In association with

2008 REVIEW OF WATER PRICES – ASSESSMENT OF EXPENDITURE FORECASTS FOR SOUTHERN RURAL WATER

Final Report

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Essential Services Commission

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2008 REVIEW OF WATER PRICES - ASSESSMENT OF EXPENDITURE FORECASTS FOR SOUTHERN RURAL WATER FINAL REPORT

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EXECUTIVE SUMMARY

The final recommendations for Southern Rural Water's operating and capital expenditure forecasts for the second regulatory period are outlined in Table 1 and Table 2 respectively.

Table 1 Recommendations for SRW's Operating Expenditure Forecasts

Business	Forecast	Operating Expenditure ($m, 01/01/07)				
		2008/09	2009/10	2010/11	2011/12	2012/13
Southern Rural Water	Final Water Plan	16.98	16.61	16.65	16.39	16.26
	Cardno Revised	16.98	16.53	16.49	16.14	15.93
	Net Change	**-**	**-0.08**	**-0.16**	**-0.25**	**-0.33**

Table 2 Recommendations for SRW's Capital Expenditure Forecasts

Business	Forecast	Capital Expenditure ($m, 01/01/07)				
		2008/09	2009/10	2010/11	2011/12	2012/13
Southern Rural Water	Final Water Plan	4.74	2.76	2.55	2.40	1.62
	Cardno Revised	4.62	2.64	2.43	2.28	1.50
	Net Change	**-0.12**	**-0.12**	**-0.12**	**-0.12**	**-0.12**

Operating Expenditure Forecasts

Based on our review of Southern Rural Water's operating expenditure forecasts, we consider that the proposed spend for 2008/13 is prudent and increases above the 2006/07 base level opex have largely been explained and justified. The additional opex in each year can be explained by the additional operating expenditure that SRW has forecast to incur through new obligations during the second regulatory period.

There are additional opex increases related to new staff and new operating initiatives but SRW has also calculated a number of productivity improvements and netted off these savings against the gross opex figures to arrive at the breakdown of expenditure reported to the ESC in its information template accompanying its 2008/13 Water Plan. We consider that further productivity improvements could be achieved over the remainder of the second regulatory period and recommend an additional saving of $82k per year from 2009/10 until 2012/13.

Based on the review, and given some of the issues in reconciling the information in the SRW Water Plan to that in the ESC Template, we do not recommend further significant changes at this stage. However, we do recommend that ESC undertakes further analysis and continues to work with SRW to verify that the information provided by SRW in the templates matches that outlined in the Water Plan.

Capital Expenditure Forecasts

Through the course of our review of Southern Rural Water's capital expenditure forecasts we have experienced some issues in reconciling the expenditure forecast data that SRW has included in its Water Plan and the data that it submitted to the ESC in the Excel information templates. However, based on our review of SRW's detailed 10 year capital works program spreadsheet we have largely been able to reconcile this data to the ESC information templates and to confirm that the breakdown of expenditure forecasts in the template appears to be correct.

Given the uncertainty surrounding the source of funding and likely timing of the MID 2030 implementation, we recommend that SRW be requested to update its Water Plan and resubmit to the regulator when further details are available.

As for operating expenditure, we do not recommend significant changes at this stage. However, given some of the issues in reconciling the information in the SRW Water Plan to that in the ESC Template, we recommend that ESC undertakes further analysis to verify that the information provided by SRW in the templates matches that in the Water Plan.

1. INTRODUCTION AND BACKGROUND

On 1 January 2004 the Essential Services Commission (ESC) became the economic regulator for the Victorian water sector. The Commission's role involves regulating the prices and service standards of 20 regulated water businesses supplying water, sewerage and related services to residential, industrial and commercial, and irrigation customers throughout the State.

Each of the regulated water businesses is required to develop and submit a Water Plan to the Commission for its approval. The Plans are required to set out:

- What the water business proposes to achieve over the regulatory period in meeting demands for rural and where relevant urban water and sewerage services, and complying with its obligations;
- How the water business proposes to achieve those outcomes;
- The water business's revenue requirement to deliver those outcomes; and
- The proposed prices, or the manner in which prices will be calculated or otherwise determined, for each of the prescribed services.

Cardno has been engaged by the ESC to undertake an independent review of the expenditure forecasts provided by Southern Rural Water as part of their Water Plan submissions for the five year period commencing 1 July 2008.

The main objective of the review is to determine whether the operating expenditure (opex) and capital expenditure (capex) forecasts included in Southern Rural Water's Water Plan:

- Reflect efficient expenditure;
- Are consistent with delivering the required service levels, outputs and obligations over the regulatory period; and
- Take into account a planning horizon that extends beyond the regulatory period.

In undertaking the review, Cardno is required to provide advice to the ESC on whether:

- The capital expenditure forecasts are consistent with existing obligations and service standards are reasonable - having regard to trends in historical expenditure, the reasons underpinning any difference in the expected level from those trends and any other relevant factors;
- There is sufficient evidence of, and consistency with, well developed asset management planning and processes that demonstrate that the forecasts for the next regulatory period have been determined in the context of a planning horizon that extends beyond the term of the Water Plan;
- The proposed program of capital expenditure is deliverable over the five year regulatory period – having regard to the required lead time, approvals processes, any resource constraints and the businesses' abilities to deliver previous capital expenditure programs;
- The proposed trend in operating expenditure over the regulatory period consistent with existing obligations and service standards is reasonable – having regard to expected productivity improvements, trends in input prices and the impact of growth on operating expenditure needs and any other relevant factors; and
- The operating and capital expenditure forecasts associated with meeting new obligations and/or meeting higher service levels reflect their likely expenditure requirements – having regard to any benchmarking or other quantitative techniques considered appropriate.

An Issues Report and presentation, which identified the preliminary views on Southern Rural Water's proposed expenditure forecasts and the nature of further work and investigation to be undertaken, was presented to the ESC on 26 November 2007.

A draft report was prepared presenting the preliminary comments and recommendations based on a detailed assessment of the forecasts, including a series of structured interviews at Southern Rural Water, where the assumptions and bases used to derive the forecast expenditures were discussed in depth.

The draft report was made available to Southern Rural Water who provided a written response commenting on the findings and recommendations that have been made. These comments have been noted by ESC and taken on board in the preparation of this Final Report.

2. EXPENDITURE REVIEW METHODOLOGY

Our approach to reviewing Southern Rural Water's expenditure forecasts involved an initial desktop study where the Final Water Plan and expenditure forecasts that had been submitted to the ESC, along with other information that was readily available, were reviewed. This preliminary review and assessment was then followed by a more detailed analysis of the expenditure forecasts, involving a series of structure interviews with Southern Rural Water to discuss how the forecasts had been derived and the assumptions that had been made.

2.1 Initial Review Stage

The initial review and assessment involved:

- A desktop assessment of Southern Rural Water's Water Plan for 2008-13 and the expenditure forecast templates that had been submitted to the ESC;
- An initial review of any other information that was readily available, i.e., recent Annual Reports that were able to be downloaded from the business's website;
- Identifying the key issues in the submission that would need to be reviewed in more detail; and
- Identifying any additional information requirements to assist in the more detailed review.

The outcomes of the initial review phase were used to prepare an Issues Report and presentation, submitted to the ESC on 26 November 2007, which identified the key issues associated with the business's proposed expenditure forecasts. These key issues were discussed in detail with the ESC and used to form the review plan. The Issues Report also formed the main focus of the more detailed review stage.

2.2 Detailed Review Stage

The detailed review stage involved more in depth analysis of the expenditure forecasts and included a series of structure meetings with key Southern Rural Water staff. In particular the detailed review stage involved:

- A more in depth review of the key aspects of Southern Rural Water's expenditure forecasts for 2008-13;
- Specific focus on the key issues that had been identified through the Issues Report and discussions with the ESC;
- An assessment of Southern Rural Water's supporting systems and processes, including those used for asset management, capital planning, project management and budgeting;
- A more detailed review of the main and highest costing capital projects proposed during the 2008-13 timeframe; and
- A more detailed assessment of the impacts on operating expenditure of these capital projects.

The outcomes from this detailed review stage were outlined in the Draft Report. The Draft Report was made available to Southern Rural Water for their comments and feedback, with this information being used to prepare this Final Report.

