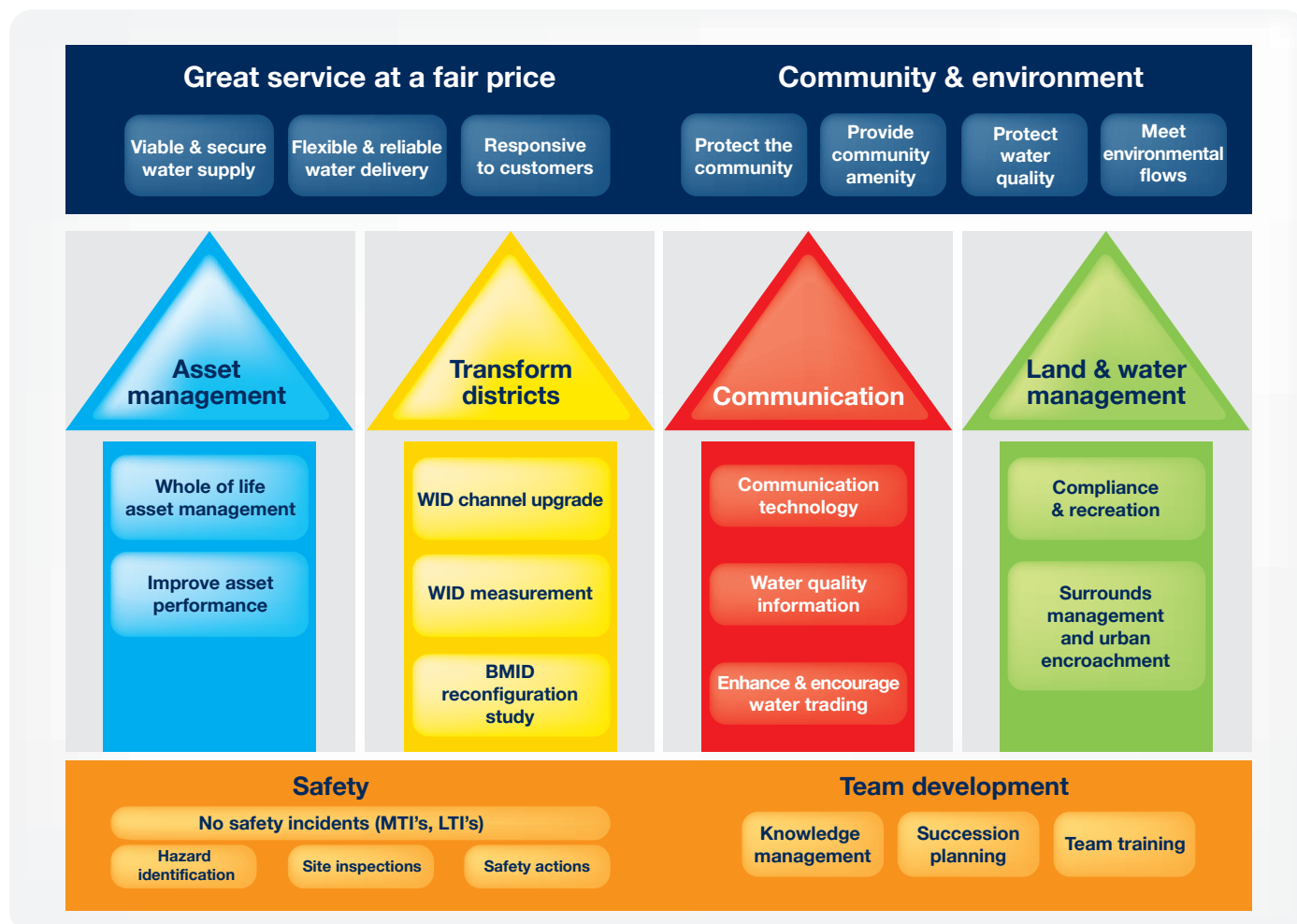


Figure 15: strategy map – water supply west

## Our external focus

Our planning framework for the Western Irrigation Business (including the Werribee Irrigation District, the Bacchus Marsh Irrigation District and our reservoirs servicing the Werribee and Maribyrnong systems) has been developed in consultation with customers and staff across the organisation, and is targeted at delivering outcomes in two areas:

- providing great service at a fair price for our customers
- preserving environmental and community values

### Great service at a fair price

Providing great service at a fair price means:

- providing a viable and secure water supply
- providing flexible and reliable water delivery to irrigators
- being responsive to customers by providing clear, relevant and timely information
- ensuring that prices are affordable, and that customers recognise greater value in our service than its cost

## Community & environment

Whilst delivering these outcomes for our customers, we must carefully manage the impact of our operations on the natural environment. We must also recognise that in our reservoirs we have stewardship of significant assets, largely funded by taxpayers, with recreational and aesthetic values for local communities, but also with significant potential risks. Delivering our community and environmental outcomes means:

- protecting communities from any risks associated with our assets and activities
- providing safe amenities and recreational facilities to benefit local communities
- protecting water quality
- managing environmental water entitlements and river flows

## Our internal focus

To deliver these outcomes for customers, the community, and the environment, we will focus our actions in four areas:

- Improving asset management
- Transforming our irrigation districts
- Improving customer communications
- Improving land and water management

## Asset management

Water is diverted into the Werribee and Bacchus Marsh districts via diversion weirs on the Werribee River. Water is harvested, stored and supplied to the irrigation districts via three reservoirs; Pykes Creek, Merrimu and Melton Reservoirs. The delivery system for the two districts consists of a combined 67 km of channels, 40 km of pipelines, 63 km of drains and 562 customer outlets.

Managing these assets well, to ensure that they continue to deliver service to customers, means understanding the condition of the assets and undertaking the appropriate maintenance and renewal works. To ensure value for money and minimise whole of life asset costs, we must understand when the right time is to intervene, and when to maintain an asset versus replacement. Often this will involve a trade-off between cost and risk to service performance.

Our objectives over the next few years to improve our asset management are:

- Implementing a new asset management system
- Completing and implementing an Asset Management Plan for the Werribee and Bacchus Marsh Irrigation Districts
- Addressing long-term maintenance issues
- Ensuring that we inspect and assess the condition of all assets at appropriate intervals
- Reviewing preventative and planned maintenance practices to ensure best practice

To measure our progress with improving our asset management we will monitor our asset performance and service levels. Our measures are to include the following:

- Accuracy of delivered volumes
- Minimal order shifting
- Delivery reliability
- Delivery efficiency
- Drought resilience
- Accurate delivery of ordered releases from reservoirs



## Section 5 / Werribee and Bacchus Marsh Irrigation Districts

### Transforming our districts

The WID's delivery system mostly consists of small unlined concrete channels that are approaching their end of life, and lose a lot of water. Whilst there is more piping in Bacchus Marsh, water losses are still large. Currently the districts operate at about 65% efficiency.

The recent drought required a strategic focus on water security for both irrigation districts and as a result the recycled water scheme was set up for the WID.

Within this context the Western Irrigation Futures (WIF) project was established to develop a strategy for the future of the Werribee and Bacchus Marsh irrigation districts. The strategy was developed in 2010 and is now being implemented. To date we have delivered the following projects:

- Reviewed the allocation methodology to secure water in storage for the following season. This is to improve water security for both irrigation districts
- A review of individual carryover. Individual customers will have the option to carryover unused allocation to subsequent seasons. This means that our customers have a greater ability to manage their water requirements over multiple seasons to best suit their operations.
- Securing a long-term bulk supply of recycled water at a sustainable price and the introduction of long-term recycled water contracts with our customers
- For Water Plan 3, we propose some channel lining and accurate measurement to improve delivery efficiency in the WID. For the BMID we are undertaking a reconfiguration study.

### Channel Upgrade

As part of WIF we developed a proposal for lining of the channel system in the WID to improve efficiency and extend the life of the assets. In developing this proposal, we assessed 8 options - varying from the full piping of the district to partial piping and lining to full lining.

We proposed a co-funding model, with government meeting 50% of the initial capital investment and irrigators providing the remaining 50%.

As SRW is dedicated to modernising the district infrastructure we are undertaking some leading works which will be complementary to the WID modernisation funding bid. We intend to upgrade the remaining section of the 4/1 delivery system, after which approximately 1/3 of the WID will be modernised. This is the oldest section of channel and currently requires significant maintenance. In addition it poses problems in servicing customers due to valves at the end of the piped section having reached the end of their life.

### Measurement network

We are also proposing to install some accurate measurement technology into the channel system so that we can measure the system performance at important parts of the channel system. This information will be used to target the areas of the system that will lead to significant improvements in efficiency. The measurement devices will also provide a greater degree of operational control of the delivery of water to customers.

### BMID reconfiguration study

For the BMID we are undertaking a feasibility study into the reconfiguration and modernisation of the delivery infrastructure. This involves using the Werribee River to bypass a section of the main channel and the piping of the main channel that passes through the centre of the township.

**Section 5 / Werribee and Bacchus Marsh Irrigation Districts****Improve communications**

The strongest messages we have heard from customers through our consultation have been about more innovative communications, water quality, and doing more to encourage water trading.

**Communication technology**

In communicating, we will explore technological opportunities to provide more immediate and targeted communication – particularly targeted to smart phones so that customers can receive important messages on the farm. We will also look at cost effective opportunities to increase personal contact with our customers.

**Water quality information**

Throughout our consultation, customers have consistently raised concerns about water quality. Whilst there is little scope for SRW to influence water quality, we can help customers to better manage their water usage by providing more water quality information. We will publish regular information about salinity levels, soil conditions, groundwater levels, and other relevant measures.

**Enhance & encourage water trading**

In our irrigation districts, there are a number of customers who often do not use their water allocation. We'd like to see more of this water used productively in our districts. Therefore we will:

- Establish a process to record and make available information about active and interested buyers and sellers of water
- Prominently display this information at our offices and on our website
- Use technology such as SMS/email to promote trading opportunities
- Provide better information to potential buyers on how to purchase water
- Target communication to customers with available allocation outlining the benefits of trading and the process to make it happen.

**Land and water management****Compliance & recreation**

Our land and water management focus includes a compliance program, to ensure that people are doing the right thing on and around our storages, as well as throughout the district. This is about ensuring the safety of the community, and also protecting water resources.

**Surrounds management and urban encroachment**

We will also continue our programs around our reservoirs to manage stock, vehicle and other access as well as erosion control, catchment planning including urban encroachment and other water quality protection measures.

## Section 5 / Werribee and Bacchus Marsh Irrigation Districts

## Financial tables

## Capital expenditure

Our capital program for the western irrigation districts and related storages totals just over \$11 million across Water Plan 3. This total is dominated by the works proposed in Werribee as part of the Western Irrigation Futures program, and replacement of a conduit at Melton Reservoir.

Project	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total	WP4
<b>Significant projects</b>							
Werribee modernisation (Western Irrigation Futures)	\$950	\$600	\$1,500	\$1,500	\$0	\$4,550	\$4,000
Melton Conduit Replacement	\$2,000	\$0	\$0	\$0	\$0	\$2,000	\$0
<b>Other projects</b>							
Other projects - Werribee Irrigation	\$404	\$308	\$243	\$244	\$247	\$1,445	\$1,681
Other Projects - Bacchus Marsh Irrigation	\$492	\$246	\$161	\$226	\$171	\$1,296	\$1,148
Other Projects - Pykes Creek	\$455	\$300	\$460	\$120	\$275	\$1,610	\$1,607
Other Projects - Melton	\$260	\$80	\$65	\$45	\$5	\$455	\$580
<b>Total</b>	<b>\$4,561</b>	<b>\$1,534</b>	<b>\$2,429</b>	<b>\$2,135</b>	<b>\$698</b>	<b>\$11,356</b>	<b>\$9,016</b>

Table 36: capital expenditure summary – Werribee & Bacchus Marsh (\$000, \$11/12)

The following table summarises the capital program by funding source. The Werribee modernisation program will be funded from the renewals as part of our transition away from renewal pricing - with other works adding to our Regulatory Asset Base.

Funding Source	2013/14	2014/15	2015/16	2016/17	2017/18	Total
Price increases (Regulatory Asset Base)	\$3,119	\$688	\$768	\$409	\$527	\$5,510
Renewal transition offset	\$1,442	\$846	\$1,661	\$1,726	\$171	\$5,846
<b>Total</b>	<b>\$4,561</b>	<b>\$1,534</b>	<b>\$2,429</b>	<b>\$2,135</b>	<b>\$698</b>	<b>\$11,356</b>

Table 37: capital expenditure by funding source - Werribee & Bacchus Marsh (\$000, \$11/12)

## Western Irrigation Futures

During 2007/08, with river flows and storage levels at record lows, we commenced our Western Irrigation Futures strategy to consider long term options for the Werribee and Bacchus Marsh Irrigation Districts.

In developing the strategy, we undertook preliminary analysis of three options for infrastructure investment to improve water efficiency in the Werribee district:

- Full piping at a cost of \$41 million
- Partial piping at a cost of \$23 million
- Lining, automation and new metering at cost of \$23 million

An options paper developed as part of the strategy in 2010 proposed a business case for investment in the third option - channel lining, automation, and metering. We are currently working on this business case, but alongside this we have two projects planned for Water Plan 3:

- Piping or lining the 4/1 Channel to reduce losses and improve service to customers
- Establishing a measurement network to help identify losses and verify water savings

## Section 5 / Werribee and Bacchus Marsh Irrigation Districts

Project	Water Plan 2	2013/14	2014/15	2015/16	2016/17	2017/18	Water Plan 3 Total	WP4	Program Total
Upgrade 4/1 channel	\$111	\$400	\$600	\$1,500	\$1,500	\$0	\$4,000	\$4,000	\$8,111
Measurement Network	\$62	\$550	\$0	\$0	\$0	\$0	\$550	\$0	\$612
<b>Total</b>	<b>\$173</b>	<b>\$950</b>	<b>\$600</b>	<b>\$1,500</b>	<b>\$1,500</b>	<b>\$0</b>	<b>\$4,550</b>	<b>\$4,000</b>	<b>\$8,723</b>

Table 38: Western Irrigation Futures summary (\$000, \$11/12)

For the Bacchus Marsh district, we have a study underway considering options to reconfigure the supply system. With the uncertainty that still exists for this system, we propose to:

- Defer major asset replacement investments for Water Plan 3 and reconsider these for Water Plan 4 - when we expect the longer term plans for the district will be more certain
- Allocate budget provisions where necessary to extend the life of these assets by 5 years

### Replacement of Melton outlet conduit

In 1953, a 750mm diameter cast iron pipe replaced the original 1911 concrete outlet tunnel in the Melton dam. An investigation in 2008 found that this conduit was corroding, and estimated the remaining life at six years.

We propose to replace the conduit with a mild steel cement lined pipe, at a cost of around \$2.7 million. Some of this expenditure will occur prior to Water Plan 3.

### Quantities

The bulk of our irrigation district revenue comes from fixed entitlements, which means that our quantities are static and our exposure to revenue variability is low.

In Werribee, our recycled water pricing includes a 50% fixed component based on the contract volume, and 50% on usage. This structure mirrors our contract with Melbourne Water, which helps to mitigate demand risk. However, our delivery efficiency varies with seasonal conditions – with effectively no losses when recycled water is supplied as a supplement to river water, but up to 35% losses in dry conditions. Our price for recycled water is established by a five year contract with our customers and is calculated to anticipate this variability so that cost-recovery is returned over this five year contractual period.

We budget on the basis of supplying 3GL of recycled water to the irrigation district, plus 1GL to customers outside the district.

### Indicative tariff outcomes

#### Werribee Irrigation District

The table below summarises the revenue required for the WID across Water Plan 3 to deliver the outcomes proposed in this plan. The most significant change is a reducing renewal annuity as we transition away from this pricing model.

	2011/12	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total
Baseline operating expenditure	\$2,338	\$2,338	\$2,338	\$2,338	\$2,338	\$2,338	\$11,689
Obligations & initiatives	\$0	\$112	\$109	\$107	\$104	\$101	\$533
Productivity & growth	\$0	(\$15)	(\$30)	(\$45)	(\$61)	(\$76)	(\$227)
Renewal annuity	\$374	\$145	\$10	\$0	\$0	\$0	\$154
Capital expenditure charges	\$585	\$988	\$1,118	\$1,162	\$1,198	\$1,163	\$5,629
Business resilience	\$114	(\$104)	(\$30)	\$3	\$37	\$142	\$48
<b>Total Revenue Requirement</b>	<b>\$3,411</b>	<b>\$3,464</b>	<b>\$3,514</b>	<b>\$3,564</b>	<b>\$3,616</b>	<b>\$3,668</b>	<b>\$17,826</b>

Table 39: revenue requirement – WID (\$000, \$11/12)

## Section 5 / Werribee and Bacchus Marsh Irrigation Districts

An annual tariff increase of 1.44% is required for the Werribee Irrigation District to meet the revenue required by this plan. The renewal offset will fund the initial modernisation works, whilst tariffs will increase to fund dam safety works at Melton Reservoir.

Actual tariffs will be set annually in consultation with our customers, and will typically match the annual change in our revenue requirement.

The table below provides the average charges for typical customers in the district, assuming an equal annual increase in prices.

		2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Small	5 ML	\$1,788	\$1,791	\$1,804	\$1,840	\$1,876	\$1,911	\$1,945
Medium	50 ML	\$16,257	\$16,248	\$16,336	\$16,665	\$16,990	\$17,308	\$17,621
Large	100 ML	\$32,515	\$32,496	\$32,672	\$33,331	\$33,979	\$34,617	\$35,242

Table 40: indicative customer impacts – WID (\$11/12)

### Bacchus Marsh Irrigation District

The table below summarises the revenue required for the BMID across Water Plan 3 to deliver the outcomes proposed in this plan. Note the immediate removal of the renewal annuity for Bacchus Marsh as we enter Water Plan 3.

	2011/12	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total
Baseline operating expenditure	\$907	\$907	\$907	\$907	\$907	\$907	\$4,536
Obligations & initiatives	\$0	(\$3)	(\$6)	(\$8)	(\$9)	(\$9)	(\$35)
Productivity & growth	\$0	(\$6)	(\$11)	(\$17)	(\$22)	(\$28)	(\$83)
Renewal annuity	\$104	\$0	\$0	\$0	\$0	\$0	\$0
Capital expenditure charges	\$290	\$411	\$454	\$465	\$454	\$436	\$2,220
Business resilience fund	\$143	\$130	\$66	\$37	\$28	\$25	\$285
<b>Total Revenue Requirement</b>	<b>\$1,445</b>	<b>\$1,439</b>	<b>\$1,411</b>	<b>\$1,384</b>	<b>\$1,357</b>	<b>\$1,331</b>	<b>\$6,923</b>

Table 41 - Revenue Requirement - BMID (\$000, \$11/12)

The removal of the renewal annuity will allow a reduction in the real price to Bacchus Marsh (before CPI). The revenue required over Water Plan 3 is equivalent to an annual price reduction of 1.93%.

Actual tariffs will be set annually in consultation with our customers, and will typically match the annual change in our revenue requirement. This may mean an immediate price reduction – or the reduction may be deferred to offset future CPI increases.

The table below provides the average charges for typical customers in the district, assuming an equal annual decrease in prices.

		2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Small	5 ML	\$1,781	\$1,831	\$1,793	\$1,757	\$1,725	\$1,694	\$1,664
Medium	25 ML	\$16,191	\$16,652	\$16,362	\$16,079	\$15,804	\$15,532	\$15,268
Large	100 ML	\$32,382	\$33,304	\$32,723	\$32,158	\$31,608	\$31,065	\$30,536

Table 42: indicative customer impacts – BMID (\$11/12)

# Service and price

## Introduction

As outlined earlier, we have adopted a methodology for describing service / cost outcomes, and exploring the trade-off between service and price. The challenge we face as a business is in measuring our output – which for the Werribee and Bacchus Marsh Irrigation Districts is largely about the way in which we deliver water.