3. OVERVIEW OF SOUTHERN RURAL WATER

Southern Rural Water (SRW) is a rural water business with four principal businesses:

Eastern Irrigation
SRW supplies an average of 150,000 ML/year for Irrigation and Domestic & Stock purposes in the Macalister Irrigation District in Central Gippsland.

Western Irrigation
SRW supplies in the region of 4,000 ML/year to the Bacchus Marsh and 10,000 ML/year to the Werribee Irrigation Districts from the Werribee River for Irrigation and Domestic & Stock uses.

Licensing
SRW is responsible for the administration of approximately 7,800 licences for surface and groundwater diversions and for licensing construction of bores and on-stream dams.

Headworks
SRW is responsible for the management of seven major dams in the Werribee, Maribyrnong, Latrobe and Macalister basins to harvest, store and deliver bulk water entitlements to its own irrigation customers, as well as to urban water authorities and Latrobe Valley power generators.

4. DETAILED ANALYSIS OF SOUTHERN RURAL WATER'S PROPOSED EXPENDITURE

4.1 Operating Expenditure

A summary of Southern Rural Water's historical and forecast operating expenditure, as included in the ESC's information template is shown in Table 4-1.

Table 4-1 SRW's Historical and Forecast Operating Expenditure

Item	First Regulatory Period			Second Regulatory Period				
	Financial Year Opex ($m, 01/01/07)							
	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Operating Expenditure Summary								
Business As Usual Opex	14.61	15.72	16.10	16.55	16.30	16.16	16.01	15.89
Bulk Water Charges	-	1.41	1.46	0.31	0.30	0.32	0.31	0.33
Licence Fees	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.03
Environmental Levy	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Total Prescribed BAU Opex	**14.85**	**17.37**	**17.80**	**17.10**	**16.84**	**16.72**	**16.56**	**16.46**
New Obligations	-	-	-	0.44	0.31	0.49	0.38	0.37
Total Operating Expenditure	**14.85**	**17.37**	**17.80**	**17.53**	**17.15**	**17.21**	**16.94**	**16.83**

4.1.1 General and Key Issues

- Opex costs included in SRW's final Water Plan are vague with little detail provided in terms of actual costs against either specific operating activities or costs in each year of the second period.

- The breakdown of SRW's forecast prescribed BAU operating expenditure by activity type for 2008/13, as reported to the ESC is provided in Table 4-2.

Table 4-2 SRW's Forecast Business as Usual Operating Expenditure by Activity

Item	First Regulatory Period			Second Regulatory Period				
	Financial Year Opex ($m, 01/01/07)							
	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Operations	11.36	11.40	11.86	12.76	12.52	12.39	12.22	12.08
Maintenance	-	-	-	-	-	-	-	-
Bulk Water Charges	-	1.41	1.46	0.31	0.30	0.32	0.31	0.33
Corporate	3.25	4.32	4.23	3.78	3.78	3.77	3.79	3.81
Environmental Levy	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.03
Licence Fees	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Total Prescribed BAU Opex (excluding new obligations)	**14.85**	**17.37**	**17.80**	**17.10**	**16.84**	**16.72**	**16.56**	**16.46**

- Analysis of the operating expenditure forecasts included in the ESC's template shows that gross opex is forecast to be lower during the second regulatory period than it has been in the first regulatory period for all but the first year of the period.

- SRW has not shown the historical or forecast expenditure related to maintenance activities in its submission to the ESC. We reviewed the detailed breakdown of SRW's Water Plan projections but very little of the expenditure was allocated to operational maintenance, with the only items specified as maintenance being for software maintenance ($10k/year during 2008/13), MID channel automation ($110k/year during 2008/13 and meter maintenance ($20k/year during 208/13). SRW has included operating expenditure for maintenance together with the overall costs for its key areas of business.

- SRW has included additional operating expenditure in the ESC's template in relation to New Obligations that it is required to meet during 2008/13. We have provided a more detailed breakdown of the forecast operating expenditure for New Obligations in Table 4-7 along with further comments in the associated text.

- Although 2006/07 is taken by the ESC as the Base Year, the prescribed BAU opex data shows a 17.2% increase from 2005/06 to 2006/07. This was a predominantly as a result of increases in Bulk Water Charges, which increased from $0.23m to $1.41m, a increase of 513%, and an increase in Corporate opex, which increased from $3.25m to $4.32m, an increase of 32.9%. Licence Fees and Environmental Levies are forecast to remain steady from the first regulatory period across the whole of the second regulatory period.

- SRW's gross opex forecasts for each year in the second regulatory period are lower than the 2006/07 base year total operating expenditure for four out of the five years of the period, with only the 2008/09 spend forecast to be higher. However, as a result of the high expenditure on bulk water charges in 2006/07 ($1.41m) compared to the forecast spend in the second regulatory period, the ESC's BAU opex targets for 2008/13 show that SRW is incurring additional opex above the target levels in each year, as shown in the table below:

Table 4-3 SRW's Forecast Additional Opex above the ESC Target Level

Item	First Regulatory Period			Second Regulatory Period				
	Financial Year Opex ($m, 01/01/07)							
	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Gross operating expenditure	14.85	17.37	17.80	17.53	17.15	17.21	16.94	16.83
SRW BAU Opex Forecasts*	14.61	15.72	16.10	16.98	16.61	16.65	16.39	16.26
ESC Target BAU opex	-	-	15.57	15.41	15.26	15.11	14.95	14.80
Additional Opex			**0.53**	**1.57**	**1.35**	**1.54**	**1.44**	**1.46**

* excl bulk water & sewerage charges

Analysis of SRW's opex forecasts show that the BAU opex (excluding bulk water and sewerage charges) is in the region of between $1.35m and $1.57m dollars higher than the ESC's calculated Target BAU opex in each year of the second regulatory period.

- The majority of the opex is incurred from SRW's Irrigation service, with just under half of the level of the Irrigation spend incurred by bulk water services. The operating expenditure allocated to Surface Water Diversions, Groundwater Diversions and Applications is at a fairly similar level of in the region of $2m for each of the services, although SRW has combined the surface and groundwater expenditure forecasts in the final version of the data submitted to the ESC. The breakdown of historical and forecast expenditure by service is shown in Table 4-4.

Table 4-4 SRW's Gross Historical and Forecast Operating Expenditure by Service

Item	First Regulatory Period			Second Regulatory Period				
	Financial Year Opex ($m, 01/01/07)							
	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Irrigation	8.07	10.19	10.05	9.86	9.68	9.59	9.47	9.39
Diversions	2.97	3.41	3.60	3.84	3.80	3.78	3.77	3.76
Bulk Water Services	3.45	3.74	4.25	4.47	4.43	4.42	4.40	4.40
Applications	1.83	2.05	1.91	1.75	1.74	1.73	1.72	1.72
Corporate	3.66	4.02	4.05	4.36	4.36	4.34	4.37	4.39
Gross BAU Operating Expenditure	**19.99**	**23.41**	**23.87**	**24.28**	**24.02**	**23.86**	**23.74**	**23.65**

- However, the gross charges also include the internal charges for Bulk Water Charges and for Corporate opex that are incurred by SRW. In the derivation of its historical and forecast operating expenditure these internal charges have been netted of to derive the total BAU opex in each year. The total expenditure for each of these categories and the internal charges that SRW has reported as incurring and forecast to incur during the second regulatory period are as follows:

Table 4-5 SRW's Historical and Forecast Gross and Internal Water Charges and Corporate Opex

Item	First Regulatory Period			Second Regulatory Period				
	Financial Year Opex ($m, 01/01/07)							
	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Gross Water Charges	1.81	3.31	3.67	2.93	2.91	2.93	2.91	2.93
Internal Water Charges	(1.58)	(1.90)	(2.21)	(2.62)	(2.62)	(2.61)	(2.60)	(2.60)
Net Water Charges	**0.23**	**1.41**	**1.46**	**0.31**	**0.30**	**0.32**	**0.31**	**0.33**
Gross Corporate Opex	7.05	8.70	8.33	8.58	8.58	8.54	8.61	8.64
Internal Corporate Charges	(3.80)	(4.38)	(4.10)	(4.80)	(4.80)	(4.77)	(4.81)	(4.84)
Net Corporate Opex	**3.25**	**4.32**	**4.23**	**3.78**	**3.78**	**3.77**	**3.79**	**3.81**

Therefore, the full breakdown of SRW's historical and forecast opex expenditure is as provided in Table 4-6.