We have done much work recently in consultation with the Werribee Bacchus Marsh Customer Consultative Committee to:

- identify a range of measures that describe our service
- establish a range of outcomes from those measures, graded from extremely poor (1) to excellent (10)
- weight the measures to describe the relative importance to customers of different aspects of our service

The weighted set of service measures allows us to calculate a single service index, which can be plotted against a measure of the service cost to explore the trade-off between service and price.

## Service measures

We have identified 6 measures of our service to the customers in the Werribee and Bacchus Marsh irrigation district – with one additional measure for Werribee relating to recycled water.

### Measure No 1: volume accuracy

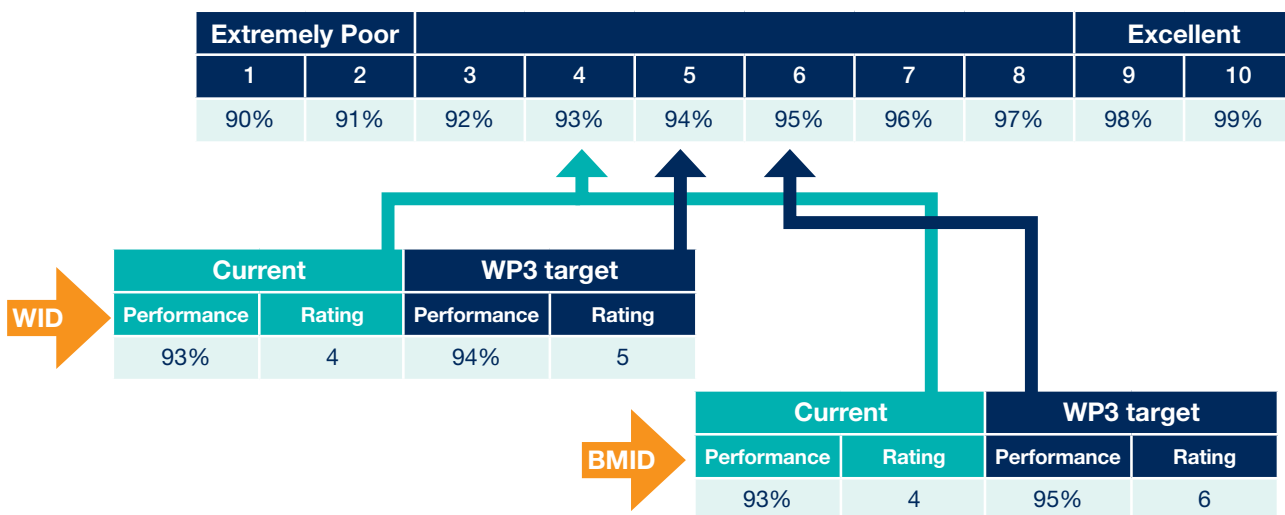
Customers typically receive water into storage dams from which they pump to irrigate crops. They determine the volume they need and/or can accept into their dam for the coming period and then place the order. They rely on SRW to deliver that volume.

We measure our accuracy as the percentage of orders where the actual volume delivered is within a defined range of the ordered volume.

We believe that performance less than 90% represents an unacceptable service level - and we strive for 100%.

Our current performance is 93% and will improve for both districts.

This improvement will come from improved flow measurement at the Werribee weir off-take giving us more accurate information on the volume of water being diverted and better control over the system. We also expect an improvement from the implementation of SCADA at Melton, which will improve our ability to respond to changes in demand and river flows.





Section 5 / Werribee and Bacchus Marsh Irrigation Districts

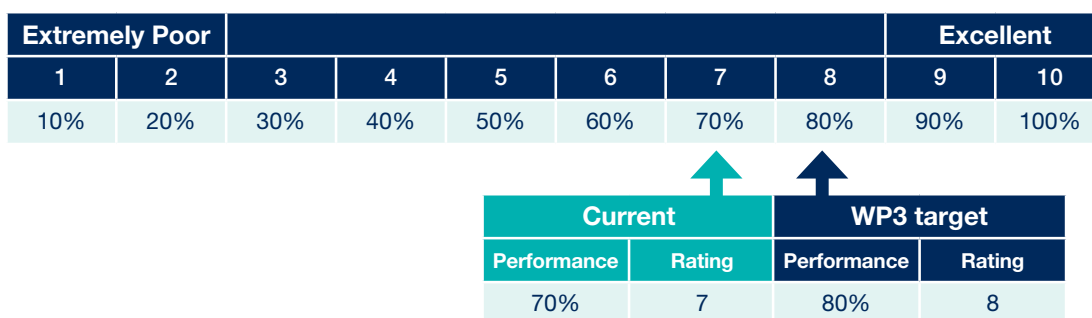
**Measure No 2: orders delivered within 1 day of requested**

Customers order water based on their judgement as to the best time to irrigate their pasture or crops, noting other on farm and lifestyle constraints. “Shifting” orders can impact on vegetable growth and farm management.

We measure performance as the percentage of orders that are delivered within 24 hours of the time they are requested. We believe the less than less than 10% represents an unacceptable service level – and we strive for 100%.

Our current performance is 70% for both districts, which we expect to improve by 10%.

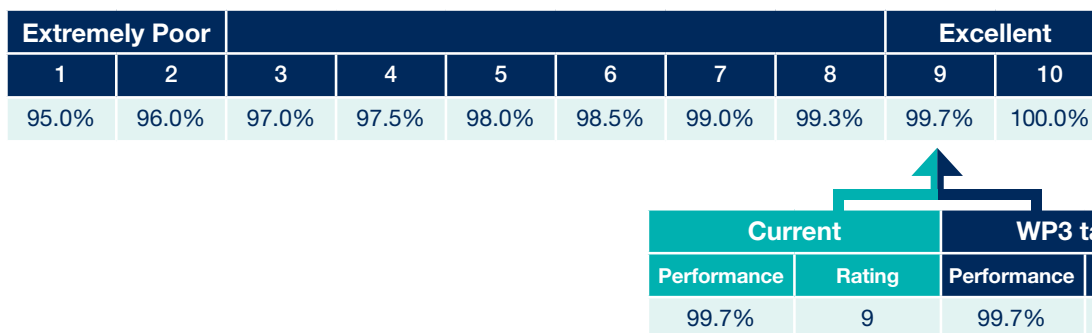
This improvement will come from SCADA at Melton and improved measurement in the district. With manual operation at Melton we regulate flows twice per day. SCADA will enable us to change the flow rate of releases at any time, so we will be better placed to meet customer demand.



**Measure No 3: delivery reliability**

This seeks to measure the time we cannot supply customers due to a problem in delivery such as channel breaks or weed growth, and is measured as the time that the delivery system is available to supply without constraint.

Our reliability has typically been around 99.7% - and we expect to maintain this level.



**Measure No 4: delivery efficiency**

To maximise the economic value from an irrigation district we seek to minimise losses caused by outfalls, seepage, leakage, measurement error, theft and evaporation.

We measure efficiency as the percentage of water released into the system that is actually delivered to customers.

Our delivery systems currently lose around 35%, though we expect to reduce by 2017/18 through channel lining and the introduction of a measurement network.

Section 5 / Werribee and Bacchus Marsh Irrigation Districts

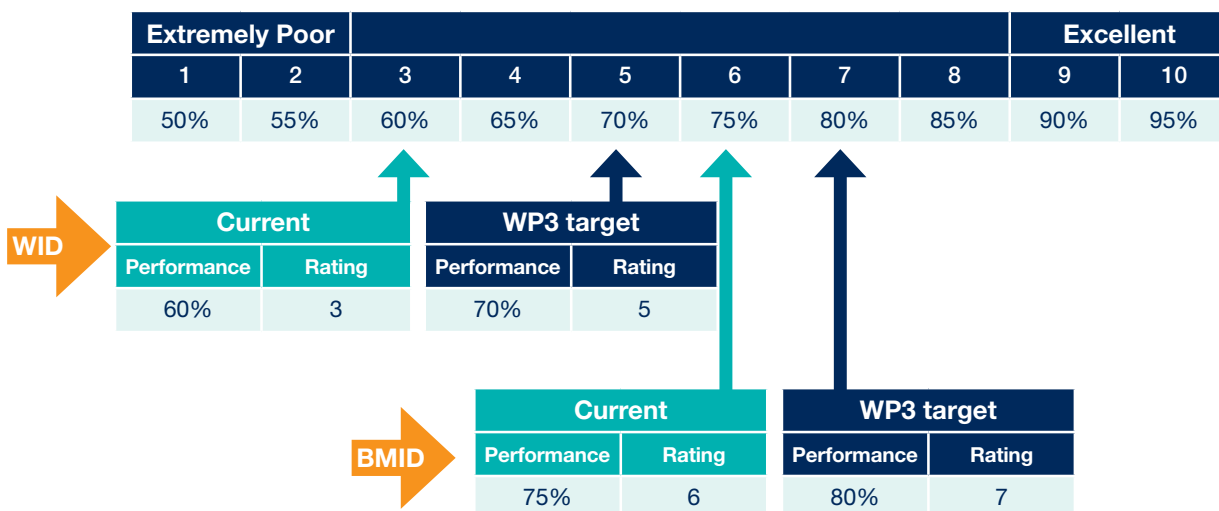


**Measure No 5: customer satisfaction**

In addition to meeting objective service targets, there are also more subjective aspects of our service, such as the way that we deal with customers, the information we provide, and the accuracy and suitability of our billing arrangements.

We measure this through a biannual customer survey.

Our most recent satisfaction ratings were 60% for Werribee and 75% for Bacchus Marsh. Our target ratings for the end of Water Plan 3 are 75% and 80% respectively.



**Measure No 6: drought resilience**

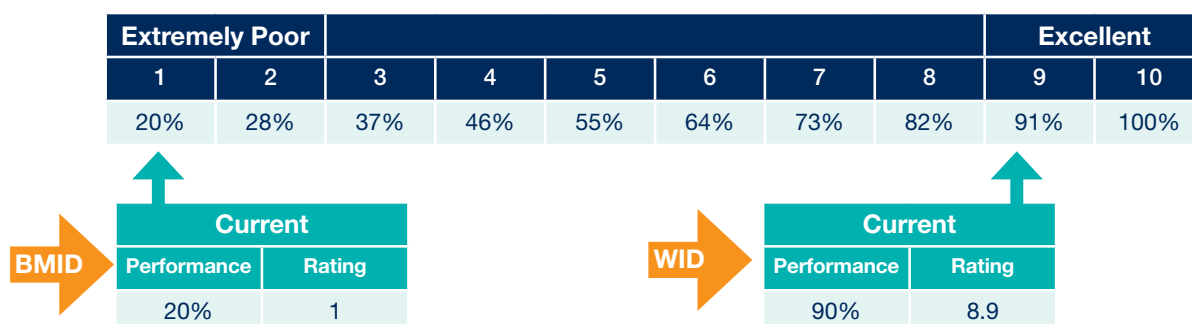
Werribee and Bacchus Marsh suffered major disruption with the drought over the past 13 years, particularly the four year period from 2007/08 where allocations did not exceed 15%. We can influence the viability of the districts during drought by sourcing alternative water supplies.

We measure drought resilience as the percentage of high reliability entitlement that we can deliver from alternative sources when river water allocation falls to 20%.

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Supplying only the 20% river water allocation is a poor outcome, and we strive to make up the remaining 80% of entitlement from alternative sources.

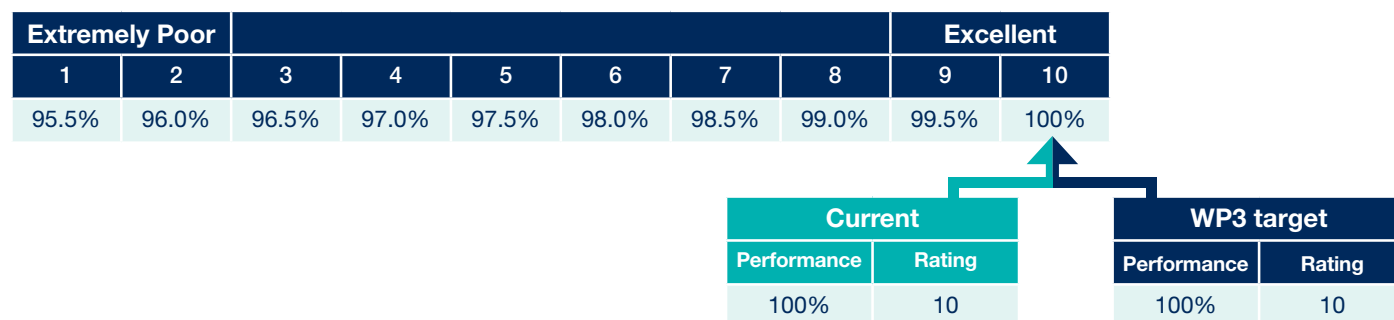
In Bacchus Marsh we do not have an alternative water supply that we can rely on in drought. In Werribee we have the recycled water scheme, and our drought resilience target is dependent upon sign-on for recycled water.



**Measure No 7: water quality (Werribee only)**

Water quality is an important issue for Werribee as recycled water in its raw form can be more saline than is ideal for crops – particularly during drought. High salinity reduces crop yield and quality, and increases on farm costs.

We propose to measure the water quality as the percentage of time that the salinity of recycled water is below 1800 EC.



**Service measure weightings**

The following weightings have been proposed as reflecting the relative importance of the service measures:

Measure	Weight	
	WID	BMID
1 Volume accuracy	9.0%	11.1%
2 Orders delivered within 1 day of requested	13.7%	16.7%
3 Delivery reliability	13.7%	16.7%
4 Delivery efficiency	22.7%	22.2%
5 Overall customer satisfaction	13.7%	16.7%
6 Drought resilience	13.6%	16.6%
7 Water quality	13.6%	0%
<b>Total</b>	<b>100%</b>	<b>100%</b>

Table 43: service measure weightings – WID & BMID

## Summary of service targets

The tables below summarises our performance targets for each of the service measure across the five years of the Water Plan:

### Werribee Irrigation District

Measure	Current	2013/14	2014/15	2015/16	2016/17	2017/18
1 Volume accuracy	93.0%	93.0%	93.0%	94.0%	94.0%	94.0%
2 Orders delivered within 1 day of requested	70.0%	70.0%	70.0%	80.0%	80.0%	80.0%
3 Delivery reliability	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%
4 Delivery efficiency	65.0%	65.0%	65.0%	66.0%	66.0%	69.0%
5 Overall customer satisfaction	60.0%	65.0%	65.0%	65.0%	65.0%	70.0%
6 Drought resilience	90.0%	TBD	TBD	TBD	TBD	TBD
7 Water quality	N/A	100.0%	100.0%	100.0%	100.0%	100.0%

Table 44: service targets – WID

### Bacchus Marsh Irrigation District

Measure	Current	2013/14	2014/15	2015/16	2016/17	2017/18
1 Volume consistency	93.0%	93.0%	93.0%	94.0%	95.0%	95.0%
2 Orders delivered within 1 day of requested	70.0%	70.0%	70.0%	70.0%	80.0%	80.0%
3 Delivery reliability	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%
4 Delivery efficiency	65.0%	65.0%	66.0%	66.0%	66.0%	67.0%
5 Customer satisfaction	75.0%	75.0%	75.0%	75.0%	80.0%	80.0%
6 Drought resilience	20%	20%	20%	20%	20%	20%

Table 45: service targets - BMID

## Measuring cost

Werribee and Bacchus Marsh Irrigation District customers own a number of entitlements, each with its own tariff. Typically, a customer will own some high reliability water share, some low reliability water share, some delivery share, and one or more associated service points. In Werribee most customers also have recycled water entitlement.

In order to derive a single indicator of cost, we have determined an average cost per ML.

For Bacchus Marsh, we have divided the total cost for the district by the quantity of high reliability water shares. This average cost per ML of high reliability water share is comparable to the “water right” tariff that existed prior to the unbundling of water entitlements in 2008/09.

For Werribee, we have used two cost measures. The first is similar to Bacchus Marsh, in that it divides the total cost by entitlement. However, for Werribee we have included an assumed cost and volume for recycled water in this calculation. The second cost measure assumes that one in four years will be dry and recycled water will provide almost all water delivered to irrigators in these dry years.

The cost of recycled water is considerably higher for dry seasons, as we expect to shandy potable water from metropolitan sources to manage salinity levels. This metropolitan water is almost ten times as expensive as recycled water, so the recycled water price is significantly influenced by the amount of metropolitan water that must be shandied into the supply system.

On the assumption that one four years will be dry, we have weighted the cost measures for Werribee by 75% on the basic entitlement price, and 25% on the drought cost.

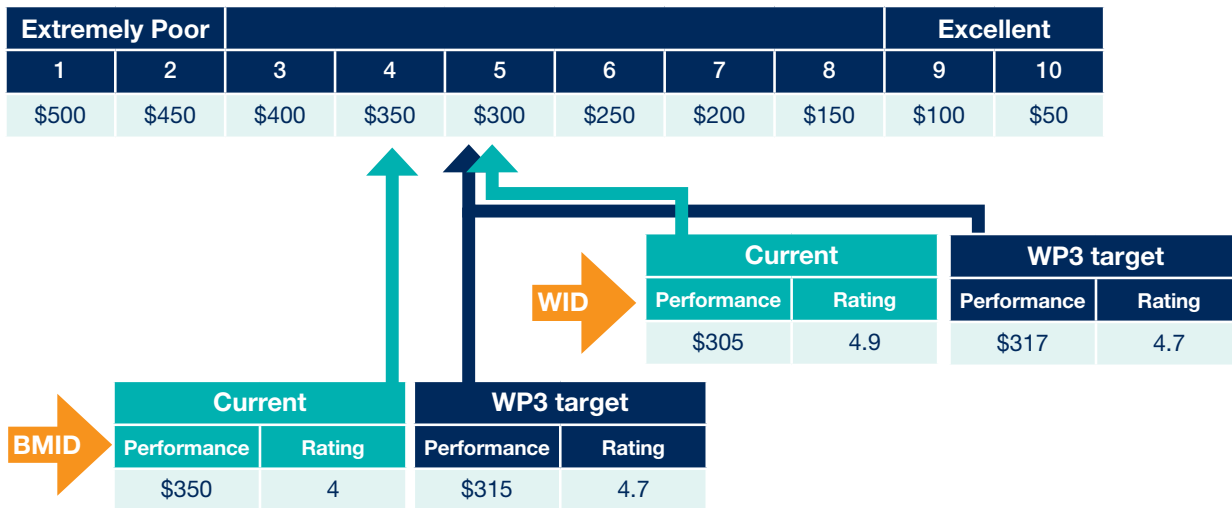
Section 5 / Werribee and Bacchus Marsh Irrigation Districts

Entitlement cost

As with our service measures, we have defined a range of price (cost) outcomes from \$50/ML, which we believe is at the lower end for irrigation water in Victoria – and therefore an excellent pricing outcome for customers – to \$500/ML, which we believe would be pushing towards the upper limit of customer affordability.

The average cost per ML of entitlement in Werribee will increase from \$305 to \$317. The average for BMID will decrease from \$350 to \$315 (excluding CPI).

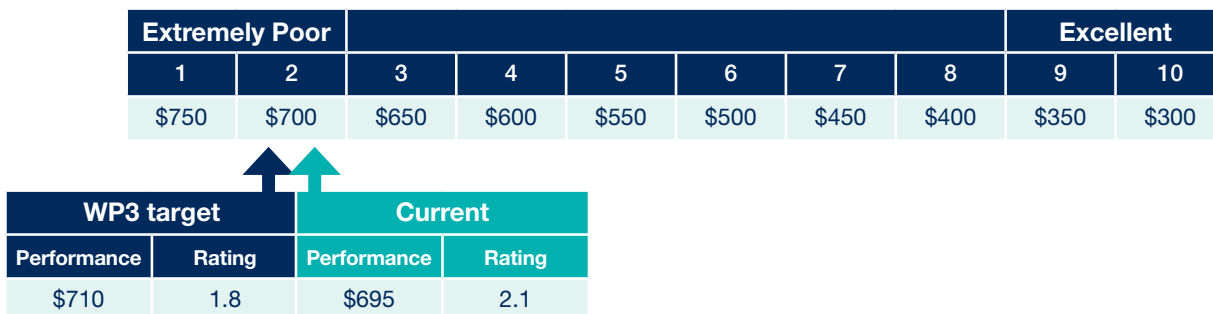
This comprises 75% of our cost measure for Werribee.