Table 4-6 SRW's Gross Historical and Forecast BAU Operating Expenditure by Service

Item	First Regulatory Period			Second Regulatory Period				
	Financial Year Opex ($m, 01/01/07)							
	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Irrigation	8.07	10.19	10.05	9.86	9.68	9.59	9.47	9.39
Diversions	2.97	3.41	3.60	3.84	3.80	3.78	3.77	3.76
Bulk Water Services	3.45	3.74	4.25	4.47	4.43	4.42	4.40	4.40
Applications	1.83	2.05	1.91	1.75	1.74	1.73	1.72	1.72
Corporate	3.66	4.02	4.05	4.36	4.36	4.34	4.37	4.39
Total Internal Charges	(5.38)	(6.28)	(6.31)	(7.42)	(7.41)	(7.38)	(7.42)	(7.43)
Net BAU Operating Expenditure	**14.61**	**17.13**	**17.56**	**16.86**	**16.60**	**16.48**	**16.32**	**16.22**

- Operating expenditure on Irrigation is forecast to remain fairly steady through 2008/13, although there is a year-on-year decrease over the five years, with the expenditure

decreasing from $9.86m in 2008/09 to $9.39m in 20012/13. The forecast expenditure in each of the five years is lower than the $10.19m incurred in the 2006/07 base year.

- SRW has included additional staff that it intends to recruit in its forecasts for 2008/09. The additional staffing requirements that it has identified for its water supply activities related to the management and operation of its headworks and delivery infrastructure across its three irrigation districts are a River/Drainage Officer, a Water Supply Senior Manager and two additional headworks staff. As a result of these identified new positions, SRW has included an additional $0.35m/year in its 2008/13 forecasts. If SRW can recruit these additional staff we consider that this forecast expenditure for four new staff would be a reasonable allowance.

- SRW's operating expenditure forecasts also include an additional $0.11m/year related to increases in maintenance associated with the channel automation capital projects.

- SRW's expenditure of Surface and Ground Water Diversions has also been forecast to remain fairly steady through 2008/13 at approximately $3.80m in each year. This is an increase on the 2006/07 base year level of $3.41m.

- SRW's gross forecast expenditure for Bulk Water Services is projected to remain consistent over the second regulatory period at between $4.4m and $4.5m in each year. This is an increase on the $3.74m that SRW spend in the base year, although there has been an expected rise for 2007/08 of $4.25m.

- Forecast expenditure on Applications has also been forecast to remain steady through the second regulatory period in the region of $1.75m a year, with this being lower than $2.05m incurred in 2006/07.

- SRW has also estimated that expenditure on Corporate opex will remain steady during 2008/13, with the spend forecast to be in the range of $4.36m to $4.39m in each year over the period. This is an increase on the $4.02m spend that was incurred by Corporate opex in the 2006/07 base year.

  The increase in corporate operating expenditure in 2008/13 above the base year is being explained by SRW by changes to the BAU makeup of the historical spend, including the creation of a new management position within the business to handle and progress policy and external stakeholder issues, an increase in staff resources for customer service activities and an additional sum for Board consultancy provisions. It is also forecasting increased corporate opex during 2008/13 for regulatory activities, including the preparation of the next Water Plan and work associated with regulatory performance reporting during the period.

  The proposed expenditure for ESC related activities includes $0.021m/year increasing to $0.029m in 2012/13 for ESC fees, $0.02/year for costs associated with regulatory auditing and reporting, with an additional $0.02m in 2012/13 for a major regulatory audit and an additional $0.02 in 2011/12 for preparation of the third regulatory period Water Plan. SRW's forecasts have been based on its historical spend on regulatory costs, with the previous regulatory budget as recommended by the ESC being very low at $0.01m/year, and being lower than the fees charged by the ESC. Therefore, SRW has proposed a 2008/13 increase on the $0.01/year regulatory costs totalling $0.203m over the five years. We consider that the increases are reasonable and justifiable given the low recommended previous budget.

  SRW is proposing an additional 0.5 FTE for its reception area and has included an additional $0.045m/year to provide for this additional staff resource. Given that this includes staff on-costs, we consider that this is reasonable.

SRW's proposed increase for Board Consultancy Provision, to allow the Board to receive consultancy as may be required is significant, with the current provision of $5,000/year being increased by an additional $45,000/year to $50,000/year in each year of 2008/13. This would be expected to buy around 25 days of consultancy for the Board and although dependent on future issues and needs that might arise during the five year period, seems to be slightly excessive. We note that the current $5,000/year budget was increased in 2005/06 from $3,000/year.

SRW has also experienced increases in its insurance premiums which have approximately doubled the expenditure. It has included an average of an additional $0.15m/year in its forecasts to meet this BAU opex increase. The increase has been as a result of a review of insured assets which found that a number of them had been undervalued and, as such had been under-insured, with the under-insurance totalling $718m. SRW provided us with a copy of the review report that was submitted to the Board and we were able to confirm the proposed increase in the premium.

SRW has included a small sum of $5,000/year for maintaining its website, with a one off provision of $50,000 in 2010/11 included in the Corporate capex for a significant upgrade of its website. This is reasonable.

- SRW has also included additions to its base year BAU Corporate operating expenditure related to changes to its requirements for Information Technology. It has increased its employee and labour costs by 28%, from $0.226m/year to $0.290m/year, an increase of $0.064m/year for the recruitment of an additional IT helpdesk and support member of staff. It has also increased the operating expenditure to include additional provision of offsite support by IT staff, increased training funds, increased IT maintenance funds and increased software licences. The overall impact is an approximate increase of $0.125m/year for IT-related activities over the recent historical spend, although this also includes the corporate capital spend on IT items.

- SRW has included operational expenditure for new obligations during the second regulatory period in its forecasts totalling almost $2m over the five years. The two largest forecast expenditures are for River Catchment Health, $0.47m over the period, and Channel Automation, $0.55m over the five years. This represents over half of the operating expenditure that has been forecast to be incurred through SRW meeting its new obligations. The forecasts for the operating expenditure for Streamflow Gauging and Dairy Use Metering form a further $0.48m of the total new obligation expenditure. The breakdown of the new obligation expenditure forecasts is provided in Table 4-7.

Table 4-7 SRW's Forecast Operating Expenditure for New Obligations

Item	Cost Driver	Financial Year Opex ($m, 01/01/07)					
		08/09	09/10	10/11	11/12	12/13	Total
River Catchment Health	Compliance	0.16	0.09	0.09	0.07	0.07	**0.47**
Greenhouse Strategy	Compliance	0.05	-	-	-	-	**0.05**
Channel Automation	Compliance	0.11	0.11	0.11	0.11	0.11	**0.55**
State Observation Bore Network	Service Improvements	0.02	0.02	0.02	0.02	0.02	**0.09**
Streamflow Gauging	Compliance	0.07	0.07	0.04	0.04	0.03	**0.25**
Victorian Water Resources Data Warehouse	-	0.02	0.02	0.02	0.02	0.02	**0.10**
Groundwater Management System	-	-	-	0.12	0.02	0.02	**0.16**
Local Management Rules	-	0.01	0.01	0.01	0.01	0.01	**0.05**
Dairy Use Metering	Service Improvements	-	-	0.08	0.08	0.08	**0.23**
Consistent Metering	Service Improvements	-	-	0.02	0.02	0.02	**0.05**
Total New Obligations Opex		**0.44**	**0.31**	**0.49**	**0.38**	**0.37**	**1.99**

SRW is implementing river health initiatives over the second regulatory period identified in the State Government Strategies and also to meet its obligations included in SRW's Statement of Obligation. River catchment health initiatives that SRW is proposing for 2008/13 include developing and implementing plans to manage the environmental impacts of its activities on waterways. The major work includes an impact assessment and development of plans and strategies.

SRW has included an allowance in its operating expenditure forecasts for increased maintenance associated with the channel automation capital work that is proposed over 2008/09 and 2009/10 and for a change to 24 hour supervision and response as a result of the automation providing service to customers 24/7. The allowance included in SRW's breakdown of opex for New Obligations is for $0.11m/year across the period. This is slightly different from the average $0.12m/year (from a five year total of $0.6m) included in SRW's Funding Submission document. The operating expenditure forecasts included in the Funding Submission include the productivity improvement of $0.05m in 2009/10 and 2010/11 increasing to $0.1m in the last two years of the period that SRW has forecast to be realised through the progressive reduction in section numbers.

Dairy use metering operating expenditure, proposed by SRW to start in 2010/11 and remain constant for the rest of the period, relates to SRW promotion of metering of metering in dairy sheds across its service area. Although SRW has capital expenditure for this service improvement starting in 2008/09 and totalling $5.25m over the five years, it has not included any opex for the first two years of the period. The operating expenditure that has been allowed for in SRW's forecasts is for the administration activities related to the new obligation and for meter reading and maintenance costs that have been forecast to be incurred. This does not match the data included in SRW's draft funding submission document, where opex spends of $1.05m and $0.9m have been forecast for the 2008/09 and 2009/10 respectively for development of guidelines, community engagement and communication, licence processing, project management of the initiative and $0.6m in each of the years for meter installation, at $400/meter.

The allowance for streamflow gauging that SRW has included in its 2008/13 operating expenditure forecasts relates to the conditions and obligations that SRW has to meet with the ongoing Streamflow Management Plans required by State Government. The capital expenditure related to this obligation during 2008/13 is for the implementation of an additional twelve monitoring sites, with SRW also looking at a further six or seven new sites in the western and eastern extents of the state.

- In addition to the operating expenditure allocated to New Obligations that SRW has to meet during the second regulatory period, the overall opex totals for each areas of its business include expenditure which has been allocated to 'New Initiatives'.

- The breakdown of the forecast 2008/13 operating expenditure allocated to each area of the business is shown in the following table. The forecasts also include an offset against the Corporate New Initiatives which SRW has netted off against the gross total to eliminate internal charges associated with the new work.

Table 4-8 SRW's Forecast Operating Expenditure for New Initiatives

Item	Financial Year Opex ($m, 01/01/07)					
	08/09	09/10	10/11	11/12	12/13	Total
Irrigation	0.424	0.425	0.414	0.431	0.441	**3.710**
Surface Water Diversions	0.292	0.282	0.280	0.283	0.284	**1.420**
Groundwater Diversions	0.313	0.303	0.301	0.304	0.305	**1.525**
Bulk Water Services	0.589	0.572	0.584	0.586	0.616	**2.947**

Item	Financial Year Opex ($m, 01/01/07)					
	08/09	09/10	10/11	11/12	12/13	Total
Applications	0.126	0.126	0.124	0.127	0.128	**0.630**
Corporate	0.970	0.971	0.950	0.983	1.002	**4.876**
Gross New Initiative Opex	**3,050**	**2,957**	**2,972**	**3,021**	**3,108**	**15,108**
Corporate New Initiative Offset	(0.100)	(0.100)	(0.98)	(0.102)	(0.104)	**(0.504)**
Net New Initiative Opex	**2.950**	**2.857**	**2.876**	**2.919**	**3.004**	**14.604**

- In its Water Plan, SRW considers that it is "not realistic to expect a simplistic productivity profile of 1%/year reduction in operating costs given the escalating costs of doing business as usual". However, it has proposed to establish productivity measures for irrigation and headworks businesses (excluding renewals and depreciation) and has netted off the forecast productivity improvements against the gross operating expenditure forecasts in each year across 2008/13. The productivity savings that SRW has included in its capital plan for its irrigation districts and headworks for 2008/13 are as provided in the following table.

Table 4-9 SRW's Forecast Productivity Improvements for Irrigation Districts and Headworks

Item	Financial Year Opex ($m, 01/01/07)					
	08/09	09/10	10/11	11/12	12/13	Total
Productivity Savings - Eastern Irrigation	-0.194	-0.194	-0.194	-0.194	-0.194	-0.970
Productivity Savings - WID	-0.050	-0.050	-0.050	-0.050	-0.050	-0.250
Productivity Savings - BMID	-0.025	-0.025	-0.025	-0.025	-0.025	-0.125
Productivity Savings - Eastern Headworks	-0.050	-0.050	-0.050	-0.050	-0.050	-0.250
Productivity Savings - Western Headworks	-0.010	-0.010	-0.010	-0.010	-0.010	-0.05
Total	**-0.329**	**-0.329**	**-0.329**	**-0.329**	**-0.329**	**-1.645**

In addition to these operational productivity savings, SRW has also netted off savings that it has forecast it will make from its channel automation work through reduction in section numbers and also productivity improvements in its licensing business. The forecast savings for these areas of SRW's business are shown in Table 4-10.

Table 4-10 SRW's Forecast Productivity Improvements for Channel Automation and Licensing

Item	Financial Year Opex ($m, 01/01/07)					
	08/09	09/10	10/11	11/12	12/13	Total
Channel Automation - Reduction in Section Numbers	-0.050	-0.050	-0.050	-0.100	-0.100	-0.350
Productivity Improvement - Licensing	-0.075	-0.075	-0.075	-0.075	-0.075	-0.375
Total	**-0.125**	**-0.125**	**-0.125**	**-0.175**	**-0.175**	**-0.725**

4.1.2 Recommendations

- Based on our review of Southern Rural Water's operating expenditure forecasts, we consider that the proposed spend for 2008/13 is reasonable and that increases above the 2006/07 base level opex have largely been explained and justified.

  The additional opex in each year can largely be explained by the additional operating expenditure that SRW has forecast to incur through new obligations during the second regulatory period. There are additional opex increases related to new staff and new operating initiatives but SRW has also calculated a number of productivity

improvements and netted off these savings against the gross opex figures to arrive at the breakdown of expenditure reported to the ESC in its information template accompanying its 2008/13 Water Plan.

- As indicated in Table 4-9, SRW has identified productivity improvements of $0.329m for the irrigation and headworks businesses to be implemented in 2008/09. We consider that further improvements should be achieved over the remainder of the second regulatory period and recommend an additional saving of $82k per year from 2009/10 until 2012/13.

- Based on the review, and given some of the issues in reconciling the information in the SRW Water Plan to that in the ESC Template, we do not recommend further significant changes at this stage. However, we do recommend that ESC undertakes further analysis and continues to work with SRW to verify that the information provided by SRW in the templates matches that outlined in the Water Plan.

- Our recommended changes to Southern Rural Water's regulatory operating expenditure forecast are as follows:

Table 4-11 Recommended Changes to SRW's Operating Expenditure for Regulatory Purposes

			$m				
Item	**Item/Description**		**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**
1	Productivity Improvements	Original Water Plan Forecast	-0.329	-0.329	-0.329	-0.329	-0.329
		Recommended Revised Forecast	-0.329	-0.411	-0.493	-0.575	-0.657
		Recommended Net Change	-	-0.082	-0.164	-0.246	-0.328
Total Recommended Net Change:			-	-0.08	-0.16	-0.25	-033
Original Water Plan Total Regulatory Opex:			16.98	16.61	16.65	16.39	16.26
Recommended Revised Total Regulatory Opex:			**16.98**	**16.53**	**16.49**	**16.14**	**15.93**
% Change:			-	-0.5%	-1.0%	-1.5%	-2.0%

4.2 Capital Expenditure

A summary of Southern Rural Water's historical and forecast capital expenditure, as included in the ESC's information template is shown in Table 4-12.

Table 4-12 SRW's Historical and Forecast Capital Expenditure

Item	First Regulatory Period			Second Regulatory Period				
	Financial Year Capex ($m, 01/01/07)							
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Irrigation	1.17	1.58	14.95	3.12	1.62	1.44	1.11	0.96
Surface Water Diversions	0.05	0.07	1.22	0.21	0.16	0.16	0.16	0.14
Groundwater Diversions	0.10	0.15	0.72	0.23	0.19	0.19	0.18	0.18
Bulk Water Services	0.23	0.47	2.11	1.08	0.73	0.71	0.90	0.29
Applications	0.03	0.04	0.91	0.09	0.06	0.05	0.04	0.04
Total BAU Capex	**1.58**	**2.31**	**19.92**	**4.74**	**2.76**	**2.55**	**2.40**	**1.62**

4.2.1 General and Key Issues

- The full extent of SRW's capital program over 2008/13, as provided by SRW is as provided in Table 4-13.