Drought cost (Werribee only)

The cost of water to Werribee in a dry year, with only 25% river water allocation, is much higher – at around \$700 per ML. We have not forecast a significant movement in this element of the cost – though we do not yet know the future cost of recycled water.

This comprises 25% of our cost measure for Werribee.



## Our performance improvement

Applying our performance measures and weightings, we can calculate the movement in our service and price for the Water Plan period.

### Werribee Irrigation District

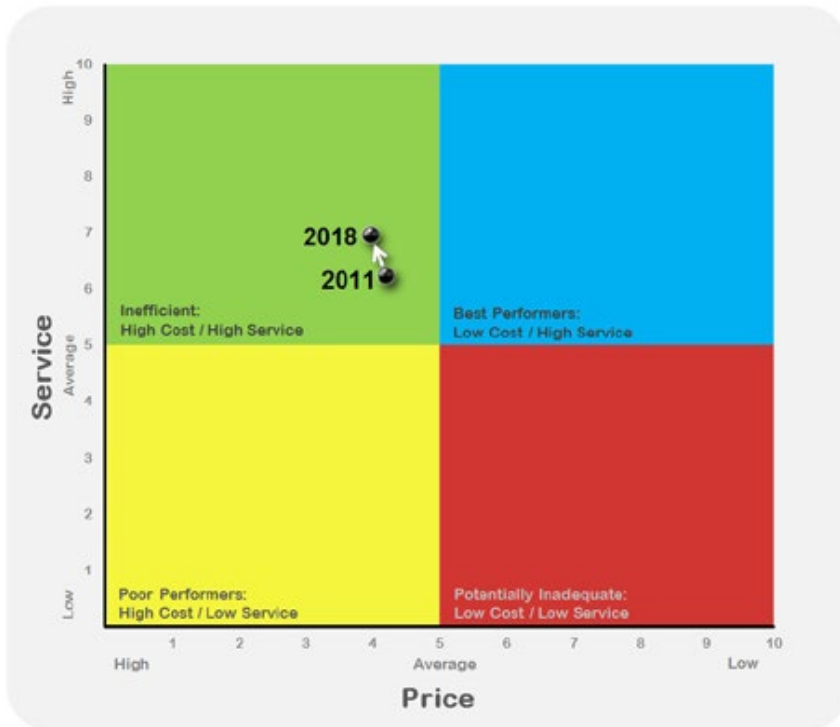


Figure 13: service and price outcomes - WID

### Bacchus Marsh Irrigation District

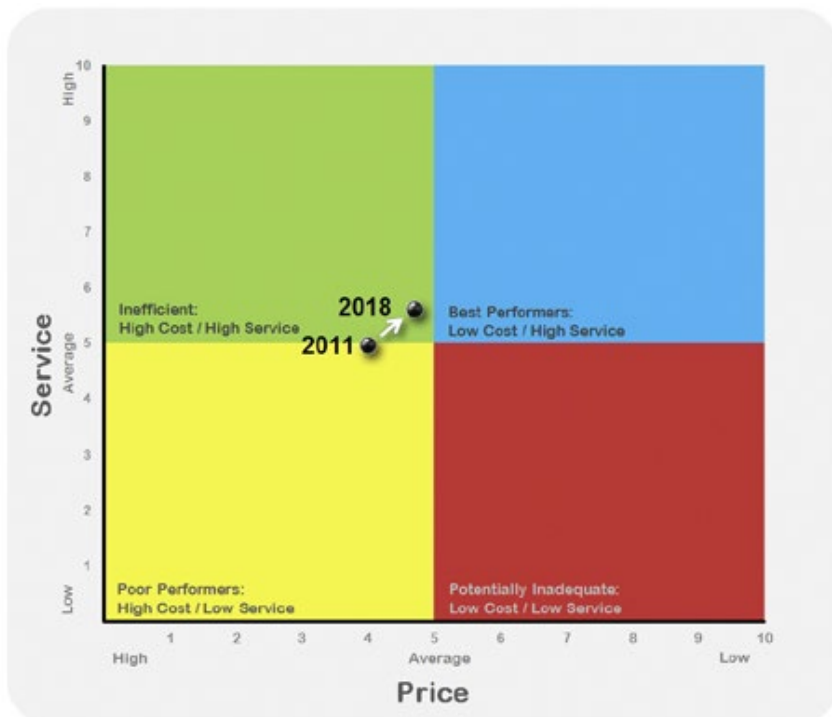


Figure 14: service and price outcomes - BMID



## Section 5 / Werribee and Bacchus Marsh Irrigation Districts

### Consultation

In developing our draft plan, and throughout the consultation period, we have continued to work with our customer forum, as well as inviting comment from the broader customer base through direct mailing. We also ran a customer focus group in early 2012, and we met with local councils and the Catchment Management Authority to discuss the Water Plan as part of our regular engagement meetings.

### Customer committee

We met with our local consultative committee four times during development of our strategy and Water Plan. The members reviewed our service measures and targets for Werribee and Bacchus Marsh, and have endorsed the Werribee investment proposal. The committee also reviewed the responses provided by customers on feedback forms, and agreed that the feedback was not representative of the broader irrigation community.

### Feedback forms

In June, following release of our draft water plan, we sent a summary of the Water Plan to all 302 customer in the WID and 121 customers in the BMID. Accompanying this was a return paid card asking for feedback on our prices, service targets and proposed projects.

From the WID, we received 18 responses, representing around 6% of the customers we mailed. All of these customers gave feedback on prices, with 3 supporting the proposal, 13 unhappy, and 2 unsure.

The most positive response was for the measure of water quality – with over 80% of customers supporting this measure. Only one customer supported the measure of order shifts no greater than 24 hours.

There was no clear message on our service targets, with most customers unsure of whether the targets are appropriate or not. No alternative targets have been suggested by customers.

Support from the customer who responded has been around 20%-30% for our proposed projects. Improving asset management and enhancing water markets are the most positive, whilst no customers have supported the Melton conduit replacement.

Comments accompanying the surveys include:

- Prices being too high
- The district being unsustainable
- Preference for subdivision of land

Whilst proportionally Werribee has provided the largest amount of feedback from any customer group, we are not sure how representative this 5% is of the broader customer base.

We received only 1 response from Bacchus Marsh, and this customer did not provide feedback on prices, however nominated consistent volume, reliable delivery and drought resilience as being important service measures.

This customer supported alternative water sources, extending asset lives, enhanced control and measurement, customised communications, and land and water management – as valuable projects.

### Focus group

Twelve randomly selected customers were invited to attend a two-hour customer focus group in Werribee on Monday 19th March 2012. Unfortunately, only three customers attended on the day, with a further four providing input via subsequent phone interviews.

The findings from these seven customers included:

- Customers are not interested in SRW offering any non-essential services
- Customers are not generally interested in receiving additional visits from SRW field officers to talk about their business issues
- Customers believe that water trading can be improved

### Other stakeholders

As part of our regular engagement meetings, we discussed our draft Water Plan with Melton, Wyndham and Moorabool councils, as well as the Port Phillip and Westernport Catchment Management Authority.

These stakeholders have been supportive of our proposals. In particular, Moorabool Council is keen to see modernisation works in the BMID.

### Our response

Nothing in the feedback we received has given us cause to alter our plans. The number of responses was very small - and in the opinion of our customer committee did not represent the views of the broader customer base.

We will continue to work with our customer committee to refine service measures, targets and weightings, and to set prices within the revenue cap proposed by this plan.

## Water Plan 2 outcomes

### Performance measures

The next sections provide our performance outcomes (where available) against the targets we proposed in Water Plan 2.

#### Werribee Irrigation District

For the WID we have generally exceeded our targets for volume accuracy, although in 2009/10, due to the drought, we were only able to supply recycled water. This affected our result for that year. Over the Water Plan 2 period we have not experienced any reliability issues with the WID.

System efficiency performance did not meet targets. The low volumes delivered in very dry and very wet years make baseline losses high in proportion to the water delivered.

Our customer satisfaction scores dropped in our 2010/11 survey. We believe this reflects difficult conditions for customers during the drought period and some dissatisfaction with the recycled water scheme - particularly with regard to water quality.

		2008/09	2009/10	2010/11	2011/12	2012/13
<b>Volume Accuracy</b>						
	Target	91%	91%	91%	91%	91%
	Actual	93%	88%	94%	94%	
<b>Average Order Lead Time</b>						
	Target	N/A	N/A	N/A	N/A	N/A
	Actual	N/A	N/A	N/A	N/A	
<b>Delivery Reliability</b>						
	Target	99%	99%	99%	99%	99%
	Actual	100%	100%	100%	100%	
<b>Delivery Efficiency</b>						
	Target	72%	72%	72%	72%	72%
	Actual	65%	65%	61%	62.7%	
<b>Customer Satisfaction Index</b>						
	Target	76%	N/A	78%	N/A	80%
	Actual	67%	N/A	64%	N/A	

Table 46: Water Plan 2 performance measures - WID

## Section 5 / Werribee and Bacchus Marsh Irrigation Districts

**Bacchus Marsh Irrigation District**

For the BMID we began to record volume accuracy data in the 2011/12 season. We have experienced good reliability with no significant periods without the ability to supply water to customers.

It was not possible to measure this earlier as we were delivering on a roster basis during the drought.

Delivery efficiency results failed to meet targets. As with the WID, the main reason for this has been that during the drought we have been delivering smaller volumes to customers and so base losses are proportionally higher.

We have seen a big improvement in customer satisfaction scores, which are now close to our target.

		2008/09	2009/10	2010/11	2011/12	2012/13
<b>Volume Accuracy</b>						
	N/A	N/A	N/A	91%	95%	91%
	N/A	N/A	N/A	N/A	97%	
<b>Average Order Lead Time</b>						
	Target	N/A	N/A	N/A	N/A	N/A
	Actual	N/A	N/A	N/A	N/A	N/A
<b>Delivery Reliability</b>						
	Target	99%	99%	99%	99%	99%
	Actual	100%	100%	100%	100%	
<b>Delivery Efficiency</b>						
	Target	74%	74%	74%	74%	74%
	Actual	66%	68%	69%	64%	
<b>Customer Satisfaction Index</b>						
	Target	79%	N/A	80%	N/A	80%
	Actual	70%	N/A	78%	N/A	

Table 47: Water Plan 2 performance measures - BMID

## Section 5 / Werribee and Bacchus Marsh Irrigation Districts

## Capital expenditure

Our capital expenditure for Water Plan 2 was dominated by a \$5 million upgrade project at Pykes Creek Reservoir. We also completed some major works at Melton Reservoir. Both these projects were largely carried over from Water Plan 1.

Area	Project	Carried forward	WP2 Proposal	Total Budget	Actual & Forecast	Difference
Pykes Creek Reservoir	Pykes Ck Upgrade Stage 2	\$4,912	\$0	<b>\$4,912</b>	\$5,177	\$265
Melton Reservoir	Melton Embankment Protection	\$970	\$900	<b>\$1,870</b>	\$2,825	\$955
<b>Total of projects greater than \$1m</b>	<b>\$5,882</b>	<b>\$900</b>	<b>\$6,782</b>	<b>\$7,761</b>	<b>\$8,002</b>	<b>\$1,220</b>
Werribee Irrigation	Projects less than \$1m	\$173	\$1,327	<b>\$1,500</b>	\$790	(\$710)
Bacchus Marsh Irrigation	Projects less than \$1m	\$103	\$907	<b>\$1,010</b>	\$774	(\$236)
Pykes Creek Reservoir	Projects less than \$1m	\$272	\$1,011	<b>\$1,283</b>	\$641	(\$642)
Melton Reservoir	Projects less than \$1m	\$534	\$714	<b>\$1,248</b>	\$1,790	\$542
<b>Total Water Plan 2 Capital Expenditure</b>		<b>\$6,964</b>	<b>\$4,859</b>	<b>\$11,823</b>	<b>\$11,997</b>	<b>\$174</b>

Table 48: Water Plan 2 capital expenditure – significant projects – Werribee & Bacchus Marsh (\$000, nominal)

The majority of our spend relates to headworks assets – which are funded through charges against our regulatory asset base. We have deliberately held off on some renewal works while we've worked through the modernisation strategy.

Funding Source	Carried forward	WP2 Proposal	Total Budget	Actual & Forecast	Difference
Price Increases (Regulatory Asset Base)	\$6,825	\$3,150	<b>\$9,975</b>	\$11,306	\$1,331
Renewals	\$140	\$1,709	<b>\$1,848</b>	\$691	(\$1,157)
<b>Total</b>	<b>\$6,964</b>	<b>\$4,859</b>	<b>\$11,823</b>	<b>\$11,997</b>	<b>\$174</b>

Table 49: Water Plan 2 capital expenditure – summary by funding source – Werribee & Bacchus Marsh (\$000, nominal)

## Section 5 / Werribee and Bacchus Marsh Irrigation Districts

## Renewal funds

### Werribee Irrigation District

The Werribee renewal fund has doubled over Water Plan 2, and is forecast to be more than \$5 million by the end of the regulatory period. In part this reflects a natural accumulation phase for the fund – but also reflects our decisions not to renew assets that may be upgraded under a modernisation program.

	Actual				Forecast
	2008/09	2009/10	2010/11	2011/12	2012/13
Opening balance	\$2,346	\$2,800	\$3,172	\$3,739	\$4,379
Annuity charges	\$360	\$374	\$374	\$374	\$374
Asset renewal projects	\$109	\$207	\$11	\$17	\$54
Interest on fund balance	\$203	\$205	\$205	\$282	\$327
<b>Closing balance</b>	<b>\$2,800</b>	<b>\$3,172</b>	<b>\$3,739</b>	<b>\$4,379</b>	<b>\$5,026</b>

Table 50: WID renewal funds (\$000, nominal)

### Bacchus Marsh Irrigation District

As with Werribee, our Bacchus Marsh renewal fund has grown over Water Plan 2.

	Actual				Forecast
	2008/09	2009/10	2010/11	2011/12	2012/13
Opening balance	\$1,428	\$1,644	\$1,809	\$1,979	\$2,229
Annuity charges	\$100	\$128	\$104	\$104	\$104
Asset renewal projects	\$5	\$81	\$46	\$0	\$77
Interest on fund balance	\$121	\$118	\$112	\$146	\$161
<b>Closing balance</b>	<b>\$1,644</b>	<b>\$1,809</b>	<b>\$1,979</b>	<b>\$2,229</b>	<b>\$2,418</b>

Table 51: BMID renewal funds (\$000, nominal)

## Tariff outcomes

### Werribee Irrigation District

In Water Plan 2 we estimated an annual increase (before CPI) of 8.7%. In consultation with our customer committee, we increased prices substantially at the start of the Water Plan, with later increases being less than CPI.

<b>Water Plan 2 indicative annual increase</b>	<b>8.7%</b>				
Actual increases	2008/09	2009/10	2010/11	2011/12	2012/13
	24.4%	1.2%	-0.2%	-0.3%	-1.1%
<b>Equivalent actual annual increase</b>	<b>7.8%</b>				

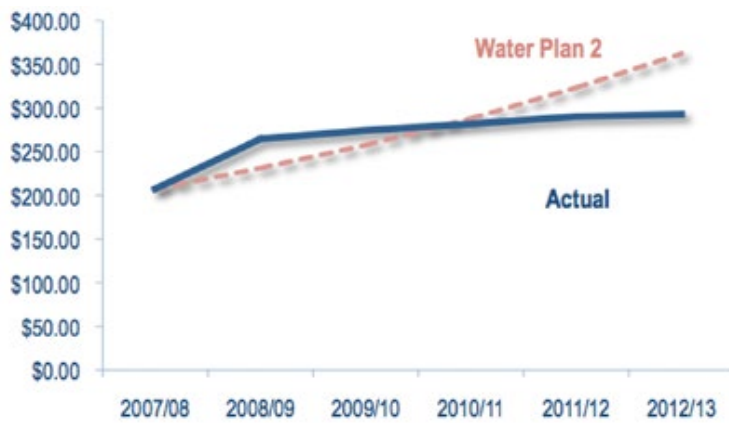


Figure 11: Water Plan 2 tariff outcomes - WID

### Bacchus Marsh Irrigation District

In Water Plan 2 we estimated an annual increase (before CPI) of 10.1%. In consultation with our customer committee, we spread the majority of the increase over the first two years of the Water Plan, with later increases being closer to CPI.

<b>Water Plan 2 indicative annual increase</b>	<b>10.1%</b>				
Actual increases	2008/09	2009/10	2010/11	2011/12	2012/13
	11.9%	17.0%	4.9%	3.0%	3.9%
<b>Equivalent actual annual increase</b>	<b>10.0%</b>				

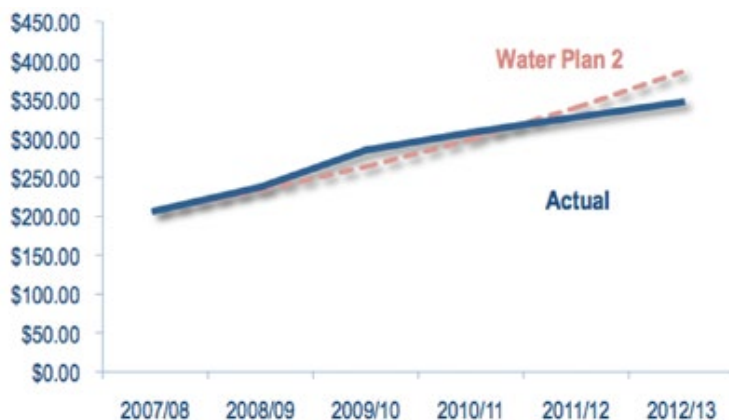


Figure 12: Water Plan 2 tariff outcomes - BMID



## Section 5 / Werribee and Bacchus Marsh Irrigation Districts

## Financial outcomes

## Werribee Irrigation District

The table below summarises the revenue raised across each year of Water Plan 2 – as compared with the revenue required to meet the operating and capital costs of the business. Our result for 2011/12 reflected low demand for recycled water – and a subsequent transfer of labour costs to district supply – and once-off costs associated with flooding in Werribee.

	Actual				Forecast
	2008/09	2009/10	2010/11	2011/12	2012/13
<b>Revenue</b>					
Annual entitlement charges	\$2,680	\$3,215	\$3,300	\$3,402	\$3,517
Other revenue	\$0	\$5	\$10	\$9	\$0
Alternative water supply charges	\$238	\$0	\$0	\$0	\$0
<b>Total revenue</b>	<b>\$2,918</b>	<b>\$3,221</b>	<b>\$3,310</b>	<b>\$3,411</b>	<b>\$3,517</b>
Revenue Required	\$2,417	\$2,754	\$3,044	\$3,540	\$3,467
<b>Under/Over Recovery</b>	<b>\$501</b>	<b>\$467</b>	<b>\$266</b>	<b>(\$129)</b>	<b>\$50</b>

Table 52: Water Plan 2 revenue recovery –WID (\$000, nominal)

The WID opened with a deficit of over \$900,000 carried forward from prior years. The deficit has now been repaid.

	Actual				Forecast
	2008/09	2009/10	2010/11	2011/12	2012/13
Opening balance	(\$919)	(\$473)	(\$23)	\$250	\$134
Operating result	\$501	\$467	\$266	(\$129)	\$50
Interest on fund balance	(\$55)	(\$17)	\$7	\$13	\$11
<b>Closing balance</b>	<b>(\$473)</b>	<b>(\$23)</b>	<b>\$250</b>	<b>\$134</b>	<b>\$195</b>

Table 53: accumulated surplus / deficit –WID (\$000, nominal)

## Section 5 / Werribee and Bacchus Marsh Irrigation Districts

**Bacchus Marsh Irrigation District**

After staging the Water Plan 2 price increase over first two years, the BMID has continued to generate operating surpluses to repay past deficits.