Table 4-13 SRW's 2008/13 Full Capital Program

Item	2008/09	2009/10	2010/11	2011/12	2012/13	Total
	$m, 01/01/07					
Channel Automation	3.739	3.708	-	-	-	**7.447**
MID2030	1.639	3.558	18.573	28.916	42.090	**94.775**
H&S + Productivity + Measurement & Reporting	0.338	0.225	0.217	0.150	0.134	**1.064**
Asset Renewals and Rehabilitation	1.178	0.553	0.814	0.514	0.519	**3.578**
Werribee Irrigation District	0.212	0.233	0.344	0.194	0.267	**1.250**
Bacchus Marsh Irrigation District	0.293	0.153	0.217	0.102	0.105	**0.870**
Licensing Capex	0.295	0.215	0.216	0.217	0.218	**1.161**
Total Headworks Capex	3.221	2.107	1.785	1.806	0.965	**9.884**
Recreation Facilities Capex	0.126	0.095	0.075	0.055	0.058	**0.409**
Salinity Program (non-prescribed)	0.189	0.090	0.070	0.070	0.150	**0.569**
Corporate Capex	1.560	1.226	1.226	1.146	1.143	**6.301**
Total	**12.789**	**12.162**	**23.537**	**33.170**	**45.649**	**127.306**

This differs significantly from the capital expenditure forecasts that SRW has reported to the ESC in its information templates. However, the BAU capital expenditure that SRW has included in the breakdown of capex submitted to the ESC in its template does not include any of the costs related to the MID2030 project. The MID2030 project spend has been included as New Obligation capital expenditure. As such, the 2008/13 BAU prescribed revised capital program is as provided in the table below.

Table 4-14 SRW's 2008/13 Capital Program Excluding MID2030

	2008/09	2009/10	2010/11	2011/12	2012/13	Total
	$m, 01/01/07					
Channel Automation	3.739	3.708	-	-	-	**7.447**
H&S + Productivity + Measurement & Reporting	0.338	0.225	0.217	0.150	0.134	**1.064**
Asset Renewals and Rehabilitation	1.178	0.553	0.814	0.514	0.519	**3.578**
Werribee Irrigation District	0.212	0.233	0.344	0.194	0.267	**1.250**

	2008/09	2009/10	2010/11	2011/12	2012/13	Total
	$m, 01/01/07					
Bacchus Marsh Irrigation District	0.293	0.153	0.217	0.102	0.105	**0.870**
Licensing Capex	0.295	0.215	0.216	0.217	0.218	**1.161**
Total Headworks Capex	3.221	2.107	1.785	1.806	0.965	**9.884**
Recreation Facilities Capex	0.126	0.095	0.075	0.055	0.058	**0.409**
Salinity Program (non-prescribed)	0.189	0.090	0.070	0.070	0.150	**0.569**
Corporate Capex	1.560	1.226	1.226	1.146	1.143	**6.301**
Total	**11.150**	**8.604**	**4.964**	**4.254**	**3.559**	**32.532**

However, even with the MID2030 project excluded from the total 2008/13 BAU capital works program the forecast expenditure does not match the data submitted in the ESC template. Further breakdown of SRW's capital program included in its Water Plan shows its capital program by the different funding sources it is utilising to achieve the program. The breakdown of SRW's capital program by funding source is provided in Table 4-15

Table 4-15 SRW's 2008/13 Capital Program by Funding Source (as included in its Water Plan)

Item	Funding Source	2008/09	2009/10	2010/11	2011/12	2012/13	Total
Macalister Irrigation District		$m, 01/01/07					
	Contributions	3.739	3.708	-	-	-	7.447
	Renewal Annuity	1.178	0.553	0.814	0.14	0.519	3.578
	Pricing	0.338	0.225	0.217	0.150	0.134	1.064
	Post 2013 Sources (MID2030)	1.639	3.558	18.573	28.916	42.090	94.775
	TOTAL	**6.894**	**8.044**	**19.604**	**29.206**	**42.743**	**106.864**
Werribee Irrigation District	Renewal Annuity	0.146	0.178	0.292	0.161	0.232	1.008
	Pricing	0.066	0.055	0.053	0.033	0..35	0.242
	TOTAL	**0.212**	**0.233**	**0.345**	**0.194**	**0.232**	**1.25**
Bacchus Marsh Irrigation District	Renewal Annuity	0.134	0.103	0.198	0.083	0..85	0.603
	Pricing	0.159	0.050	0.019	0.019	0.021	0.267
	TOTAL	**0.293**	**0.153**	**0.217**	**0.102**	**0.021**	**0.87**
Licensing	Contributions	0.810	0.810	0.810	0.810	0.810	4.050
	Pricing	0.295	0.215	0.216	0.217	0.218	1.161
	TOTAL	**1.105**	**1.025**	**1.026**	**1.027**	**1.028**	**5.211**
Headworks	Pricing	3.347	2.202	1.860	1.861	1.023	10.293
	TOTAL	**3.347**	**2.202**	**1.860**	**1.861**	**1.023**	**10.293**
Salinity Program (non-prescribed)	Non-Prescribed	0.049	0.050	0.050	0.050	0.050	0.249
	TOTAL	**0.049**	**0.050**	**0.050**	**0.050**	**0.050**	**0.249**
Corporate Capex	Pricing	0.890	0.456	0.436	0.356	0.433	2.571
	TOTAL	**0.890**	**0.456**	**0.436**	**0.356**	**0.433**	**2.571**
Total		**12.789**	**12.162**	**23.537**	**33.170**	**45.649**	**127.306**

Analysis of the projects where part or all of the funding is being provided through pricing is shown in the following table.

Table 4-16 SRW's 2008/13 Capital Program Funded by Pricing

Item	Funding Source	2008/09	2009/10	2010/11	2011/12	2012/13	Total
		$m, 01/01/07					
Macalister Irrigation District	Pricing	0.338	0.225	0.217	0.150	0.134	1.064
Werribee Irrigation District	Pricing	0.066	0.055	0.053	0.033	0..35	0.242
Bacchus Marsh Irrigation District	Pricing	0.159	0.050	0.019	0.019	0.021	0.267
Licensing	Pricing	0.295	0.215	0.216	0.217	0.218	1.161
Headworks	Pricing	3.347	2.202	1.860	1.861	1.023	10.293

Corporate Capex	Pricing	0.890	0.456	0.436	0.356	0.433	2.571
Total		**5.095**	**3.202**	**2.800**	**2.637**	**1.863**	**15.597**

This is still higher than the data included in the ESC information template, but when the Macalister capital spend allocated to pricing is removed from the total works program funded by pricing the yearly forecasts for each year within the second regulatory period are close to matching the data that SRW included in the information template. The capital program funded by pricing, excluding Macalister Irrigation District projects, is provided in Table 4-17.

Table 4-17 SRW's 2008/13 Capital Program Funded by Pricing excluding Macalister Irrigation District Projects

Item	Funding Source	2008/09	2009/10	2010/11	2011/12	2012/13	Total
		$m, 01/01/07					
Werribee Irrigation District	Pricing	0.066	0.055	0.053	0.033	0..35	0.242
Bacchus Marsh Irrigation District	Pricing	0.159	0.050	0.019	0.019	0.021	0.267
Licensing	Pricing	0.295	0.215	0.216	0.217	0.218	1.161
Headworks	Pricing	3.347	2.202	1.860	1.861	1.023	10.293
Corporate Capex	Pricing	0.890	0.456	0.436	0.356	0.433	2.571
Total		**4.757**	**2.977**	**2.584**	**2.487**	**1.730**	**14.534**

However, there still appears to be a discrepancy in each year over the five year period, between the data included in SRW's Water Plan and that included in the ESC information template, with the overall discrepancy totalling $0.46m over the period. However, as the ESC information template has been derived from information included in SRW's 10 year capital program spreadsheet we consider that the information reported to the ESC is the correct capital program and related expenditure that it is proposing over 2008/13.

- SRW has a detailed 10 year capital works program spreadsheet that it has used to derive the capital expenditure forecast information outlined in its Water Plan and submitted to the ESC. This allows the capital program to be broken down and reported against a number of different headings, including by driver, area of spend and initiative.

  SRW's capital program for 2008/13 by driver is shown in the following table.