	Actual				Forecast
	2008/09	2009/10	2010/11	2011/12	2012/13
<b>Revenue</b>					
Annual entitlement charges	\$1,033	\$1,253	\$1,335	\$1,419	\$1,511
Other revenue	\$15	\$20	\$20	\$5	\$0
Alternative water supply charges	\$566	\$354	\$15	\$0	\$0
<b>Total revenue</b>	<b>\$1,614</b>	<b>\$1,627</b>	<b>\$1,370</b>	<b>\$1,424</b>	<b>\$1,511</b>
Revenue Required	\$1,671	\$1,550	\$1,241	\$1,284	\$1,360
<b>Under/Over Recovery</b>	<b>(\$57)</b>	<b>\$77</b>	<b>\$129</b>	<b>\$140</b>	<b>\$151</b>

Table 54: Water Plan 2 revenue recovery – BMID (\$000, nominal)

The BMID has repaid over \$300,000 of the opening deficit, with around \$135,000 remaining for repayment in Water Plan 3.

	Actual				Forecast
	2008/09	2009/10	2010/11	2011/12	2012/13
Opening balance	(\$439)	(\$534)	(\$492)	(\$389)	(\$272)
Operating result	(\$57)	\$77	\$129	\$140	\$151
Interest on fund balance	(\$38)	(\$35)	(\$26)	(\$24)	(\$14)
<b>Closing balance</b>	<b>(\$534)</b>	<b>(\$492)</b>	<b>(\$389)</b>	<b>(\$272)</b>	<b>(\$135)</b>

Table 55: accumulated deficit – BMID (\$000, nominal)

# Section 6

## Groundwater and Rivers

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## Overview

Our Groundwater and Rivers business manages and controls the take and use of water for irrigation and other purposes from unregulated rivers and groundwater aquifers in southern Victoria. It is also responsible for licensing the construction of bores and farm dams.

The business administers around 7,800 licences. Of these, 4,400 are to take and use up to 145,000 ML of water from unregulated (and partially regulated) rivers, and 3,400 licences to use nearly 330,000 ML from groundwater bores.

The business also handles a range of applications. These may be for new licences, most commonly to construct groundwater bores - or may be to vary or transfer existing licences. Each year around 1,200 bore construction licences are issued, mostly for stock and domestic use – with much higher numbers of applications in recent drought years.

## What do we charge for?

### Take and use licences

Licences to take and use water from rivers or groundwater aquifers are issued under section 51 of the Water Act. Southern Rural Water issues and manages these licences as delegate of the Minister for Water.

Licences specify the maximum volume of water that may be taken in a year, subject to rosters and restrictions, and any conditions that apply to the licence. The costs of managing and monitoring licences, and ensuring compliance, are recovered through annual tariffs. Annual tariffs comprise a fixed charge per licence, plus a charge per megalitre of licensed volume. The charge per megalitre of licensed volume is different for surface and groundwater licences, and additional charges may be applied in localised areas to recover specific costs relating to:

- harvesting and regulation of river flows
- monitoring of water levels and/or quality
- additional compliance costs

Licences are typically issued for up to 15 years, with a renewal fee payable at the end of the licence term.

A licence belongs to a person, and references land on which water can be used, but can be transferred to the new owner when a property changes hands. A licence can also be transferred to another property within a water system – subject to assessment and approval. Application fees apply for these transactions.

### Construction licences

Licences to construct groundwater bores or dams are also issued by Southern Rural Water as delegate of the Minister for Water. These licences are typically issued for a 12 month period, and specify the conditions for the construction of works.

Fees are payable upon lodgement of an application, and cover the costs of assessing the application.

These licences may be extended or transferred - subject to assessment and approval. Separate application fees are payable for this.

### Operating licences

Licences are also required to operate works associated with a take and use licence. Licences for farm dams which are defined as hazardous - based on their size, location and capacity - are typically issued for a five-year period. An annual fee recovers the costs of surveillance and of monitoring compliance with licence conditions.

### Transactional applications

We process a number of applications to obtain new licences, and to undertake transactions against existing licences. These include:

- Applications for new take and use licences (surface and groundwater)
- Applications for new works licences (bores and farm dams)
- Entitlement transfers
- Changes of ownership
- Renewals
- Amendments
- Information statements and reports

We have a set of prices for these applications, based on the average costs of processing each particular class of application.

## Our strategy

Groundwater and Rivers is a regulatory business. Apart from metering, stream gauging and some bore monitoring equipment, we are not an infrastructure or asset intense business. Groundwater and Rivers' business direction has been developed in consultation with customers, and has resulted in two guiding principles:

- providing great service at a fair price to our customers
- being a sound regulator without undue impact on rural businesses

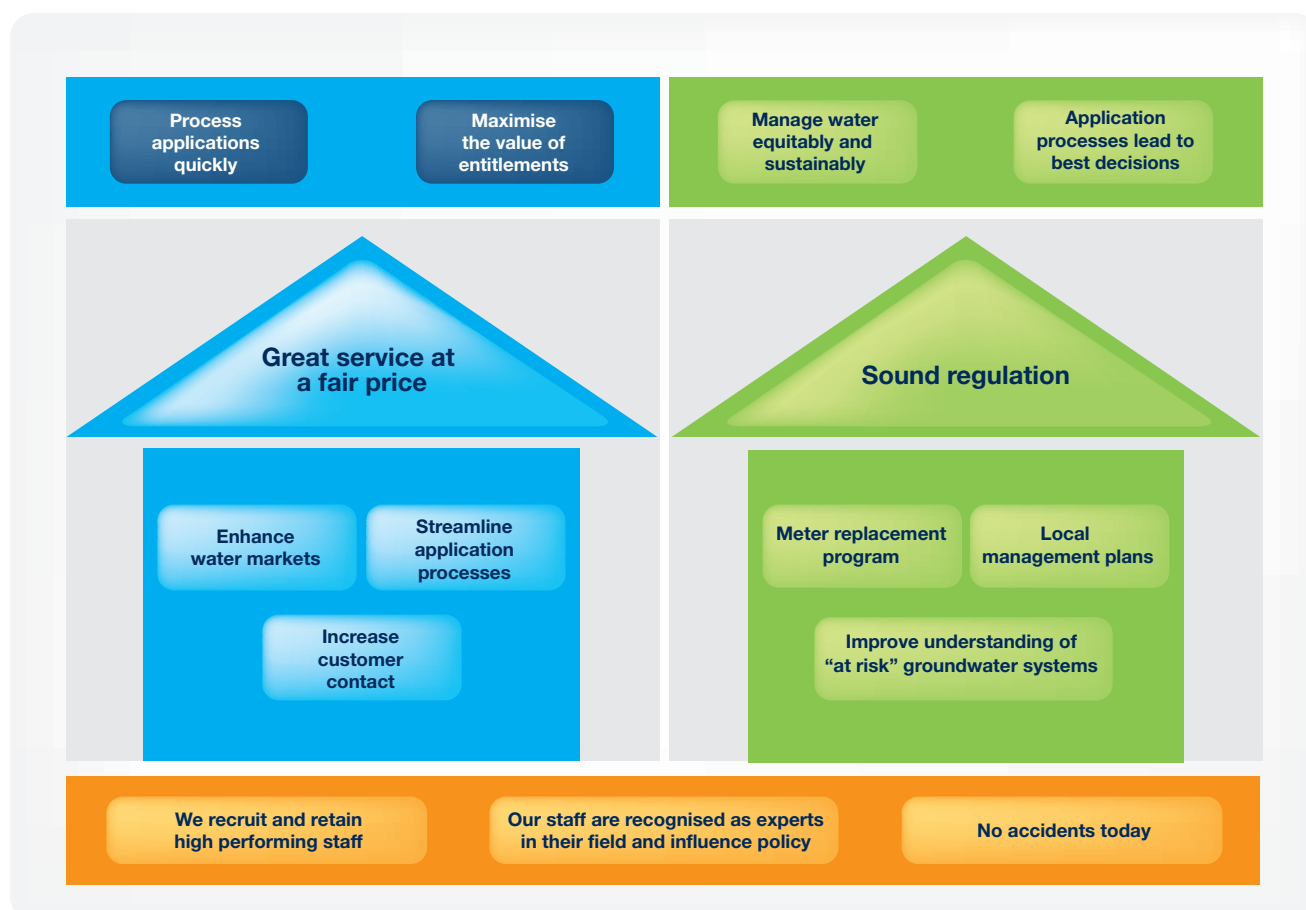


Figure 20: strategy map – groundwater and rivers

### Great service at a fair price

To provide efficient service we have identified the service measures and price levels that are important to customers. Broadly, this means:

- Understanding our customers' needs
- Sharing information
- Having application processes that lead to the best decision in a timely manner

We have three areas of focus to improve our service to customers during Water Plan 3:

- Enhancing water markets
- Streamlining application processes
- Increasing customer contact

## Enhancing water markets

We regularly hear from our customers and their representatives that they would value Southern Rural Water taking a stronger role in enabling water trading.

We believe that we can take a more proactive role in enhancing trade, and that policies and actions outlined in the Sustainable Water Strategies will address a number of barriers which currently restrict water trading. These include:

- Un-declaring water supply protection areas
- Creating local management plans for groundwater
- Creating the ability for “limited term trades”
- Streamlining Water Act 1989 section 40 assessments as part of local management rules

From 2012/13 and continuing into Water Plan 3, we will take a number of actions to facilitate trade, including:

- Establish a process to record and make available information about active and interested buyers and sellers of water
- Prominently display this information at our offices and on our website
- Use technology such as SMS/email to promote trading opportunities
- Provide better information to potential buyers on how to purchase water
- Contact customers who have traditionally used little or none of their entitlement to explain the opportunity of trading water and identify any barriers to trading

## Streamlining application processes

We will review our application processes to minimise the time and cost to applicants, whilst continuing to make sound decisions and preserve third-party interests.

We believe that we can streamline some of our processes through:

- Greater reliance on existing information
- Ensuring that processes are appropriate to the level of risk
- Providing more up-front information on processes to potential applicants

## Increasing customer contact

As a regulator we must balance the needs of licence holding customers, agencies and other stakeholders. Understanding those needs leads to this balance. We manage to KPIs, and measure performance and survey customer satisfaction. Customers have continually made clear that they prefer face to face contact and to see more of their local field officer.

In this planning period we intend to improve and formalise our engagement to capture customer and stakeholder needs. This will enable us to continually review our performance measures and assess whether we are putting management efforts in the right activities.

We will achieve this by:

- Holding at least three annual “open house” forums in our major customer centres
- Conducting customer focus groups every second year
- Visiting more customers each year
- Providing customers with locally focused water reports at least annually

## Sound regulation

Our regulatory functions are delegated by the Minister for Water, and we regulate in accordance with the policies and obligations of the Minister. As a regulator with a delegated function, our challenge is to balance good regulation without stifling regional economic prosperity. We aim for regulatory operations that protect natural values with the minimum possible impact on customers’ needs. We achieve this by:

- Influencing policy with technical expertise and strong understanding of our customers

## Section 6 / Groundwater and Rivers

- Managing water transparently and equitably
- Being close to stakeholders

To deliver these outcomes for customers, the community, and the environment, we will focus our actions in three areas:

- Meter replacement program
- Local Management Plans
- Improving our understanding of at risk groundwater systems

### Meter replacement program

Our meters must meet national guidelines for manufacture, installation and maintenance. In accordance with the National Framework for Non-urban Water Metering and the associated Victorian State Implementation Plan, SRW has prepared a Metering Action Plan which identifies and categorises SRW's meter fleet. The majority of meters effectively comply with the required standards; however, 950 meter sites have been identified as not meeting current installation standards.

We have designed a replacement schedule over Water Plans 3 and 4 around the expected remaining lives, and taking into account the efficiency of replacing meters on an area by area basis.

These meter replacements will be funded from annual tariffs. New licence holders will continue to pay up front for initial meter installations.

### Local management plans

The Water Act sets out the compliance requirements of water users - however managing water fairly and equitably requires that local areas have specific rules concerning flow sharing, trading and allocation caps.

To ensure transparency we are preparing Local Management Plans for all areas so each existing or prospective licensee can view and understand the local rules governing water extraction. Many areas will be complete in the Water Plan 2 period, with more complex areas being finalised during Water Plan 3. These are shown in the table below.

Local Management Area	Main issues	Funding
Avon river/ Wa De Lock Groundwater Management Area	Groundwater/Surface Water Interaction	Current resources
Deutgam Water Supply Protection Area	Transparent restriction trigger levels	\$50 thousand once off cost
Mitchell River	Improved restriction triggers	Current resources
To be identified	Identify systems suitable for "high flow summer harvesting" and prescribe the rules per SWS actions	\$50 thousand once off cost

### Improving our understanding of "at risk" groundwater systems

Most groundwater systems have had numerous technical studies conducted over time. In most areas we have a good understanding of the risks and applicable management responses. In a small number of areas the main risks are not sufficiently understood or quantified to enable a long term planning response. In these areas we propose to review the existing technical work into a concise report. This will identify whether there are gaps that require new work, or whether there is sufficient existing information to inform long term planning. These areas are described the table below.

Groundwater Area	Primary Knowledge Gap	Funding Source
Condah Water Supply Protection Area	Long term impact of water extraction	Existing resources
Sale Water Supply Protection Area	Connection with deeper aquifers	Existing resources
Bungaree Water Supply Protection Area	Long term impact of water extraction	Existing resources



## Financial tables

### Capital expenditure

Our capital expenditure program for Groundwater and Rivers totals \$1.8 million. The bulk of this relates to meter replacements under our Metering Action Plan. We also have an annual provision for installing meters on new licences. These costs are directly recoverable from customers.

Project	2013/14	2014/15	2015/16	2016/17	2017/18	Total	WP4
<b>Significant projects</b>							
Meter Replacements	\$465	\$195	\$250	\$200	\$200	\$1,310	\$1,200
Recoverable Meter Installations	\$40	\$40	\$40	\$40	\$40	\$200	\$320
<b>Other projects</b>							
General	\$70	\$110	\$128	\$70	\$70	\$448	\$790
<b>Total</b>	<b>\$575</b>	<b>\$345</b>	<b>\$418</b>	<b>\$310</b>	<b>\$310</b>	<b>\$1,958</b>	<b>\$2,310</b>

Table 56: capital expenditure summary – groundwater & rivers (\$000, \$11/12)

### Meter replacement program

In accordance with the National Framework for Non-urban Water Metering and the associated Victorian State Implementation Plan, SRW has prepared a Metering Action Plan which identifies and categorises SRW's meter fleet. The majority of meters effectively comply with the required standards; however, 950 meter sites have been identified as not meeting current installation standards. It is unlikely that these meters are recording accurately.

Under the grandfathering provision, these meters can remain in the field until the end of their useful life. We have designed a replacement schedule over Water Plans 3 and 4 around the expected remaining lives, and taking into account the efficiency of replacing meters on an area by area basis.

We expect to replace around 600 of the 950 grandfathered meters during Water Plan 3, as follows:

Area	2013/14	2014/15	2015/16	2016/17	2017/18	Total
Groundwater	112	47	47	68	19	293
Surfacewater	45	55	49	67	109	325
<b>Total</b>	<b>157</b>	<b>102</b>	<b>96</b>	<b>135</b>	<b>128</b>	<b>618</b>

Table 57: meter replacement program – meter numbers

### Quantities

There are two streams of revenue in this part of the business – annual licence fees, and application fees. These tariffs are described earlier.

With caps in place across most water systems, there is little scope to issue new licences or entitlements. This component of our revenue is therefore static.

However, our revenue from applications is entirely determined by demand – and can fluctuate significantly. At the height of the recent drought we processed unprecedented numbers of applications to construct groundwater bores. This demand has fallen away rapidly with the easing of the drought, and we are now budgeting for volumes consistent with the past two seasons – and more consistent with pre-drought levels.

## Section 6 / Groundwater and Rivers

## Indicative tariff outcomes

## Field compliance (existing licences)

The table below summarises the revenue required for across Water Plan 3 to meet our obligations for managing licences. There is no significant change proposed from current expenditure.

	2011/12	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total
Baseline operating expenditure	\$5,436	\$5,436	\$5,436	\$5,436	\$5,436	\$5,436	\$27,178
Obligations & initiatives	\$0	\$452	\$310	\$255	\$253	\$248	\$1,518
Productivity & growth	\$0	(\$35)	(\$71)	(\$107)	(\$143)	(\$179)	(\$535)
Capital expenditure charges	\$496	\$576	\$569	\$542	\$580	\$552	\$2,819
Business resilience	(\$32)	(\$229)	(\$44)	\$74	\$75	\$144	\$20
<b>Total Revenue Requirement</b>	<b>\$5,899</b>	<b>\$6,200</b>	<b>\$6,200</b>	<b>\$6,200</b>	<b>\$6,200</b>	<b>\$6,200</b>	<b>\$31,000</b>

Table 58: revenue requirement – field compliance (\$000, \$11/12)

With no significant changes proposed in this Water Plan, we expect tariffs to remain stable. The tables below provide the average charges for typical surface and groundwater licence holders.

		2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Small	5 ML	\$373	\$388	\$389	\$389	\$389	\$388	\$388
Medium	50 ML	\$845	\$869	\$869	\$869	\$868	\$867	\$865
Large	200 ML	\$2,420	\$2,471	\$2,471	\$2,469	\$2,466	\$2,461	\$2,454

Table 59: indicative customer impacts – surface water licences (\$11/12)

		2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Small	5 ML	\$338	\$354	\$354	\$355	\$354	\$354	\$354
Medium	150 ML	\$500	\$524	\$524	\$524	\$524	\$523	\$521
Large	300 ML	\$1,400	\$1,471	\$1,469	\$1,467	\$1,463	\$1,459	\$1,454

Table 60: indicative customer impacts – groundwater licences (\$11/12)

## Service and price

As outlined earlier, we have adopted a methodology for describing service / cost outcomes, and exploring the trade-off between service and price. The challenge we face as a business is in measuring our output. For this part of our business, which is regulatory in nature, the challenge is even greater than for our water supply businesses. Arguably, if done well, our compliance activities will benefit, but will be invisible to most of our customers.

There are two distinct aspects to our Groundwater and Rivers functions:

- monitoring existing licences and water systems to ensure compliance with licence conditions, and to provide fair access water
- assessing applications for new licences – most for the construction of new bores or to transfer existing licences

We have applied our service and price methodology separately for these two functions. For each we have:

- identified a range of measures that describe our service
- graded performance targets for those measured from extremely poor (1) to excellent (10)
- weighted the measures to describe the relative importance to customers of different aspects of our service

The weighted set of service measures allows us to calculate service indexes for our field compliance activities and for determining applications. These service indexes can be plotted against a measure of the service cost to explore the trade-off between service and price.

## Field compliance

### Service measures – field compliance

We have identified measures across five aspects of our field compliance function.

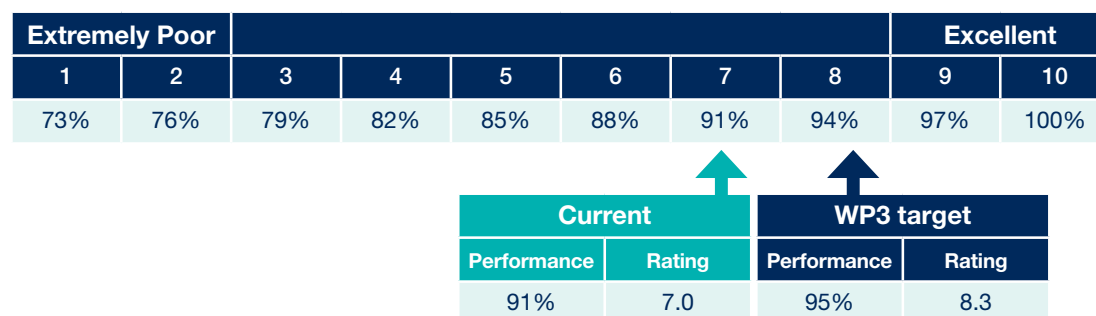
#### Measure No 1: compliance actions

Our compliance activities are aimed at protecting the interest of all water users by ensuring that people comply with licence conditions, and with rosters and bans.