Table 4-18 SRW's 2008/13 Capital Program by Project Driver

Item	2008/09	2009/10	2010/11	2011/12	2012/13	Total
	$m, 01/01/07					
Compliance	3.864	2.015	1.282	1.897	1.478	**10.536**
Renewals	2.684	2.187	3.182	1.862	1.650	**11.565**
Service Improvements	6.161	7.961	12.173	29.411	43.671	**99.377**
Total Gross Capex	**12.709**	**12.163**	**16.637**	**33.170**	**46.799**	**121.478**
Non-Prescribed Capex	0.103	0.296	0.151	0.145	0.117	**0.812**
Total Prescribed Capex	**12.606**	**11.867**	**16.486**	**33.025**	**46.682**	**120.666**

The main driver for SRW's 2008/13 capital program is service improvements to its infrastructure, with the MID2030 proposed expenditure that has been categorised as New Obligations by SRW in the ESC information template being included under this driver.

- The non-prescribed capex that is included in SRW's overall capital program relates to its Salinity Program and to Property Management expenditure on non-core business

buildings. The breakdown of the non-prescribed capital expenditure is as shown in Table 4-19.

Table 4-19 SRW's 2008/13 Non-Prescribed Capital Expenditure

Item	2008/09	2009/10	2010/11	2011/12	2012/13	Total
	$m, 01/01/07					
Salinity Program	0.049	0.050	0.050	0.050	0.050	**0.249**
Property Management	0.054	0.246	0.101	0.095	0.067	**0.540**
Total Non-Prescribed Capex	**0.103**	**0.296**	**0.151**	**0.145**	**0.117**	**0.812**

- In addition to the BAU capex, SRW has also forecast additional capex related to New Obligations in its information template submission to the ESC. The projects that have been allocated to New Obligations relate to the additional operating expenditure associated with the New Obligations, previously outlined in Table 4-7 in Section 4.1.1. The New Obligation capex forecasts for the second regulatory period are provided in Table 4-20.

Table 4-20 SRW's Forecast Gross Capital Expenditure for New Obligations

Item	Cost Driver	Financial Year Capex ($m, 01/01/07)					
		08/09	09/10	10/11	11/12	12/13	Total
River Catchment Health	Compliance	0.01	0.04	0.05	0.04	0.07	**0.20**
Greenhouse Strategy	Compliance	-	-	-	-	-	**-**
BE Compliance	Renewals	0.10	0.09	0.04	0.05	0.06	**0.35**
Channel Automation	Compliance	3.74	3.71	-	-	-	**7.45**
MID2030 Part 1	Renewals	0.81	2.15	2.59	9.71	19.09	**34.34**
MID2030 Part 2	Compliance	0.83	1.41	9.09	19.21	24.15	**54.68**
State Observation Bore Network	Service Improvements	-	-	-	-	-	**-**
Streamflow Gauging	Compliance	-	-	-	-	-	**-**
Victorian Water Resources Data Warehouse	-	-	-	-	-	-	**-**
Groundwater Management System	-	-	-	-	-	-	**-**
Local Management Rules	-	-	-	-	-	-	**-**
Dairy Use Metering	Service Improvements	1.71	1.56	0.66	0.66	0.66	**5.25**
Consistent Metering	Service Improvements	0.15	0.15	0.15	0.15	0.15	**0.75**
Total New Obligations Capex		**7.35**	**9.11**	**12.58**	**29.82**	**44.18**	**103.02**

The Channel Automation project is being fully funded by Government contributions in both years of the project. The Dairy Use Metering is forecast to receive $0.42m of customer contributions in 2008/09. The ongoing Consistent Metering program is predominantly funded by customer contributions, with $0.13m of the gross forecast coming from this source in each year of the five year period.

- SRW is undertaking strategic planning projects related to the future investment on the Werribee Irrigation District (WID) and the Bacchus March Irrigation District (BMID) during the period, although so work coming out of the planned studies is proposed to proceed in the period. However, the Water Plan notes that potential investment may include pipelining the WID and reconfiguring/pipelining the BMID.

  As such, and as for the MID2030 project, this would suggest that an annuity renewals approach is not an appropriate method for funding in the future as it is not replacing like with like assets.

- Although SRW does not anticipate implementation of the WID and BMID projects in the second period, it has noted in the Water Plan that if the planning projects show that significant expenditure is required that it may seek a variation to the price determination or explicit recognition of the expenditure within the Water Plan.

- Although SRW is carrying out this strategic planning, a total of $1.250m has been forecast for WID and $0.87m for BMID. Funding for the 2008-13 capex for these districts includes funding from renewals annuity making up the majority of the forecast, $1.008m for WID and $0.63m for BMID. SRW has noted in the Water Plan that it has assumed that, in light of the short-term uncertainty, only essential works will be carried out in the second period.

- SRW has a coordinated program of dam safety and headworks initiatives that meets its obligations under its Statement of Obligations and adheres to the ANCOLD Guideline standards. The forecast expenditure of Dam Safety and general headworks is provided in Table 4-21.

Table 4-21 SRW's Proposed Capital Expenditure on Dam Safety and General Headworks

	2008/09	2009/10	2010/11	2011/12	2012/13	Total
	$m, 01/01/07					
Dam Safety and General Headworks	3.182	1.827	1.694	1.680	0.847	9.23

SRW has included dam safety and general headworks projects totalling $9.23m for the period, with specific projects at Blue Rock and Melton included in its ten largest capex projects. However, there is also a number capex costs allocated to 'Other' projects for each a number of the dams/weirs included in the overall program, which although are for smaller spends in each year, result in a high total capex over the period which should put them in the ten largest projects. This includes 'Other' projects for Blue Rock, which total $0.686m over the period and 'Other' projects for Glenmaggie, which total $0.836m over 2008/13.

The Dam Safety and Headworks Program is weighted towards the start of the regulatory period, with a forecast spend of $3.167m proposed to be incurred in the first year. The proposed expenditure reduces year-on-year through the rest of the period. The expenditure has been weighted towards the first year of the period to allow SRW to allow it to carry out priority works for flood protection at the Melton Reservoir. The forecast expenditure for the Melton Reservoir in 2008/09 totals $1.456m and, as such, makes up almost half of the forecast $3.182m proposed by SRW for the first year.

4.2.2 Capital Planning Processes

SRW has adopted the Water Plan process as the basis of its five year Strategic Plan. Individual projects are identified by project managers and put forward as part of a consultative approach. Business drivers are documented as part of a Funding Submission for each project and these drivers include compliance, risk management, improving capability, service delivery (e.g. new irrigation assets), and maintaining capability/asset base (e.g. renewals or long-term maintenance).

The Water Plan (or 5 Year Strategic Plan) then feeds into the annual Corporate Plan which sets out annual budgets and more detailed targeting of works to be achieved in the annual capital expenditure program. At this stage, individual projects are subject to a works authorisation process which includes a more detailed budget, alternative solutions, risk management and mitigation as well as a project plan and delivery milestones. Risk assessment is based on a developed risk table (e.g. dam headworks are covered by ANCOLD guidelines). Authorisation levels are based on capital estimates and the risk

assessment with large projects (>$500k and/or extreme risk) requiring Board level approval.

In terms of project delivery, our discussions revealed that annual capital expenditure is not necessarily limited by funding constraints but is usually limited by available resources (whether internally or externally project managed) – and that typically two-thirds of planned expenditure is actually delivered.

4.2.3 Asset Management Systems and Processes

A policy document for asset management exists and has been approved by the SRW Board. Responsibilities for asset management activities are defined in staff position descriptions and documented in the asset management plans presently produced. The Water Plan and Corporate Plan reflect goals and business objectives and define the relationship to asset management.

The structure of the organisation focuses on asset management as a corporate support service to the operations groups. Asset management activities assignment is:

- Corporate: strategic planning, project delivery, program development, specialist services, support systems.
- Operations: operations and maintenance of assets and some planning.

The full life cycle of assets is covered through in house activities. The definition of business drivers are contained in asset management plan documentation for distribution assets and the corporate plan.

Systems available to SRW include Asset Life asset register, Finance One for financial reporting, ARC view as a GIS, scanned plans and records and a number of spreadsheets and databases for maintenance management. These are not live linked, but GIS, Asset Life and Finance One are cross referenced. They are available at office sites but current networking limitations do not allow effective management of the assets.

Processes associated with asset management are advanced in some areas. For example distribution asset renewal projections are based on sound computer models. In other areas it is simplified by the nature of support systems e.g. maintenance activities are not directly linked to assets and hence maintenance levels and costs are not attributable to assets.

Physical data related to the description of assets is extensive and held in the asset database Asset Life for distribution assets. Headworks assets descriptors are contained in Asset Life also but attribute data is in databases used for maintenance management of those assets and is appropriate for maintenance purposes.

Additional data such as maintenance data for distribution assets is required to be collated to the database to complete the set required for effective long term management. While maintenance data is collected it is associated with activities and not the assets. It is not easily linked to assets.

Improvements would relate to centralising all data into the Asset Life or equivalent database for long term management including maintenance.

4.2.4 Southern Rural Water Major Capital Projects 2008/13

The top ten highest expenditure capital projects that SRW has identified in its Water Plan 2008 are as provided in the following table.

Table 4-22 SRW's Top Ten Capital Projects (including the MID2030 Capex)

	2008/09	2009/10	2010/11	2011/12	2012/13	Total
	$m, 01/01/07					
MID 2030 (Post 2013 Funding)	1.639	3.558	18.573	28.916	42.090	94.776
Channel Automation – MID	3.739	3.708	-	-	-	7.447
Metering Program	0.810	0.810	0.810	0.810	0.810	4.050
MID Carp Damage Renewal	0.280	0.280	0.280	0.280	0.280	1.400
Melton Embankment Protection	0.900	-	-	-	-	0.900
IT Infrastructure Upgrade	0.250	0.148	0.113	0.103	0.100	0.714
Blue Rock Spillway Upgrade	0.280	0.300	-	-	-	0.580
Glenmaggie Drainage Lines	-	-	0.500	-	-	0.500
Rosslynne Access Road	-	-	-	0.500	-	0.500
Melton Outlet Remodelling	0.500	-	-	-	-	0.500
Total	**8.398**	**8.804**	**20.276**	**30.609**	**43.28**	**111.367**

MID 2030 Strategy

MID 2030 is SRW's strategy for the future of the Macalister Irrigation District and has been developed by SRW, irrigators and regional stakeholders. The overall objective is to ensure the sustainability and long term viability of the MID by:

- Increasing water availability by reducing losses;
- Providing improved service levels for irrigators; and
- Managing environmental impacts.

Water supply infrastructure components for the upgrading the Macalister Irrigation District include a combination of:

- Automating the operation of channels;
- Replacing channels with pipelines;
- Improving measurements of flow; and
- Constructing off-channel storages.

The total forecast expenditure for the MID over the second regulatory period is $106.86m. The majority of funding for the project is from 'Post 2013 sources', totalling $94.8m across the period. Funding of the project includes monies from different sources but includes a total of $3.578 over the second regulatory period from renewals annuity.

The other funding sources, including the renewals annuity, are forecast to contribute a further $12.089m over the Period, meaning that SRW has forecast a total spend on the Macalister Irrigation District between 2008-13 of $106.864m.

The breakdown of funding sources for the MID are shown in Table 4-23.

Table 4-23 SRW's 2008/13 Proposed Capital Expenditure Funding Sources for the Macalister Irrigation District

Item	Funding Source	2008/09	2009/10	2010/11	2011/12	2012/13	Total
Macalister Irrigation District		$m, 01/01/07					
	Contributions	3.739	3.708	-	-	-	7.447
	Renewal Annuity	1.178	0.553	0.814	0.514	0.519	3.578
	Pricing	0.338	0.225	0.217	0.150	0.134	1.064
	Post 2013 Sources (MID2030)	1.639	3.558	18.573	28.916	42.090	94.775
	TOTAL	**6.894**	**8.044**	**19.604**	**29.206**	**42.743**	**106.864**

The majority of the MID2030 forecast capex expenditure has been included in SRW's template submitted to the ESC as New Obligations, with the forecast spend split between

two parts of the project. The allocation of MID2030 work to each of the two parts is shown in the following table.

Table 4-24 SRW's Proposed New Obligation Capital Expenditure on MID2030

	2008/09	2009/10	2010/11	2011/12	2012/13	Total
	$m, 01/01/07					
MID2030 - Part 1	0.81	2.15	2.59	9.71	19.09	34.34
MID2030 - Part 2	0.83	1.41	9.09	19.21	24.15	54.68
Total	**1.64**	**3.56**	**11.68**	**28.92**	**43.24**	**89.02**

Although SRW has forecast a total 2008/13 expenditure of $3.578 from renewals annuity this would seem to be inappropriate approach to funding the project given that capital works are not replacing like-with-like assets.

Whilst significant time and effort has obviously gone into the planning stages of the MID 2030 Strategy, there is still a considerable degree of uncertainty in the likely source(s) of funding and timing of implementation of the recommended capital works. SRW has stated that the majority of the investment is likely to go ahead whether Government funding is received or not. A number of funding options are being developed as part of the current Business Plan process.

Channel Automation
The $7.4m MID channel automation project included in Years 1 and 2 is all government funded. The works consist of automating channel regulators and customer outlets, with a total of 550 regulators and 180 outlets planned to be completed by 2009/10.

SRW's original business case for the project showed that due to the age profile of the current workforce, natural attrition provided an opportunity to progressively restructure its workforce, with the full automation of the channel system meaning that less staff would be required to operate the system.

Metering Program
SRW is proposing an ongoing metering program of $810k per year for the duration of the second period. This program comprises two major components; namely Dairy Wash Metering and the continuation of SRW's Metering Program consistent with the Victorian Government's Sustainable Water Strategy for the Central Region.

The Dairy Wash Metering component involves the provision of meters to dairy sheds across the region and administrative costs associated with the allocation and adjustment of water resource records. SRW proposes to spread the total cost of $3.3m over 5 years and across the wider licensing group, giving an annual expenditure of $660k.

SRW also proposes to complete their metering program to cover all water users using 10ML or more each year whether from surface or groundwater sources. It proposes to found the installation of meters on the basis of $400/meter contribution from general licence fees and the remainder (on average $600/meter) charged at cost to the licence holder.

For an estimated 300 licences, SRW claims that the total revenue requirement for installation of meters will be $400k. SRW has also included operating costs of $20k per year for breakdowns and $50k per year for metering, giving a total annualised cost of $150k per year for the consistent Metering Program.

MID Carp Damage (Renewal)
Carp damage to irrigation channel banks is a relatively recent maintenance issue only becoming significant for SRW since 1996, although carp were present prior to that date. Feeding activity of the European Carp creates high turbidity levels, undermines channel

banks and causes erosion and accelerated deterioration of the banks. SRW has implemented an ongoing carp management program that includes an inspection of the irrigation system to record carp damage and prioritise the remediation works program.

Mapping of carp damage has shown that approximately 14km (2%) of channels have noticeable damage. Where damage is significant, SRW proposes to remodel the channel to its original profile and to place rock or recycled concrete beaching on the internal batters to protect the banks form further damage. The program also includes reinstatement of fencing and gravel access tracks along the channels. The program is ongoing as work can only be undertaken in the winter period when channels are empty.

Melton Embankment Program
SRW is proposing to undertake remedial works to the right abutment of the Melton dam for flood protection. It has forecast a capital spend of $0.9m for this work, with the project scheduled to be carried out during the first year of the period. This project is SRW's main priority project and represents the highest forecast spend on dam safety related work during 2008/09, with the project required in order for the dam to comply with ANCOLD Risk Assessment Guidelines. The project involves:

- Increasing the concrete protection at the right abutment to allow the dam to better cope with overtopping in extreme events (for which it has been designed);
- Increasing concrete protection at the toe of the embankment; and
- Redirecting flow in the primary spillway to reduce the risk of erosion in small flood events.

The project is currently in the design stage and SRW anticipate that it is likely to commence construction in mid-2008. The cost estimates for the project included in the Water Plan have been based on the concept design of the preferred option.

Melton Outlet Remodelling
The Melton Outlet remodelling is also one of SRW's ten biggest capital projects included in the Water Plan for construction during 2008/13. SRW has forecast a capital spend of $0.5m for the work, with all of the expenditure due to be incurred during 2008/09.

The project addresses operational difficulties, OH&S issues, equipment that is reaching the end of its service life and dam safety issues. The scope of works for the project involves replacement or remediation of the cast iron outlet pipe to enable it to remain in service and addressing the ageing condition of the tunnel in which the pipe is housed and the poor maintenance access.