We propose to measure our performance across three stages of a formal compliance process:

- initial investigation (target 14 days)
- evidence brief (target 28 days)
- next action initiated (target 14 days)

We believe that we currently meet these timeframes for 91% of compliance actions, with scope to improve this to 95% through continuous improvement



Section 6 / Groundwater and Rivers

**Measures No 2-5: field inspections**

A field inspection provides vital input into our application process, particularly in identifying third party or environmental impacts. At the same time, the field inspection is part of the assessment process and therefore a timely turnaround is essential.

We propose to measure our inspections of:

- new extraction licences (Measure 2)
- new domestic and stock (D&S) bores (Measure 3)
- new Class C and D and irrigation bores (Measure 4)
- new farm dams (Measure 5)

Our performance ratings for all of these four measures are the same, with 91% representing poor performance, up to 100% for excellent performance. Our current performance is shown below with a green cross, whilst our Water Plan 3 target is marked with a blue cross.

		Extremely Poor								Excellent	
		1	2	3	4	5	6	7	8	9	10
		91%	92%	93%	94%	95%	96%	97%	98%	99%	100.0%
2	New extraction					X					
3	New D&S									X	
4	New bores									X	X
5	New dams					X	X				

**Measures No 6-8: engagement**

Through surveys and direct comment, customers have indicated that they seek more engagement with their local field officer and with SRW in general.

We propose to measure our performance against three aspects of our engagement:

- field days (Measure 6)
- local Water Reports (Measure 7)
- customer information sessions (Measure 8)

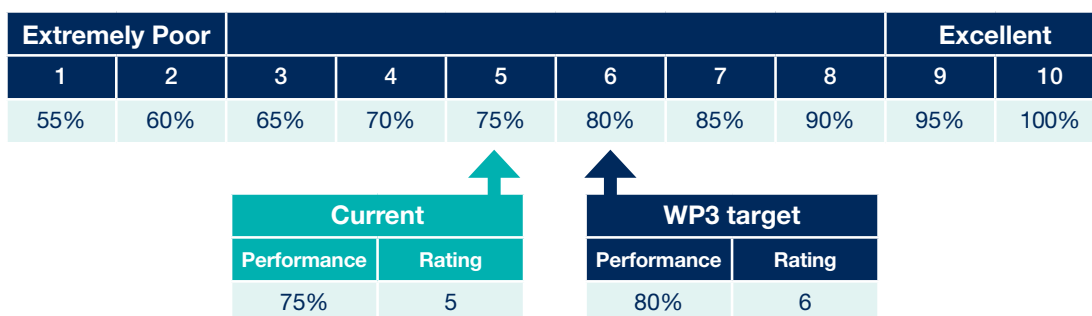
Our performance ratings for all of these four measures are based on the number of engagement actions we undertake. We believe we fulfil all of these expectations consistently.

		Extremely Poor								Excellent	
		1	2	3	4	5	6	7	8	9	10
6	Field days		1		2		3		4		5
7	Local reports		6		7		8		9		10
8	Customer sessions		1				2				3

**Measure No 9: customer satisfaction**

In addition to meeting objective service targets, there are also more subjective aspects of our service, such as the way that we deal with customers, the information we provide, and the accuracy and suitability of our billing arrangements.

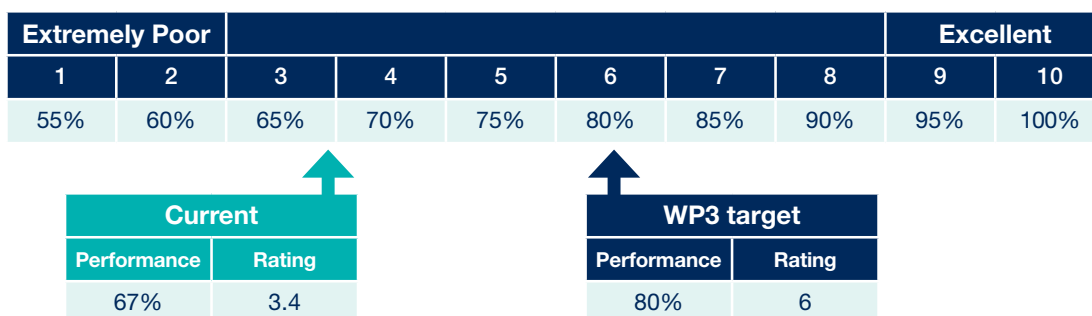
Our rating is based on composite of standardised questions asked in a biannual survey. We hope to improve our rating from 75% to 80% by continuous improvement.



**Measure No 10: stakeholder satisfaction**

As our licencing functions are undertaken as a delegate of the Minister for Water, and in the interests of the broader community, the satisfaction of our stakeholders is also an important indicator of performance.

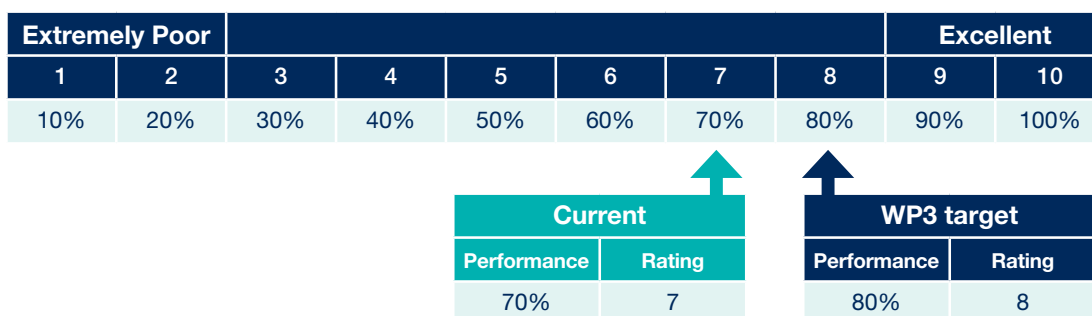
Our rating is based on an assessment by stakeholders in a biannual survey. In 2010, overall stakeholder satisfaction with our groundwater and rivers function was around 67%. We've received a lot of positive feedback about our Southern Groundwater Futures initiatives, and so we expect to see an increase in overall satisfaction with our next survey. We hope that this result will also reflect our improved communication and other initiatives.



**Measure No 11: metering plan compliance**

National standards have been written for meter manufacture, installation and maintenance, and for data handling of meter reads. The standards have been adopted by COAG, and SRW was required to prepare an implementation plan to DSE showing how we will comply with the new standards. The plan shows full compliance by 2020, with most work being undertaken during Water Plan 3.

Our performance against this compliance obligation is measured as the percentage of meters compliant with metering implementation plan. We expect to increase this from 70% to 80% over the Water Plan through our capital investment plan.



## Section 6 / Groundwater and Rivers

**Service measure weightings – field compliance**

The following weightings have been proposed as reflecting the relative importance of the service measures:

Measure	Weight
1 Compliance actions within standard	15%
<b>Inspections</b>	
2 New extraction licences	10%
3 10% of new D&S bores	5%
4 All new C & D class bores	10%
5 All new farm dams	5%
<b>Engagement</b>	
6 Attending major field days	5%
7 Local Water Reports	5%
8 Customer Information Sessions	5%
<b>Other</b>	
9 Customer satisfaction	15%
10 Stakeholder satisfaction	15%
11 Compliance with metering plan	10%
<b>Total</b>	<b>100%</b>

Table 61: service measure weightings – field compliance

**Summary of service targets – field compliance**

The table below summarises our performance targets for each of the eleven service measure across the five years of the Water Plan:

Measure	Current	2013/14	2014/15	2015/16	2016/17	2017/18
1 Compliance actions within standard	91%	91%	92%	93%	94%	95%
<b>Inspections</b>						
2 New extraction licences	95%	95%	95%	95%	95%	95%
3 10% of new D&S bores	9.9%	9.9%	9.9%	9.9%	9.9%	9.9%
4 All new C & D class bores	99%	99%	99%	100%	100%	100%
5 All new farm dams	95%	95%	95%	96%	96%	96%
<b>Engagement</b>						
6 Attending major field days	5	5	5	5	5	5
7 Local Water Reports	10	10	10	10	10	10
8 Customer Information Sessions	3	3	3	3	3	3
<b>Other</b>						
9 Customer satisfaction	75%	75%	77%	77%	80%	80%
10 Stakeholder satisfaction	67%	70%	75%	75%	80%	80%
11 Compliance with metering plan	70%	72%	74%	76%	78%	80%

Table 62: service targets – field compliance

### Measuring cost – field compliance

As a cost measure, we've taken the average cost per licence. The actual cost to each customer will vary considerably because:

- A little over half of our revenue comes from volume based tariffs, based on the licensed volume; and
- The volumetric tariffs for groundwater licences are lower than for surface water

Whilst the actual cost to a customer will vary, the cost of managing a licence is largely fixed. Our volume based tariffs do not reflect the structure of our costs, but rather reflect a community and customer expectation that water has a value and that customers with larger entitlements should pay more.

### Price outcomes

The average cost for a licence is currently around \$700, and is not expected to change over the Water Plan period. We believe that this cost is still quite low.

Extremely Poor								Excellent	
1	2	3	4	5	6	7	8	9	10
\$1,400	\$1,300	\$1,200	\$1,100	\$1,000	\$900	\$800	\$700	\$600	\$500

Current		WP3 target	
Performance	Rating	Performance	Rating
\$700	8	\$700	8



Section 6 / Groundwater and Rivers

**Our performance improvement – field compliance**

Applying our performance measures and weightings, we can calculate the movement in our service and price for the Water Plan period.

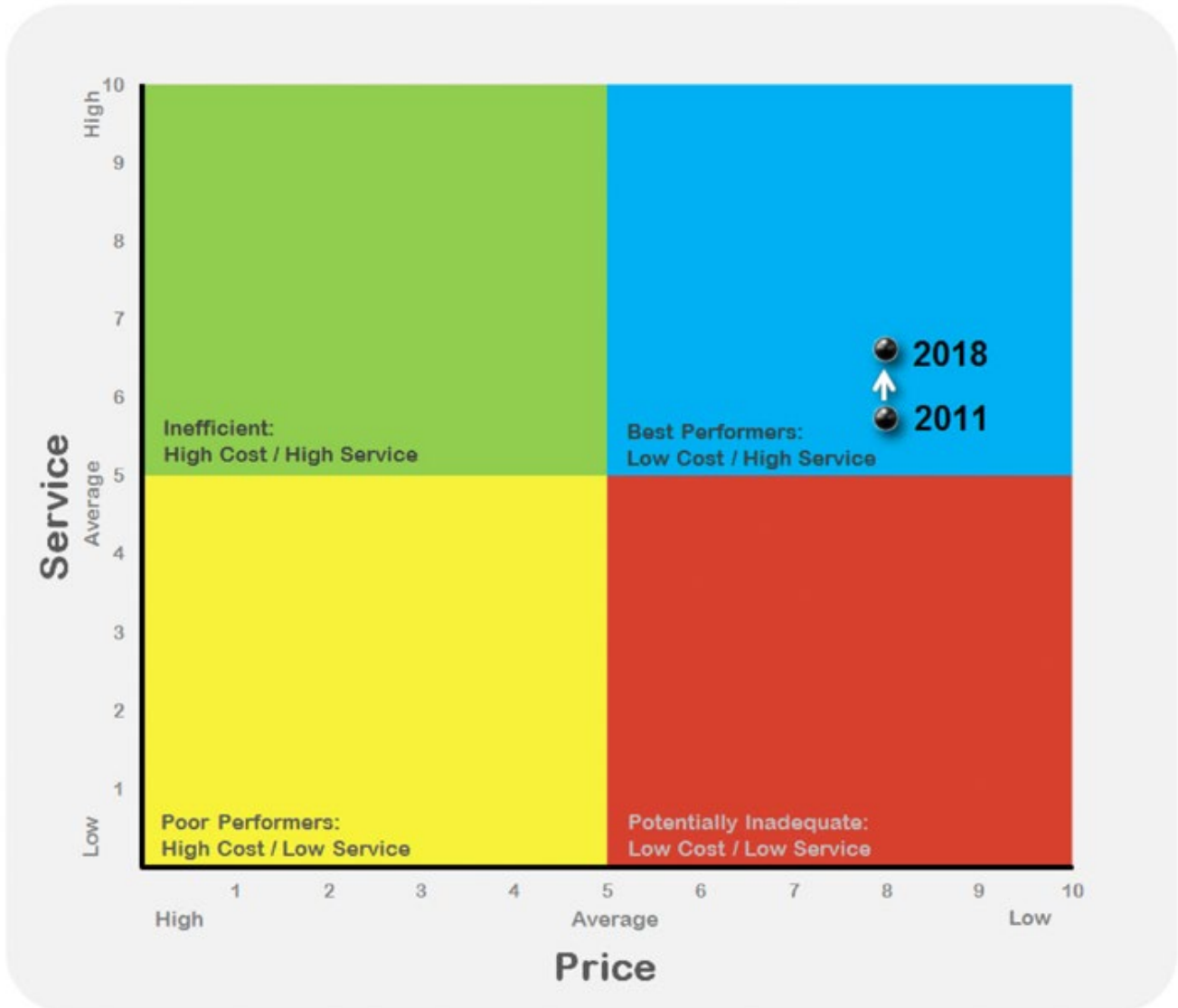


Figure 18: service and price outcomes – field compliance

## Applications

### Service measures – applications

Broadly, we have two types of service measure in relation to our processing of applications:

- Efficiency measures
- Quality measures

#### Measures No 1 & 2: processing applications with standard and target timeframes

We have established standard timeframes for processing different types of applications. We expect to meet these timeframes for all applications.

We have also established targets to have 95% of our applications processed within much shorter timeframes – typically half of the standard time.

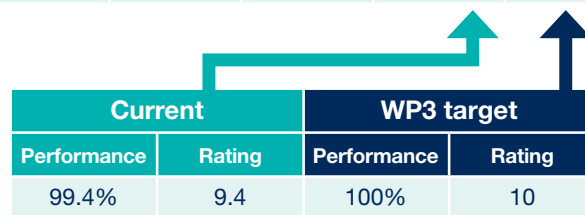
Application Type	Standard	Target
Farm Dam Licence	60	30
Bore Construction Licence	14	3
Take and Use Licence	60	30
Licence Transfer - Simple	14	7
Licence Transfer - Complex	60	30
Information Statement	7	3

Table 63: application processing targets

We propose to measure the percentage of applications processed within both the standard and the target timeframes.

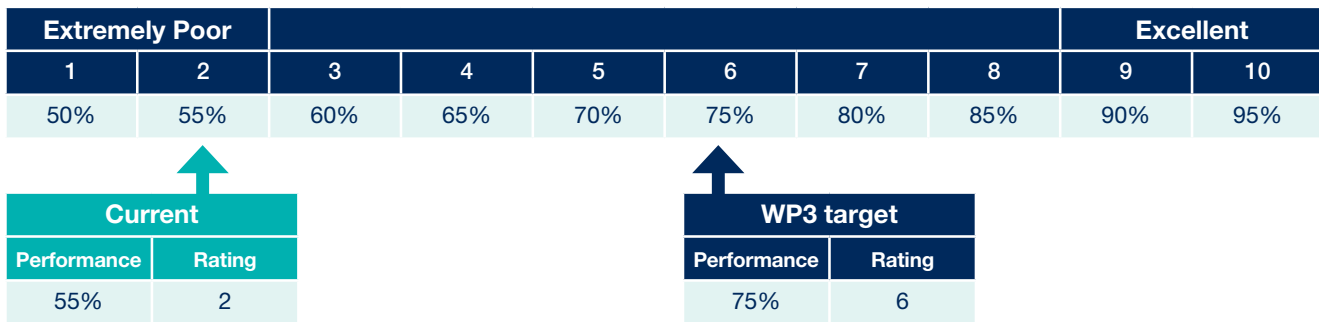
We currently process 99.4% of applications within their applicable standard timeframe, and we expect that we can increase this to 100%.

Extremely Poor								Excellent	
1	2	3	4	5	6	7	8	9	10
91%	92%	93%	94%	95%	96%	97%	98%	99%	100%



We currently process 55% of application within our shorter target timeframes. We are currently investigating a solution for online submission and assessment of BCL applications - particularly applications for domestic and stock or investigation bores. Implementation is dependent on agreement of a number of external parties and on changes to the Victorian Water Register. Whilst initial indications are positive, we don't yet know if this system will be implemented. If implemented, we would expect to see improvement in our processing timeframes reduced, and we have forecast an improvement in this measure to 75% by the end of planning period. If the system is not implemented, we will not see much improvement above existing levels.

Section 6 / Groundwater and Rivers

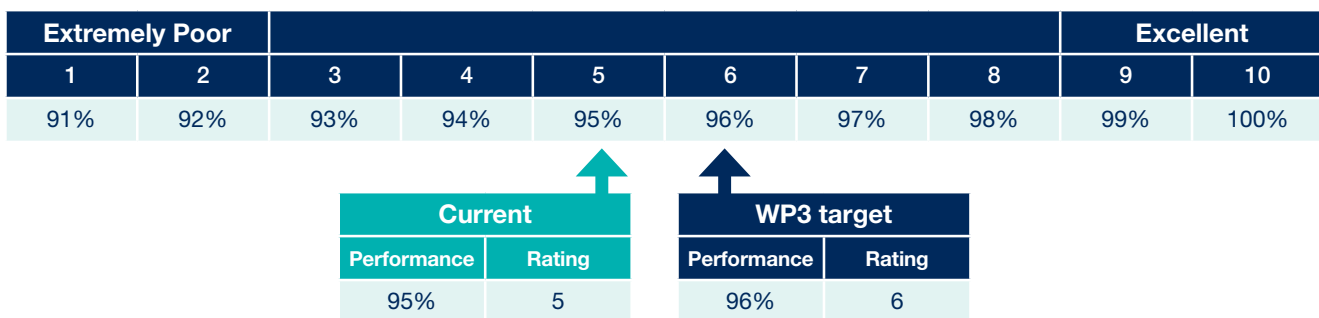


Measure No 3: customer satisfaction

With each application we process, we send the customer a simple feedback form or web link to rate their satisfaction with our handling of the transaction. The form uses a 5 point rating scale from “Very Satisfied” to “Very Dissatisfied”, and assesses satisfaction with:

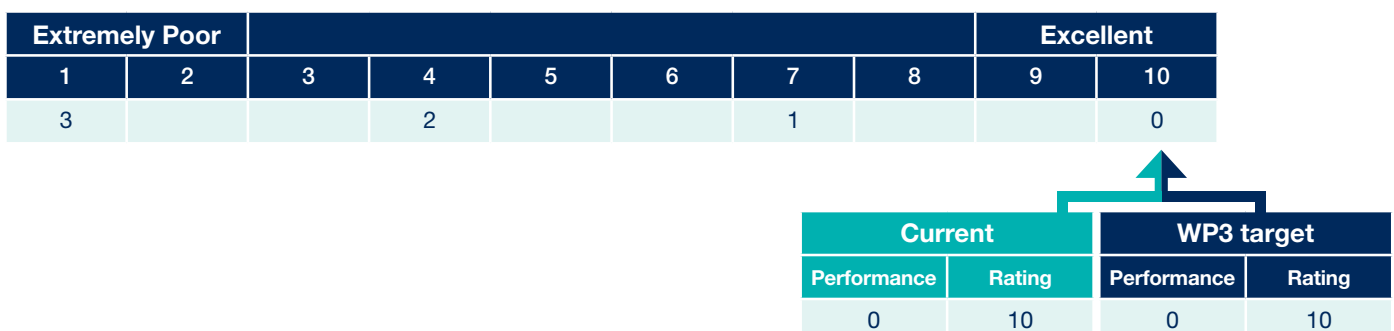
- The ease of obtaining the application form
- Our overall level of service
- How we listened to the customer’s needs
- How we explained to the customer what was required
- How we met any commitments we made
- How we explained the reason for our decision
- The availability of our staff

Satisfaction is measured by the percentage of responses as either “Satisfied” or “Very Satisfied”, and is currently around 95%. We hope to see some further improvement in this.



Measure No 4: information statement errors

We process around 1,000 information statements each year. We assess the quality of this work by measuring the number of errors identified. We are typically error free, and expect to maintain this.



### Service measure weightings - applications

The following weightings have been proposed as reflecting the relative importance of the service measures:

Measure	Weight
1 Applications within standard	35%
2 Applications within target	35%
3 Customer satisfaction	20%
4 Information statement errors	10%
<b>Total</b>	<b>100%</b>

Table 64: service measure weightings - applications

### Summary of service targets – applications

The table below summarises our performance targets for each of the four service measure across the five years of the Water Plan:

Measure	Current	2013/14	2014/15	2015/16	2016/17	2017/18
1 Applications within standard	99.4%	99.5%	99.6%	99.7%	99.8%	100.0%
2 Applications within target	55.0%	55.0%	60.0%	65.0%	70.0%	75.0%
3 Customer satisfaction	95.0%	95.2%	95.4%	95.6%	95.8%	96.0%
4 Information statement errors	0	0	0	0	0	0

Table 65: service targets – applications

### Measuring cost – applications

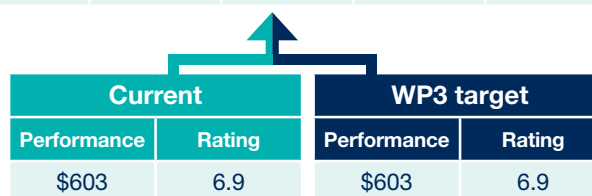
As a cost measure, we’ve taken the average cost per application. The cost of individuals applications will vary considerably because:

- We set different tariffs for different application types – reflecting the work required; and
- Application fees for new take and use licences depend upon the size of the licence being applied for

### Price outcomes

The average cost for an application is currently \$603, and won’t change across Water Plan 3.

Extremely Poor								Excellent	
1	2	3	4	5	6	7	8	9	10
\$780	\$750	\$720	\$690	\$660	\$630	\$600	\$570	\$540	\$510



Section 6 / Groundwater and Rivers

**Our performance improvement – applications**

Applying our performance measures and weightings, we can calculate the movement in our service and price for the Water Plan period. There is no significant change in our service.

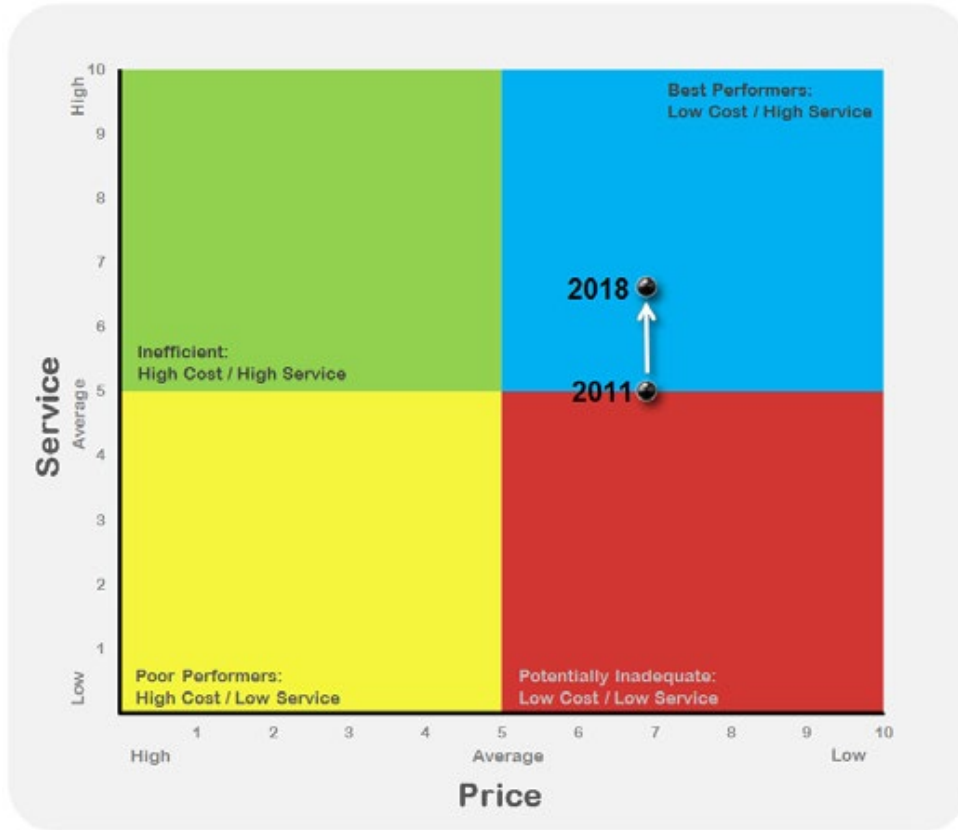


Figure 19: service and price outcomes – applications

## Consultation

In developing our draft plan, and throughout the consultation period, we have continued to work with our customer forum, as well as inviting comment from the broader customer base through direct mailing. We also ran a focus group with ten licence holders in early 2012, and we have partnered with the Victorian Farmers Federation to discuss our draft plan at branch meetings and with their Water Council.

### Southern Groundwater & Rivers Forum

We workshopped our draft Water Plan with our Southern Groundwater & Rivers Forum on two occasions during and after development, and we involved the Forum in development of our service measures. The forum was particularly interested to ensure that application fees meet the costs of assessment, and that these costs aren't subsidised by existing licence holders. The forum also requested greater clarity around funding for meter replacements, given that recent installations have been funded through government programs and up-front contributions from customers.

The comments and feedback of the Forum have influenced our final plan.

### Feedback Forms

In June, following release of our draft water plan, we sent a summary of the Water Plan to all 7,691 surface and groundwater licence holders. Accompanying this was a return paid card asking for feedback on our prices, service targets and proposed projects.

We received 272 responses, representing around 3.5% of the customers we mailed. Of these 80% were happy with the proposal to limit price increases to CPI.

Our most supported service measure has been for completing applications within set timeframes. This measure was supported by around 60% of respondents. This may not be surprising, as this is the most service oriented function of the Groundwater and Rivers business. Many of the other measures are focussed on compliance rather than service. Inspecting new bores also rated quite high.

Our least supported service measures related to field days and public information sessions. These were supported by around 20% respondents.

Support for our service targets has been generally positive, at over 50%.

Support for our proposed projects has been fairly consistent at 35%-50% for each project. The lowest rated was field technology at only 20%. This may reflect the project being internally focussed, with possibly too little discussion on the benefits.

Overall, the quantitative responses have been quite positive. However, some of the qualitative questions have generated negative comments from around 20 customers. These comments generally reflect:

- Past price increases
- Lack of visible service
- Complexity of the documents
- Lack of perceived value
- Issues with water quality
- Concern about Coal Seam Gas

Around 10-15 customers also provided a phone number with their feedback. These customers have been contacted, but have generally only reinforced the feedback they had already provided (most of these have been quite positive).

There has been nothing in the feedback to suggest any major concern with our draft plan.

## Section 6 / Groundwater and Rivers

### Focus Group

On Tuesday 20th March 2012, ten randomly selected customers attended a two-hour customer focus group in Warragul. The group comprised 10 customers, broken down:

- By licence type as - six irrigation licence customers, three stock and domestic and one dairy customer
- By area as - six customers located within the Latrobe system and four customers within the Bunyip system

The findings from the focus group included:

- Customers are not interested in SRW offering any non-essential services - they are more concerned about SRW keeping its fees down and focussing on core business
- Some interest in open-house meetings, provided SRW people attending can answer customers' questions
- Customers have noticed improvements to water trading in the last few years, but are seeking further improvement

### Victorian Farmers Federation (VFF)

We presented and discussed our draft Water Plan at two regional branch meeting, and with the VFF's Water Council.

Much of the interest has been around policy issues, and actions from the Sustainable Water Strategies.

### Our response

Nothing in the feedback we received has given us cause to alter our plans, but we will continue to work with our customer forum to refine service measures, targets and weightings, and to set prices within the revenue cap proposed by this plan.



## Water Plan 2 outcomes

### Performance measures

We set performance targets for Water Plan 2 based on the number of days to process various types of applications. For example, we aim to complete farm dam applications within 60 days. In converting these targets to performance measures, they were expressed as meeting the targets for 100% of applications. Whilst this has always been our aspiration, it did not represent a realistic measure of our past or expected performance.

Our performance outcomes for Water Plan 2 reflect a period of ongoing drought with abnormally high demand for applications. When applications are received, they do not always contain all of the required information, and so the time we recorded for completing applications often included time waiting for customers to provide additional information. During the Water Plan period, we changed our approach to “start the clock” only when we have a complete application with all required information.

	Standard	2008/09	2009/10	2010/11	2011/12	2012/13
<b>Farm Dam Applications</b>	60 days					
Target		100%	100%	100%	100%	100%
Actual		55%	81%	82%	100%	
<b>Bore Construction Applications</b>	14 days					
Target		100%	100%	100%	100%	100%
Actual		95%	99%	99%	97%	
<b>Take and Use Applications</b>	60 days					
Target		100%	100%	100%	100%	100%
Actual		92%	97%	98%	99%	
<b>Licence Transfers</b>	14 days					
Target		100%	100%	100%	100%	100%
Actual		79%	90%	83%	94%	
<b>Information Statements</b>	7 days					
Target		100%	100%	100%	100%	100%
Actual		86%	96%	100%	100%	

Table 66: Water Plan 2 performance measures –groundwater and rivers

## Section 6 / Groundwater and Rivers

## Capital expenditure

Our capital programs for Groundwater and Rivers are typically quite small, as we do not operate infrastructure. Most of the capital relates to metering.

Project	Carried forward	WP2 Proposal	Total Budget	Actual & Forecast	Difference
Metering Program (funded by direct contributions)	\$1,510	\$400	<b>\$1,910</b>	\$108	(\$1,802)
Projects less than \$1m	(\$449)	\$4,801	<b>\$4,352</b>	\$2,398	(\$1,954)
<b>Total Water Plan 2 Capital Expenditure</b>	<b>\$1,061</b>	<b>\$5,201</b>	<b>\$6,262</b>	<b>\$2,506</b>	<b>(\$3,756)</b>

Table 67: Water Plan 2 capital expenditure – groundwater and rivers (\$000, nominal)

## Tariff outcomes

### Surface water

In Water Plan 2 we forecast an indicative annual price increase of 8.6% for unregulated river water licences. Whilst our actual increase was slightly higher in the first year, subsequent increases have been much lower – as shown below.

Water Plan 2 indicative annual increase	8.6%				
Actual increases	2008/09	2009/10	2010/11	2011/12	2012/13
	10.0%	7.1%	4.0%	3.3%	4.2%
<b>Equivalent actual annual increase</b>	<b>6.7%</b>				



Figure 16: Water Plan 2 tariff outcomes – surface water

**Groundwater**

Similarly, groundwater prices increased slightly higher in the first year than the annual increase indicated in our Water Plan, but have since increased at a much lower rate.

<b>Water Plan 2 indicative annual increase</b>	<b>10.3%</b>				
Actual increases	2008/09	2009/10	2010/11	2011/12	2012/13
	12.2%	5.7%	5.2%	5.4%	6.1%
<b>Equivalent actual annual increase</b>	<b>7.7%</b>				



Figure 17: Water Plan 2 tariff outcomes - groundwater

## Section 6 / Groundwater and Rivers

## Financial outcomes

The table below summarises the revenue raised across each year of Water Plan 2 – as compared with the revenue required to meet the operating and capital costs of the business. Our results have been impacted by declining applications revenue.

	Actual				Forecast
	2008/09	2009/10	2010/11	2011/12	2012/13
Revenue					
Annual entitlement charges	\$4,506	\$4,968	\$5,272	\$5,898	\$6,249
Application fees	\$2,417	\$1,844	\$1,375	\$1,507	\$1,350
Other revenue	\$154	\$143	\$78	\$38	\$0
<b>Total revenue</b>	<b>\$7,077</b>	<b>\$6,956</b>	<b>\$6,725</b>	<b>\$7,443</b>	<b>\$7,599</b>
Revenue Required	\$7,355	\$7,312	\$7,071	\$7,019	\$7,528
<b>Under/Over Recovery</b>	<b>(\$277)</b>	<b>(\$356)</b>	<b>(\$346)</b>	<b>\$424</b>	<b>\$71</b>

Table 68: Water Plan 2 operating result – groundwater & rivers (\$000, nominal)

The table below summarises the accumulated operating result over Water Plan 2.

	Actual				Forecast
	2008/09	2009/10	2010/11	2011/12	2012/13
Opening balance	\$166	(\$41)	(\$13)	(\$89)	\$296
Operating result	(\$212)	\$29	(\$73)	\$383	\$42
Interest on fund balance	\$5	(\$2)	(\$3)	\$2	\$17
<b>Closing balance</b>	<b>(\$41)</b>	<b>(\$13)</b>	<b>(\$89)</b>	<b>\$296</b>	<b>\$355</b>

Table 69: accumulated surplus / deficit – groundwater & rivers (\$000, nominal)

# Section 7

## Urban water and power companies

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## Section 7 / Urban water and power companies

## Overview

Southern Rural Water has been appointed as a storage manager on four water systems – the Latrobe, Macalister, Werribee and Maribyrnong. Our role is to harvest, store and release water on behalf of entitlement holders. This involves managing large and sophisticated infrastructure including dam walls, embankments, spillways and associated mechanical and electrical equipment.

Our general powers and responsibilities are set out in the Water Act 1989 and other legislative instruments such as the Safe Drinking Water Act 2003. Our specific responsibilities in each of the systems are specified in each of the Bulk Entitlement Conversion Orders, which also set out our customer's rights and responsibilities.

The following sections list the entitlements held by 3rd parties within the systems that we manage.

### Western Water

Western Water holds the following entitlements in the Maribyrnong and Werribee systems.

System	Source	Entitlement
Maribyrnong	Rossllynne Reservoir	86% of inflows and capacity share
Werribee	Merrimu Reservoir	60% of capacity share and 70% of inflows (including 70% of inflows to Lerderderg and Goodmans Creek weirs)
	Pykes Creek Reservoir	58ML per year

Table 70: Western Water bulk entitlements

### Gippsland Water

Gippsland Water currently holds an entitlement on the Latrobe system to 12.4% of inflows and capacity of Blue Rock dam. An amendment to the Bulk Entitlement will grant a further 3.67%, bringing the entitlement share to 16.27%. For pricing purposes, Gippsland Water will also be charged proportionally for the new drought reserve (a 22.73% share of the system). This will bring Gippsland Water's cost share to 21.06%.

### Melbourne Water

Melbourne Water holds an entitlement on the Maribyrnong system to 9.5% of inflows and capacity of Rossllynne Reservoir.

### Gippsland power generators

The Gippsland power generating companies hold the following entitlements on the Latrobe system to inflows and capacity of Blue Rock and Lake Narracan – and to unregulated flows through Narracan. The cost shares for Blue Rock include the share of the new drought reserve.

Source	Loy Yang Power		Tru Energy		International Power	
	Entitlement share	Cost share	Entitlement share	Cost share	Entitlement share	Cost share
Blue Rock	16.4%	21.2%	14.97%	19.4%	8.2%	10.6%
Lake Narracan	32.8%	32.8%	29.94%	29.94%	16.4%	16.4%
Unregulated flows	24.55%	24.55%	22.41%	22.41%	12.28%	12.28%

Table 71: Gippsland power generators' bulk entitlements

## Former SECV entitlement

The Department of Treasury and Finance (DTF) is custodian for the following water entitlements issued to the former State Electricity Commission of Victoria (SECV) on the Latrobe System. The Blue Rock entitlement share will also attract a proportional charge for the new drought reserve.

Source	Entitlement share	Cost share
Blue Rock (inflows and capacity)	10.43%	13.50%
Lake Narracan (inflows and capacity)	20.86%	20.86%
Unregulated flows through Narracan	15.61%	15.61%

Table 72: former SECV bulk entitlements

## Unallocated Shares

Unallocated entitlement shares currently exist within Merrimu and Blue Rock. The costs associated with these shares are billed to the Department of Sustainability and Environment (DSE). An amendment to the Latrobe Bulk Entitlement will grant 3.67% of the Blue Rock unallocated share to Gippsland Water and 9% to the Victorian Environmental Water Holder - with the remaining 22.73% held as a drought reserve. The cost share associated with the drought reserve will be charged proportionally across the other entitlement shares.

Source	Entitlement	Entitlement share	Cost share
Blue Rock	Drought reserve	22.73%	NA
	Environmental entitlement	9.00%	11.65%
Merrimu inflows	Unallocated share	10%	10%
Merrimu capacity	Unallocated share	20%	20%

Table 73: drought reserve, environmental entitlement and unallocated shares



## Charging arrangements

The Bulk Entitlement Conversion Orders specify the share of costs for each of the customers - typically based on a share of the storage costs. In the Latrobe system, the cost share associated with the drought reserve will be charged proportionally across the other entitlement shares. Any revenue generated from temporary sale of allocation from the drought reserve will be offset against storage charges.

The entitlements of the former SECV are charged to DTF. DSE is charged for the unallocated share in Merrimu, whilst the Victorian Environmental Water Holder will be billed for the new Latrobe environmental entitlement.

For the Yallourn system (Lake Narracan and Yallourn Weir) we pass through the costs of capital projects as direct charges.

### Charges for Western Water / Gippsland Water

Around the time of SRW's creation, the government of the day mandated a 4% rate of return to be charged on rural water assets – but with an exemption for irrigation customers. This meant that the charge only applied to bulk entitlement charges to Western Water and Gippsland Water (the storage assets used to harvest and supply to the Gippsland power companies were carried across at no cost, and so could not generate a return).

Southern Rural Water used the rate of return to fund community service obligations – including the maintenance and management of recreational facilities at storages – and to fund remedial works on dams to meet safety standards. The rate of return also funded a divided payment to government.

The rate of return charge had been contentious within the industry, and following negotiation in 2004, it was agreed that charges for Western Water and Gippsland Water would remain fixed at an agreed charge (\$1.543 million for Western Water and \$381,000 for Gippsland Water) until the net costs of operations for these two corporations exceeded the fixed charge.

We estimate this cost threshold will be reached early in Water Plan 3.

### Recreational facilities charge

Within the charges for Western Water and Gippsland Water, we continue to include a majority share of the costs of maintaining recreation facilities at five of our large dams and one of our weirs. These facilities range from a simple picnic facilities and playground to multiple recreation areas, car parks, boat ramps and waterway (powered craft) management.

We seek to minimise the cost of operation of these facilities while providing a safe and inviting environment for the local community.

We believe that local communities are the beneficiaries of the recreational facilities that we operate. In the absence of an alternative charging mechanism, we share the costs of recreation facilities cost between irrigators and urban water businesses on the basis of how many customers they have in the area of operation.

## Our strategy



Figure 21: strategy map - headworks

Our strategic focus in managing bulk entitlements on behalf of urban water businesses and power generators is on:

- ANCOLD compliance
- Asset management
- Implementing actions from Sustainable Water Strategies
- Managing storage use and surrounds
- Improving release accuracy and frequency
- Customer reporting

### ANCOLD compliance

The current draft Statement of Obligations (Clauses 5.1 and 5.2) states:

The Corporation must develop and implement processes to identify, assess, manage and prioritise improvements to, and periodically review the safety of, dams... hav(ing) regard to the ANCOLD Guidelines and have particular regard to:

- prioritising risks posed by the Corporation's dams over all dams, components of dams and the types of failure;*
- giving priority to reducing risks to life above other risks;*

## Section 7 / Urban water and power companies

- (c) basing the urgency of reducing the risk posed by a dam on the relativity of risks to the tolerability limits as defined in the ANCOLD Guidelines;
- (d) basing programs for reducing risk on the concept "As Low As Reasonably Practicable" as defined in the ANCOLD Guidelines; and
- (e) where feasible, progressively implementing risk reduction measures to achieve the best outcomes for the available resources.

DSE released a guidance note in 2011 to support these requirements, and we have undertaken a program of dam safety upgrades to meet these requirements over the past 15 years. During the next few years, we are planning to reduce dam safety risk to the "Limit of Tolerability", consistent with DSE's guidance note.

Achieving this requires work at two of our dams:

- Melton Reservoir – strengthening the right abutment with concrete to enable the dam to withstand floods up to a 1 in 100,000 frequency. These works are underway and are expected to be completed in 2012.
- Lake Merrimu – raising filters and strengthening the clay core of the embankment to enable the dam to withstand floods up to a 1 in 100,000 frequency. These works will be conducted during Water Plan 3.

We must also complete an investigation of the downstream embankment at Melton Reservoir. This may identify additional safety work.

## Asset management

The current draft Statement of Obligations (clause 7.1.1) for Southern Rural Water states:

The Corporation must develop and implement plans, systems and processes to manage its assets in ways which:

- (a) maintain the standards and conditions of service;
- (i) specified by the Commission in a Code issued under section 4F of the Act; or
- (ii) included in a Water Plan and approved by the Commission; and

In support of this obligation, we will be implementing a new asset management system, and looking to improve our asset management and maintenance practices.

### Asset management system

We currently have an asset management system for irrigation assets, and several non-integrated maintenance management systems - all with differing levels of sophistication and effectiveness. Workforce scheduling, work order generation and maintenance history recording is currently very limited.

We have budgeted to implement an asset management system in 2012/13, and we expect to see benefits from this during Water Plan 3. To achieve these improvements, we have budgeted for two extra staff members to manage the new system.

### Improving asset management and maintenance practices

Southern Rural Water was audited by Beca (engineering consultancy) as part of the industry-based Asset Management Audit in 2012. We were assessed as fully compliant in some areas and "compliant but needs improvement" in others.

In addition to implementing a new asset management system, we will undertake an evaluation of best practice management of our main classes of assets, to determine the best approach to condition monitoring, preventative maintenance, breakdown maintenance and asset replacement.

We plan to start this work during 2012/13, and we expect this will mean a greater workload in condition monitoring and data analysis to ensure an effective maintenance program. In turn, this should ensure timely maintenance and rehabilitation of assets to maintain service standards.

## Implementing actions from the sustainable water strategies

Southern Rural Water was an active partner in developing the Gippsland and Western Sustainable Water Strategies. These strategies have created various policy enhancements for Victoria along with a number of specific actions in our region.

We will partner with DSE and other agencies to fully develop and implement these policy changes, and we will be the lead or support agency in delivering a number of initiatives relating to our role at storage manager. These include:

- Establishing the operational arrangements for recreational use of Lake Narracan
- Establishing a Blue Rock Lake drought reserve
- Establishing new environmental entitlements; and
- Sale and transfer of entitlements

## Managing storage use and surrounds

Our land and water management focus includes a compliance program, to ensure that people are doing the right thing on and around our storages. This is about ensuring the safety of the community, and also protecting water resources.

We will further develop our programs around storages to manage stock, vehicle and other access - as well as erosion control and other water quality protection measures.

## Improving release accuracy and frequency

As a storage manager, our customers require that we release water at the time and at the volume that they request. While we generally meet these expectations, we have some constraints in water delivery due to the age of some of our infrastructure and control systems. A program of targeted investment in SCADA over Water Plan 3 will help to improve the frequency and accuracy of water releases.

## Customer reporting

We have recently improved the information available to customers through new Bulk Entitlement Systems, which provide “on line, real time” information to customers about their current entitlements.

During Water Plan 3 we further improve our reporting to customers on our plans and actions - particularly in relation to capital works, but also to provide information to assist with their planning for water.

## Section 7 / Urban water and power companies

## Financial tables

## Rosslynne Reservoir (Maribyrnong System)

## Capital expenditure

There are no major projects proposed for Rosslynne Reservoir over the Water Plan period. We will repaint the access bridge, and this will require encapsulating the bridge during the work and removing material from the site to avoid contamination from previous coating materials. We will also undertake a scheduled design review on the structure.

Project	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total	WP4
<b>Significant projects</b>							
Recoating bridgework	\$0	\$20	\$480	\$100	\$0	\$600	\$0
Design Review	\$100	\$150	\$0	\$0	\$0	\$250	\$0
Outlet tower stabilisation	\$0	\$0	\$0	\$0	\$0	\$0	\$4,150
<b>Other projects</b>							
General	\$45	\$50	\$85	\$60	\$40	\$280	\$1,337
<b>Total</b>	<b>\$145</b>	<b>\$220</b>	<b>\$565</b>	<b>\$160</b>	<b>\$40</b>	<b>\$1,130</b>	<b>\$5,487</b>

Table 74: capital expenditure summary – Maribyrnong System (\$000 , \$11/12)

## Revenue requirement

The table below summarises the revenue required to maintain and operate Rosslynne Reservoir across Water Plan 3. There are no significant changes from current costs.

	2011/12	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total
Baseline operating expenditure	\$408	\$408	\$408	\$408	\$408	\$408	\$2,040
Obligations & initiatives	\$0	\$10	\$10	\$10	\$10	\$10	\$51
Productivity & growth	\$0	(\$3)	(\$5)	(\$8)	(\$11)	(\$13)	(\$40)
Capital expenditure charges	\$43	\$82	\$87	\$103	\$169	\$164	\$606
<b>Total Revenue Requirement</b>	<b>\$451</b>	<b>\$498</b>	<b>\$500</b>	<b>\$514</b>	<b>\$577</b>	<b>\$568</b>	<b>\$2,657</b>

Table 75: revenue requirement – Rosslynne Reservoir (\$000 , \$11/12)

## Storage charges

The table below summarises the proposed storage charges for Rosslynne Reservoir – based on the Bulk Entitlement shares. The Southern Rural Water share is charged to river water licence holders on the Maribyrnong River downstream of Rosslynne.

Entitlement Holder	Share	2011/12	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total
Western Water	86.0%	\$388	\$428	\$430	\$442	\$496	\$489	\$2,285
Melbourne Water	9.5%	\$43	\$47	\$48	\$49	\$55	\$54	\$252
Southern Rural Water	4.5%	\$20	\$22	\$23	\$23	\$26	\$26	\$120
<b>Total</b>	<b>100%</b>	<b>\$451</b>	<b>\$498</b>	<b>\$500</b>	<b>\$514</b>	<b>\$577</b>	<b>\$568</b>	<b>\$2,657</b>

Table 76: storage charges – Rosslynne Reservoir (\$000 , \$11/12)

## Merrimu Reservoir & Lerderderg Diversion (Werribee System)

### Capital expenditure

In the Werribee system we have a capital program of around \$5 million. Other than one major project at Merrimu, which is detailed below, the remainder of the expenditure is largely maintenance related. For example, at Lerderderg Weir we will be painting the gates, which are beginning to show some signs of corrosion, and refurbishing the seals and rollers to ensure continued and efficient operation of the automatic gate system.

Project	Asset	2013/14	2014/15	2015/16	2016/17	2017/18	WP3Total	WP4
<b>Significant projects</b>								
Increase flood capacity	Merrimu	\$60	\$2,772	\$100	\$0	\$0	\$2,932	\$0
<b>Other projects</b>								
	Merrimu	\$85	\$155	\$125	\$185	\$125	\$675	\$2,542
	Lerderderg	\$105	\$85	\$55	\$510	\$280	\$1,035	\$315
	Recreation Facilities	\$35	\$40	\$40	\$90	\$190	\$395	\$1,272
<b>Total</b>		<b>\$285</b>	<b>\$3,052</b>	<b>\$320</b>	<b>\$785</b>	<b>\$595</b>	<b>\$5,037</b>	<b>\$4,129</b>

Table 77: capital expenditure summary – Werribee System (\$000, \$11/12)

### Increase Merrimu flood capacity

Merrimu Reservoir sits above the communities of Werribee and Bacchus Marsh. The storage was constructed in 1969, and raised to increase capacity in 1986. The embankment has settled since construction, lowering the flood capacity of the dam. We will raise the embankment to increase the flood capacity to current standards.

### Revenue requirement

The table below summarises the revenue required across Water Plan 3 to maintain and operate Merrimu Reservoir and the structures that divert water from the Lerderderg River via Goodmans Creek. The capital charges increase after 2014/15, reflecting the \$3 million flood capacity works at Merrimu.

	2011/12	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total
<b>Merrimu Reservoir</b>							
Baseline operating expenditure	\$591	\$591	\$591	\$591	\$591	\$591	\$2,954
Obligations & initiatives	\$0	\$38	\$38	\$38	\$38	\$38	\$190
Productivity & growth	\$0	(\$4)	(\$8)	(\$12)	(\$16)	(\$20)	(\$61)
Capital expenditure charges	\$64	\$108	\$110	\$375	\$364	\$385	\$1,342
<b>Merrimu Total</b>	<b>\$655</b>	<b>\$733</b>	<b>\$731</b>	<b>\$992</b>	<b>\$976</b>	<b>\$994</b>	<b>\$4,425</b>
<b>Lerderderg Diversion</b>							
Baseline operating expenditure	\$281	\$281	\$281	\$281	\$281	\$281	\$1,403
Obligations & initiatives	\$0	\$47	\$47	\$47	\$47	\$47	\$233
Productivity & growth	\$0	(\$2)	(\$4)	(\$6)	(\$8)	(\$10)	(\$31)
Capital expenditure charges	\$71	\$98	\$100	\$107	\$117	\$135	\$558
<b>Lerderderg Total</b>	<b>\$351</b>	<b>\$424</b>	<b>\$423</b>	<b>\$428</b>	<b>\$436</b>	<b>\$452</b>	<b>\$2,164</b>

Table 78: revenue requirement – Merrimu Reservoir (\$000, \$11/12)

## Section 7 / Urban water and power companies

## Storage charges

The table below summarises the proposed storage charges for Merrimu and Lerderderg – based on the Bulk Entitlement shares. The Southern Rural Water share is charged to irrigators in the Werribee and Bacchus Marsh districts, and on the Werribee River. The DSE share relates to the unallocated water share, which currently includes the environmental share.

Entitlement Holder	Merrimu Share	Lerderderg Share	2011/12	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total
Western Water	60%	70%	\$639	\$736	\$735	\$895	\$891	\$913	\$4,170
DSE	20%	20%	\$201	\$231	\$231	\$284	\$282	\$289	\$1,318
Southern Rural Water	20%	10%	\$166	\$189	\$188	\$241	\$239	\$244	\$1,101
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>\$1,006</b>	<b>\$1,157</b>	<b>\$1,154</b>	<b>\$1,420</b>	<b>\$1,412</b>	<b>\$1,446</b>	<b>\$6,589</b>

Table 79: storage charges – Merrimu Reservoir (\$000, \$11/12)

## Blue Rock (Latrobe System)

### Capital expenditure

There are no major capital works planned for Blue Rock. The largest items include installation of bulkheads to isolate the inlet valves – providing safe access for internal inspection - and a scheduled design review.

Project	Asset	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total	WP4
<b>Significant projects</b>								
Design Review	Blue Rock	\$40	\$15	\$215	\$30	\$0	\$300	\$0
Inlet works	Blue Rock	\$25	\$100	\$75	\$50	\$0	\$250	\$1,075
<b>Other projects</b>								
Other Projects	Blue Rock	\$170	\$70	\$69	\$40	\$25	\$374	\$1,198
	Recreation Facilities	\$8	\$60	\$35	\$42	\$70	\$215	\$495
<b>Total</b>		<b>\$243</b>	<b>\$245</b>	<b>\$394</b>	<b>\$162</b>	<b>\$95</b>	<b>\$1,139</b>	<b>\$2,768</b>

Table 80: capital expenditure summary – Latrobe System (\$000, \$11/12)

### Revenue requirement

The table below summarises the revenue required across Water Plan 3 to maintain and operate Blue Rock. There are no significant changes from current costs.

	2011/12	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total
<b>Blue Rock Dam</b>							
Baseline operating expenditure	\$794	\$794	\$794	\$794	\$794	\$794	\$3,968
Obligations & initiatives	\$0	\$17	\$17	\$17	\$17	\$17	\$83
Productivity & growth	\$0	(\$5)	(\$10)	(\$16)	(\$21)	(\$26)	(\$78)
Capital expenditure charges	\$176	\$229	\$189	\$193	\$207	\$199	\$1,016
<b>Blue Rock Total</b>	<b>\$970</b>	<b>\$1,034</b>	<b>\$989</b>	<b>\$987</b>	<b>\$996</b>	<b>\$983</b>	<b>\$4,988</b>
<b>Unregulated Latrobe River</b>							
Baseline operating expenditure	\$121	\$121	\$121	\$121	\$121	\$121	\$603
Obligations & initiatives	\$0	\$18	\$18	\$18	\$18	\$18	\$92
Productivity & growth	\$0	(\$1)	(\$2)	(\$3)	(\$4)	(\$4)	(\$13)
Capital expenditure charges	\$2	\$3	\$3	\$3	\$4	\$3	\$17
<b>Blue Rock Total</b>	<b>\$123</b>	<b>\$142</b>	<b>\$141</b>	<b>\$140</b>	<b>\$139</b>	<b>\$138</b>	<b>\$699</b>

Table 81: revenue requirement –Blue Rock (\$000, \$11/12)



## Section 7 / Urban water and power companies

## Storage charges

The table below summarises the proposed storage charges for Blue Rock – based on the Bulk Entitlement shares. The DTF share relates to the entitlement of the former SECV, and the DSE share relates to the unallocated water share. The Southern Rural Water share is charged to river water licence holders on the Latrobe River downstream of Blue Rock.

Entitlement holder	Blue Rock Share	Unregulated Share	2011/12	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total
Tru Energy	19.37%	22.41%	\$173	\$232	\$223	\$223	\$224	\$221	\$1,123
Loy Yang Power	21.22%	24.55%	\$189	\$254	\$244	\$244	\$245	\$242	\$1,230
International Power	10.61%	12.28%	\$95	\$127	\$122	\$122	\$123	\$121	\$615
Gippsland Water	21.06%	0.00%	\$120	\$218	\$208	\$208	\$210	\$207	\$1,051
DTF (Ex SECV)	13.50%	15.61%	\$120	\$162	\$155	\$155	\$156	\$154	\$783
DSE (Unallocated)	0.00%	0.00%	\$345	\$0	\$0	\$0	\$0	\$0	\$0
Environmental Water Holder	11.65%	0.00%	\$0	\$120	\$115	\$115	\$116	\$114	\$581
Southern Rural Water	2.59%	25.15%	\$50	\$62	\$61	\$61	\$61	\$60	\$305
	<b>100%</b>	<b>100%</b>	<b>\$1,093</b>	<b>\$1,175</b>	<b>\$1,130</b>	<b>\$1,127</b>	<b>\$1,135</b>	<b>\$1,120</b>	<b>\$5,687</b>

Table 82: storage charges – Blue Rock (\$000, \$11/12)

## Narracan and Yallourn (Latrobe System)

### Recoverable works

Capital works associated with Narracan and Yallourn are recoverable from the Gippsland power generating companies as incurred – in accordance with the Bulk Entitlement Conversion Orders. These works are reviewed and agreed with the entitlement holders prior to commencement.

The most significant items planned for Water Plan 3 are a scheduled design review for Narracan, and maintenance activities - including repainting the Narracan spillway gates, and maintenance on the seals and rollers to ensure they remain serviceable and able to hold storage and release flood flows as required.

Project	Asset	2013/14	2014/15	2015/16	2016/17	2017/18	Total	WP4
<b>Significant projects</b>								
Maintenance works	Narracan	\$0	\$120	\$380	\$10	\$140	\$650	\$0
Drives for spillway gates	Narracan	\$0	\$40	\$60	\$160	\$0	\$260	\$0
Design Review	Narracan	\$25	\$210	\$0	\$0	\$0	\$235	\$0
<b>Other projects</b>								
	Narracan	\$132	\$137	\$32	\$162	\$57	\$520	\$786
	Yallourn	\$65	\$40	\$122	\$190	\$0	\$417	\$547
<b>Total</b>		<b>\$222</b>	<b>\$547</b>	<b>\$594</b>	<b>\$522</b>	<b>\$197</b>	<b>\$2,082</b>	<b>\$1,333</b>

Table 83: recoverable works expenditure summary – Narracan and Yallourn (\$000, \$11/12)

## Section 7 / Urban water and power companies

## Revenue requirement

The table below summarises the revenue required across Water Plan 3 to maintain and operate Narracan and Yallourn storages. The operating revenue requirement is stable across the period, though the recoverable capital works will fluctuate over the Water Plan period.

	2011/12	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total
Baseline operating expenditure	\$432	\$432	\$432	\$432	\$432	\$432	\$2,160
Obligations & initiatives	\$0	(\$6)	(\$6)	(\$7)	(\$8)	(\$8)	(\$35)
Productivity & growth	\$0	(\$3)	(\$5)	(\$8)	(\$10)	(\$13)	(\$39)
Capital expenditure charges	\$8	\$10	\$10	\$10	\$11	\$10	\$50
<b>Operating Revenue Requirement</b>	<b>\$440</b>	<b>\$434</b>	<b>\$430</b>	<b>\$427</b>	<b>\$425</b>	<b>\$421</b>	<b>\$2,136</b>
Recoverable capital works	\$1,584	\$220	\$552	\$599	\$535	\$205	\$2,112
<b>Total Revenue Requirement</b>	<b>\$2,024</b>	<b>\$654</b>	<b>\$982</b>	<b>\$1,026</b>	<b>\$960</b>	<b>\$626</b>	<b>\$4,248</b>

Table 84: revenue requirement – Narracan and Yallourn (\$000, \$11/12)

## Storage charges

The table below summarises the proposed storage charges for Narracan and Yallourn – based on the Bulk Entitlement shares. The DTF share relates to the entitlement of the former SECV.

Entitlement holder	Share	2011/12	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total
Tru Energy	29.9%	\$606	\$196	\$294	\$307	\$287	\$187	\$1,272
Loy Yang Power	32.8%	\$664	\$215	\$322	\$337	\$315	\$205	\$1,393
International Power	16.4%	\$332	\$107	\$161	\$168	\$157	\$103	\$697
DTF (Ex SECV)	20.9%	\$422	\$137	\$205	\$214	\$200	\$131	\$886
<b>Total</b>	<b>100%</b>	<b>\$2,024</b>	<b>\$654</b>	<b>\$982</b>	<b>\$1,026</b>	<b>\$960</b>	<b>\$626</b>	<b>\$4,248</b>

Table 85: storage charges – Narracan and Yallourn (\$000, \$11/12)

## Recreation facilities - eastern

## Revenue requirement

The following table summarises the revenue required across Water Plan 3 to maintain recreation areas at our eastern storages and to manage compliance and public access.

	2011/12	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total
Baseline operating expenditure	\$247	\$247	\$247	\$247	\$247	\$247	\$1,233
Obligations & initiatives	\$0	\$14	\$14	\$14	\$14	\$14	\$68
Productivity & growth	\$0	(\$2)	(\$3)	(\$5)	(\$7)	(\$8)	(\$25)
Capital expenditure charges	\$44	\$50	\$47	\$49	\$52	\$54	\$252
<b>Total Revenue Requirement</b>	<b>\$291</b>	<b>\$309</b>	<b>\$304</b>	<b>\$305</b>	<b>\$305</b>	<b>\$306</b>	<b>\$1,528</b>

Table 86: revenue requirement - eastern recreation facilities (\$000, \$11/12)

## Section 7 / Urban water and power companies

**Recreation facilities charges**

The table below summarises the forecast charges for eastern recreation facilities - allocated on the basis of customers numbers in the region.

Entitlement Holder	Share	2011/12	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total
Gippsland Water	96%	\$279	\$297	\$292	\$293	\$293	\$293	\$1,467
Southern Rural Water	4%	\$12	\$12	\$12	\$12	\$12	\$12	\$61
<b>Total</b>	<b>100%</b>	<b>\$291</b>	<b>\$309</b>	<b>\$304</b>	<b>\$305</b>	<b>\$305</b>	<b>\$306</b>	<b>\$1,528</b>

Table 87: recreation facilities charges - eastern (\$000, \$11/12)

**Recreation facilities - western****Revenue requirement**

The following table summarises the revenue required across Water Plan 3 to maintain recreation areas at our western storages and to manage compliance and public access.

	2011/12	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total
Baseline operating expenditure	\$250	\$250	\$250	\$250	\$250	\$250	\$1,252
Obligations & initiatives	\$0	\$26	\$26	\$26	\$26	\$26	\$129
Productivity & growth	\$0	(\$2)	(\$4)	(\$5)	(\$7)	(\$9)	(\$26)
Capital expenditure charges	\$38	\$40	\$42	\$59	\$71	\$79	\$291
<b>Total Revenue Requirement</b>	<b>\$288</b>	<b>\$315</b>	<b>\$314</b>	<b>\$330</b>	<b>\$340</b>	<b>\$346</b>	<b>\$1,645</b>

Table 88: revenue requirement - western recreation facilities (\$000, \$11/12)

**Recreation facilities charges**

The table below summarises the forecast charges for western recreation facilities - allocated on the basis of customers numbers in the region.

Entitlement Holder	Share	2011/12	2013/14	2014/15	2015/16	2016/17	2017/18	WP3 Total
Western Water	98.4%	\$284	\$309	\$309	\$324	\$335	\$341	\$1,619
Southern Rural Water	1.6%	\$5	\$5	\$5	\$5	\$5	\$6	\$26
<b>Total</b>	<b>100%</b>	<b>\$288</b>	<b>\$315</b>	<b>\$314</b>	<b>\$330</b>	<b>\$340</b>	<b>\$346</b>	<b>\$1,645</b>

Table 89: recreation facilities charges - western (\$000, \$11/12)

Section 7 / Urban water and power companies

## Service and price

Our methodology for exploring the trade-off between service and price is described earlier in this plan. The challenge we face as a business is in measuring our output. For this part of our business, it's about how well we:

- Maximise the harvesting of water of behalf of entitlement holders
- Protect water shares from unnecessary release
- Release water in accordance with customer directions

In applying the service and price methodology we have:

- identified measures that describe our service
- graded performance targets for those measured from extremely poor (1) to excellent (10)
- weighted the measures to describe the relative importance to customers

The weighted set of service measures allows us to calculate a service index, which, plotted against a measure of cost – allows us to explore the trade-off between service and price.

### Service measures

We have identified four measures of our service.

#### Measure No 1: orders released on time

Storage customers rely on water being available when they need it. This measure focuses on whether we have released water on time to meet our customers' orders. At present, we have constraints in regularly meeting this for some storages, but this will be improve with the implementation of SCADA to allow remote monitoring and operation.

Our current and forecast performance is indicated below with blue and green crosses respectively.

	Extremely Poor								Excellent	
	1	2	3	4	5	6	7	8	9	10
	91%	92%	93%	94%	95%	96%	97%	98%	99%	100.0%
Rossllynne				X	X					
Merrimu				X					X	
Latrobe							X		X	

#### Measure No 2: release availability

Customers rely on our infrastructure being available to release when ordered. This standard represents the percentage of the time that our supply systems are available to deliver water to customers. This measure creates incentives for our staff to plan and respond to outages due to maintenance or equipment failure, but excludes outages arranged and agreed for major upgrade or maintenance work.

	Extremely Poor								Excellent	
	1	2	3	4	5	6	7	8	9	10
	98.2%	98.4%	98.6%	98.8%	99%	99.2%	99.47%	99.6%	99.8%	100%
Rossllynne				X				X		
Merrimu				X					X	
Latrobe					X				X	

### Measure No 3: release accuracy – customer orders

Our aim in managing storages on behalf of entitlement holders is to maximise and protect water shares – while meeting passing flow requirements. This requires that our releases are accurate. If we release too much water, then shares will be reduced. If we reduce too little water, we may breach passing flow requirements, and our customers may receive less water than they require.

	Extremely Poor								Excellent	
	1	2	3	4	5	6	7	8	9	10
	82%	84%	86%	88%	90%	92%	94%	96%	98%	100%
Rosslynne					X	→	X			
Merrimu					X	→	→	X		
Latrobe		X	→	→	X					

### Measure No 4: customer satisfaction

Our ultimate objective is to meet the reasonable expectations of our customers. This measure provides a broader indication of our performance through the views of customers on the service we provide.

We measure this based on a composite of standardised questions asked in our biannual survey, and hope to bring our rating from around 75% up to 90%.

Extremely Poor								Excellent	
1	2	3	4	5	6	7	8	9	10
55%	60%	65%	70%	75%	80%	85%	90%	95%	100%
				X	→	→	X		

### Service measure weightings

Gippsland Water provided feedback on the weightings in our draft Water Plan based on the way that they take bulk water from Blue Rock. We have reflected this feedback in our revised weightings for the Latrobe system. The following weightings have been proposed as reflecting the relative importance of the four service measures:

Measure		General Weightings	Latrobe Weightings		
			Gippsland Water (21.06%)	Others (78.94%)	Combined
1	Orders released on time	20%	10%	20%	18%
2	Release availability	30%	30%	30%	30%
3	Release Accuracy - Customer orders	30%	50%	30%	34%
4	Customer Satisfaction	20%	10%	20%	18%
<b>Total</b>		<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Table 90: service measure weightings – storage operation

## Section 7 / Urban water and power companies

## Summary of service targets

The table below summarises our performance targets for each of the four service measure across the five years of the Water Plan:

Measure	Current	2013/14	2014/15	2015/16	2016/17	2017/18
<b>Roslynne</b>						
1 Orders released on time	94.0%	95.0%	95.0%	95.0%	95.0%	95.0%
2 Release availability	98.8%	99.6%	99.6%	99.6%	99.6%	99.6%
3 Release Accuracy - Customer orders	90.0%	93.0%	93.0%	93.0%	93.0%	93.0%
4 Customer Satisfaction	73.0%	73.0%	76.0%	78.0%	78.0%	80.0%
<b>Merrimu</b>						
1 Orders released on time	94.0%	97.0%	98.0%	99.0%	99.0%	99.0%
2 Release availability	98.8%	99.6%	99.6%	99.6%	99.6%	99.6%
3 Release Accuracy - Customer orders	90.0%	92.0%	95.0%	95.0%	95.0%	95.0%
4 Customer Satisfaction	73.0%	73.0%	76.0%	78.0%	78.0%	80.0%
<b>Latrobe</b>						
1 Orders released on time	97.0%	97.0%	97.5%	98.0%	98.5%	99.0%
2 Release availability	99.0%	99.2%	99.4%	99.6%	99.7%	99.8%
3 Release Accuracy - Customer orders	84.0%	85.0%	86.0%	87.0%	88.0%	90.0%
4 Customer Satisfaction	73.0%	75.0%	79.0%	83.0%	87.0%	90.0%

Table 82: service targets – storage operation

## Measuring cost

In order to derive a single indicator of cost, we propose to calculate the cost per ML of average yield. Where costs include capital charges relating to dam safety works, we have calculated the yield price both including and excluding these dam safety costs.

### Maribyrnong

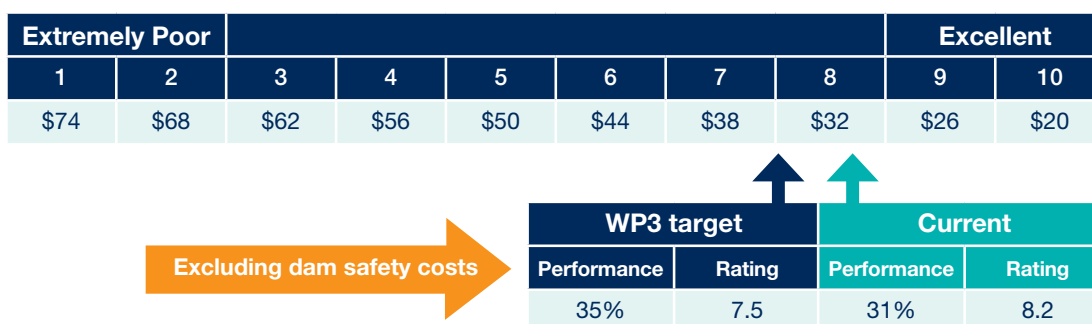
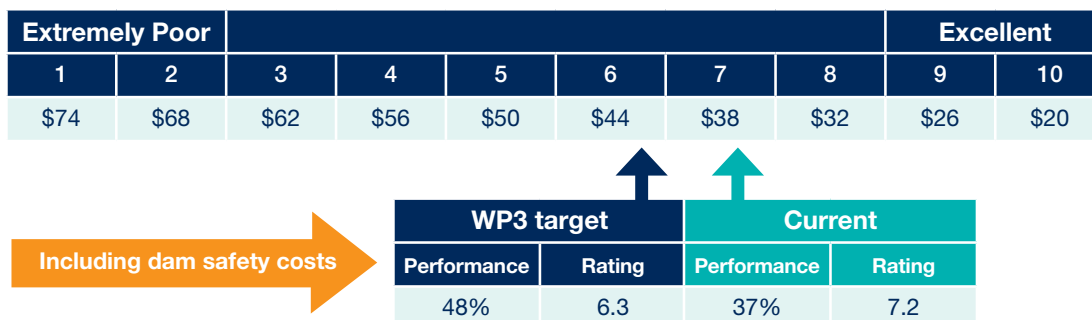
The average cost per ML for Maribyrnong will increase from \$95 to \$121.

Extremely Poor								Excellent	
1	2	3	4	5	6	7	8	9	10
\$150	\$142	\$134	\$126	\$118	\$110	\$102	\$94	\$86	\$78

WP3 target		Current	
Performance	Rating	Performance	Rating
\$121	4.6	\$95	7.9

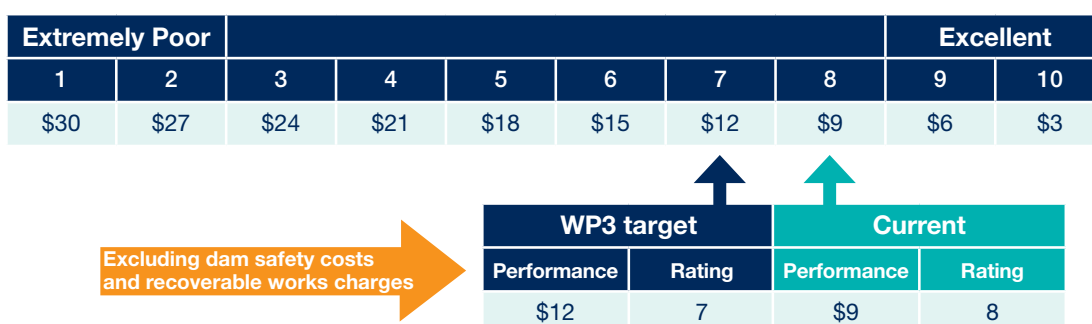
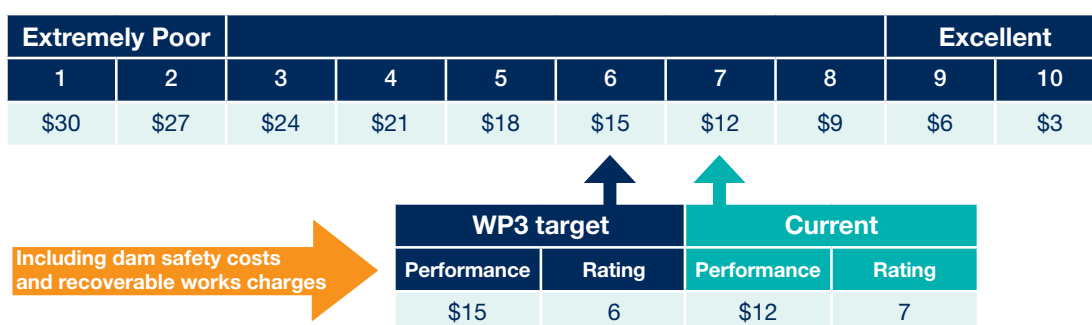
### Werribee

The total average cost per ML for the Werribee system will increase from \$37 to \$48. The current cost includes \$6 per ML for dam safety works, with an additional \$7 per ML for dam safety works during Water Plan 3. Excluding these, the average yield price moves from \$31 to \$35.



### Latrobe

The average cost per ML for the Latrobe system will increase from \$12 to \$15. Our charges for recoverable works in 2011/12 added \$3 per ML to the average price. The cost at the end of Water Plan 3 include \$3 per ML for dam safety works at Blue Rock and planned recoverable works at Narracan and Yallourn.





Section 7 / Urban water and power companies

### Our performance improvement

Applying our performance measures and weightings, we can calculate the movement in our service and price for the three water systems.

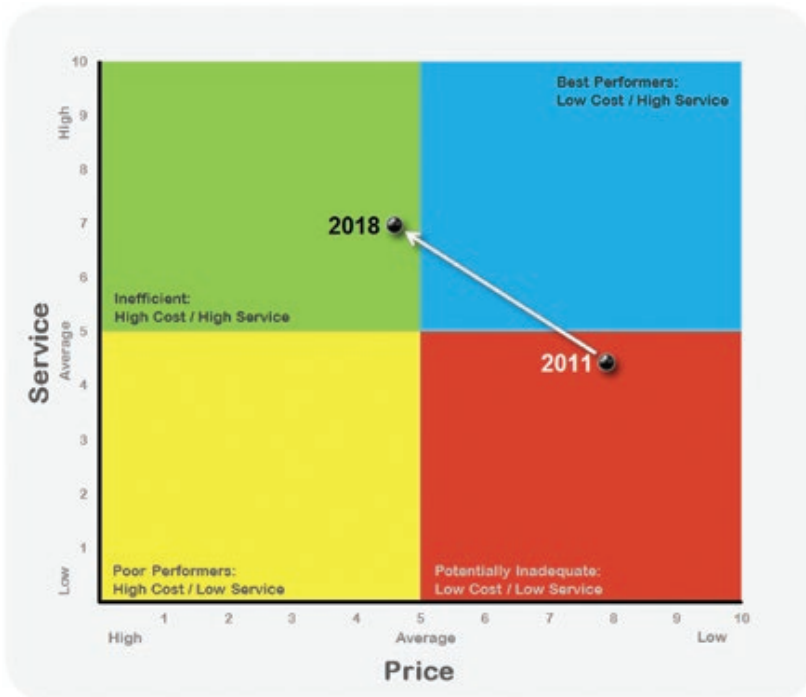


Figure 21: service and price outcomes – Maribyrnong

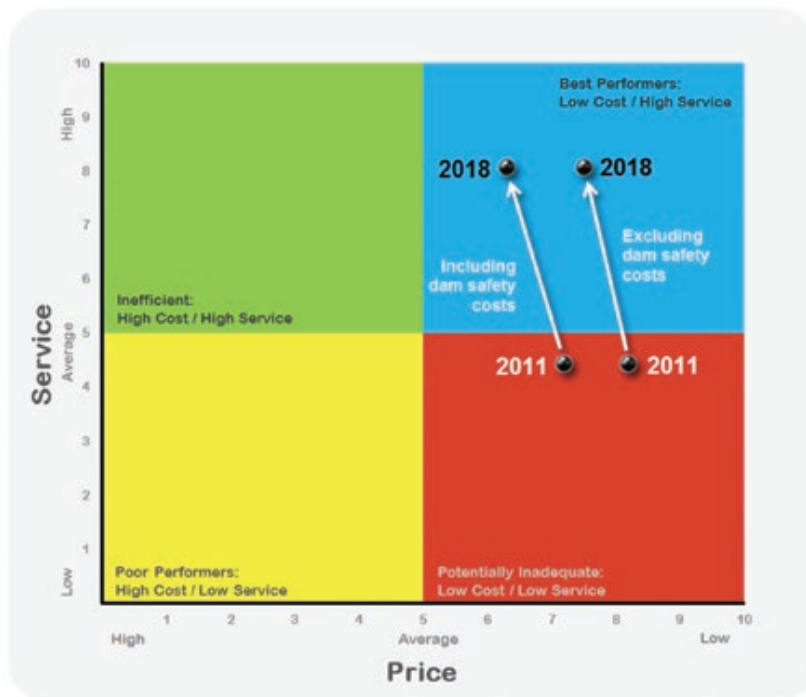


Figure 22: service and price outcomes - Werribee

Section 7 / Urban water and power companies

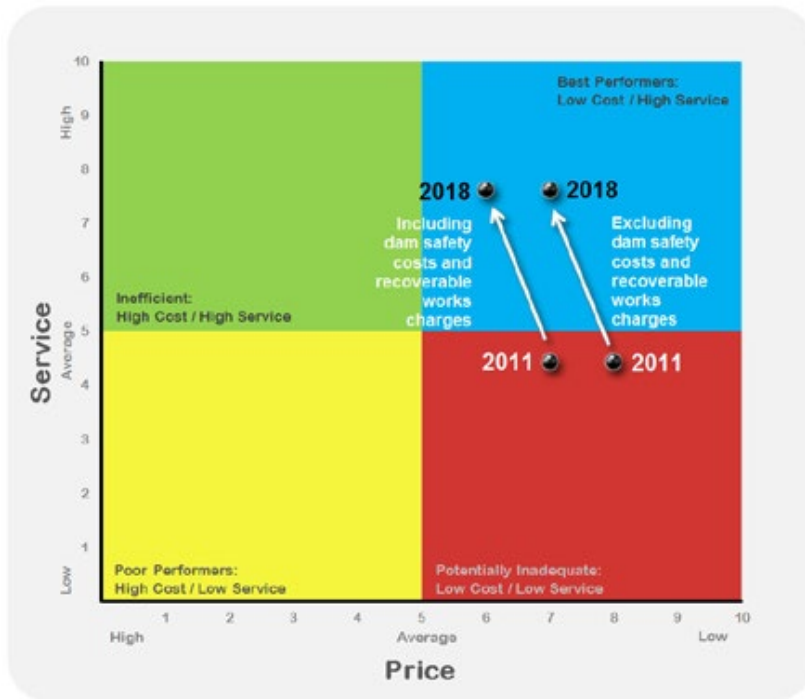


Figure 23: service and price outcomes - Latrobe

**Section 7 / Urban water and power companies**

## Consultation

We have regular meetings with all Bulk Entitlement holders, and we have used these meetings to seek input into development of our Water Plan.

Gippsland Water provided specific feedback, including:

- concern about the proposed continuation of charging arrangements for recreation facilities at storages
- noting the planned changes to Blue Rock bulk entitlement
- support for the proposed service measures
- alternative weightings to be applied to the service measures

We understand that DSE will provide further direction on recreation facilities charges. We have provided greater transparency in this plan as to the forecast charges and we will continue to provide further information on recreation facilities plans.

We have updated the relevant tables in this plan to reflect the changes to the Blue Rock bulk entitlement.

We have amended the weighting on our service measures for the Latrobe system to reflect Gippsland Water's feedback.

## Water Plan 2 outcomes

### Performance measures

Although in Water Plan 2 we proposed performance measures associated with managing storages, we have not had reliable measurement in place across the period to monitor these.

### Capital expenditure

Our capital plans for the storages with significant 3rd party entitlements were quite modest for Water Plan 2 – as summarised below.

System	Asset	Carried forward	WP2 Proposal	Total Budget	Actual & Forecast	Difference
Maribyrnong	Rosslynne Reservoir	\$566	\$1,703	<b>\$2,269</b>	\$1,080	(\$1,189)
Werribee	Merrimu Reservoir	(\$63)	\$906	<b>\$843</b>	\$575	(\$268)
	Lerderderg Weir	\$207	\$652	<b>\$859</b>	\$744	(\$115)
	Western Recreation Facilities	\$26	\$214	<b>\$240</b>	\$136	(\$104)
Latrobe	Blue Rock	\$138	\$237	<b>\$375</b>	\$530	\$155
	Eastern Recreation Facilities	\$0	\$195	<b>\$195</b>	\$195	\$0
	Narracan (Recoverable)	(\$214)	\$1,009	<b>\$795</b>	\$1,183	\$388
	Yallourn (Recoverable)	(\$7)	\$317	<b>\$310</b>	\$2,398	\$2,088

Table 83: water plan 2 capital expenditure – headworks systems (\$000)



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