The project is currently in the investigation stage with SRW expecting to select a preferred option in early 2008. The cost estimates included in its Water Plan have been based on concept designs of the most likely preferred option.

IT Infrastructure Upgrade
SRW has included a total capex forecast of $0.714m for the second regulatory period for the upgrade of its IT infrastructure. The breakdown of the total forecast over the five year period is as provided in Table 4-25.

Table 4-25 SRW's Proposed Capital Expenditure for IT Infrastructure Upgrades

Item	2008/09	2009/10	2010/11	2011/12	2012/13	Total
	$m, 01/01/07					
IT Infrastructure Upgrade	0.25	0.148	0.113	0.103	0.100	**0.714**

The upgrade work was initially identified through a review of SRW's IT Practices that was commissioned in 2005. This assessment indicated that in most IT areas SRW rated poorly

in comparison to what would be considered best practice. It was identified that inadequate capacity in the IT infrastructure and network was limiting possible productivity improvements, with restricted spend on IT infrastructure and the age of hardware and network systems posing a threat to SRW's development. The IT Strategic Plan includes both operating and capital expenditure improvements. The capital expenditure element includes centralising of technology, improving server performance and the replacement/upgrade of obsolete hardware and unsupported systems.

Blue Rock Spillway Upgrade
SRW has identified the raising and the strengthening of the spillway at Blue Rock as a key project with its Dam Safety and Headworks Program during the second regulatory period to improve safety and enable compliance with the ALARP principle of the ANCOLD Risk Assessment Guidelines at this time

A total capex spend of $0.58m has been forecast for the upgrade work, with the project scheduled to be carried out over a two year period. The total proposed project cost has been split $0.28m in 2008/09 and $0.30m in 2009/10.

The project scope includes:

- Strengthening and raising the spillway walls to prevent them from failing under high flows and threatening to allow erosion of the embankment; and
- Improving the flood capacity from 1:40,000 Annual Exceedance Probability (AEP) to 1:350,000 AEP

The cost estimates for this project that SRW has included in its Water Plan have been based on concepts that were identified as part of the design review in 2001. However, the project is yet to commence.

Glenmaggie Drainage Lines
SRW has included a forecast capital expenditure of $0.5m, all allocated to be spent in 2010/11, in its Water Plan for Glenmaggie Drainage Lines.

This project, which is part of SRW's programmed cyclical maintenance and will improve dam safety involves:

- Reaming out the pressure relief drains in the inspection gallery to reduce uplift pressures on the dam. This has not been done since the late 1970's and is now due. Monitoring is showing that the pressures are increasing slowly.

The cost estimate that SRW has included in its Water Plan has been based on similar work undertaken by SRW with site specific issues, such as difficult access, incorporated into the total cost.

Rosslynne Access Road
SRW has included a capital expenditure forecast of $0.5m in 2011/12 for works on the Rosslynne Access Road. This project is required for OH&S and public safety. The project scope involves extensive work on the 1km access road into Rosslynne Reservoir which is progressively failing, resulting in SRW's maintenance activities for the road beginning to grow rapidly.

SRW's cost estimate included in its Water Plan is based on rates used in previous road works jobs undertaken at the site by SRW and adjusted for the length of the road.

4.2.5 Capacity to Deliver the Capital Program

- Limited information provided by SRW on the actual capital expenditure achieved against the planned capital budget for each year for the capital program (in dollars of the day) is provided in the following table. This is the gross total capital excluding renewals and contributions.

Table 4-26 SRW's Recent Historical Actual vs Budget Capital Expenditure

Year	Capex Budget	Actual Capex	% of Budget Spent
2006/07	$17.054m	$11.497m	67%
2007/08	$23.397m	$21.479m	92%
Total			

The 2007/08 figures in the above table is a revised forecast as provided by SRW in comparison to the original budget in their first Water Plan. There was some 're-prioritisation' of the capital program during the first regulatory period due to the continuing drought – and also due to damage caused by the 2007 Gippsland floods.

SRW's historical capital spend can be broken down into the individual components of expenditure related to the renewals annuity programs, SRW's major projects and other capital expenditure. The breakdown of the overall historical budget and actual spend for each of the components is provided in Table 4-27.

Table 4-27 SRW's Recent Historical Actual vs Budget Capital Expenditure by Program

Program	Year	Capex Budget	Actual Capex	% of Budget Spent
Renewals Annuity Programs	2006/07	$0.670m	$1.420m	211.9%
	2007/08	$3.209m	$1.223m	38.1%
Major Projects	2006/07	$9,322m	$15.286m	164.0%
	2007/08	$21.093m	$21.986m	104.2%
Other Capex	2006/07	$2.175m	$1.768m	81.3%
	2007/08	$8.033m	$1.411m	17.6%
	Total	**$44.502m**	**$43.094m**	96.8%

This shows that over the first regulatory period SRW forecast in its Water Plan that it would come close to meeting its forecast capital budgets for projects excluding renewals. The bulk of the expenditure has been incurred through its Major Projects, with actual expenditure exceeding budget over the last two years. Although it has achieved this, the information provided by SRW in its Water Plan also shows that for 2007/08 it has forecast that it would underperform for its Renewals Annuity and Other Capital Programs.

However, the breakdown of capital expenditure over the first regulatory period does not reconcile with the data provided to the ESC in SRW's information template which, although it does not include spend funded by renewals annuity or expenditure on New Obligations, shows a lower level of BAU capital expenditure being incurred. The historical BAU capital expenditure provided to the ESC is as shown in Table 4-28.

Table 4-28 SRW's Recent Historical Capital Expenditure as included in the ESC Information Template

	2004-05	2005-06	2006-07	2007-08
Irrigation	0.86	1.17	1.58	14.95
Diversions	0.33	0.15	0.22	1.94
Bulk water services	0.33	0.23	0.47	2.11
Applications	0.02	0.03	0.04	0.91

Corporate	-	-	-	-
Eliminate internal charges	-	-	-	-
Total prescribed BAU capex	**1.54**	**1.58**	**2.31**	**19.92**

4.2.6 Recommendations

- Through the course of our review of Southern Rural Water's capital expenditure forecasts we have experienced some issues in reconciling the expenditure forecast data that SRW has included in its Water Plan and the data that it submitted to the ESC in the Excel information templates.

  However, based on our review of SRW's detailed 10 year capital works program spreadsheet we have largely been able to reconcile this data to the ESC information templates and to confirm that the breakdown of expenditure forecasts in the template appears to be correct.

- Given the uncertainty surrounding the source of funding and likely timing of the MID 2030 implementation, we recommend that SRW be requested to update its Water Plan and resubmit to the regulator when further details are available.

- It is believed that the $810k per year shown as capital expenditure for the Metering Program includes an allowance for meter reading and repair/maintenance of water meters. It is recommended that this component, estimated at $120k per year, be removed from the capital expenditure.

- Based on the review, and given some of the issues in reconciling the information in the SRW Water Plan to that in the ESC Template, we do not recommend further significant changes at this stage. However, we do recommend that ESC undertakes further analysis and continues to work with SRW to verify that the information provided by SRW in the templates matches that outlined in the Water Plan.

- Our recommended changes to Southern Rural Water's regulatory capital expenditure forecasts are as follows:

Table 4-29 Recommended Changes to SRW's Capital Expenditure for Regulatory Purposes

			$m				
Item	**Item/Description**		**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**
1	Metering Program	Original Water Plan Forecast	0.81	0.81	0.81	0.81	0.81
		Recommended Revised Forecast	0.69	0.69	0.69	0.69	0.69
		Recommended Net Change	-0.12	-0.12	-0.12	-0.12	-0.12
2		Original Water Plan Forecast					
		Recommended Revised Forecast					
		Recommended Net Change					
3		Original Water Plan Forecast					
		Recommended Revised Forecast					
		Recommended Net Change					
		Total Recommended Net Change:	-0.12	-0.12	-0.12	-0.12	-0.12
		Original Water Plan Total Regulatory Capex:	4.74	2.76	2.55	2.40	1.62
		Recommended Revised Total Regulatory Capex:	**4.62**	**2.64**	**2.43**	**2.28**	**1.50**
		% Change:	-2.5%	-4.3%	-4.7%	-5.0%	-7.4%

APPENDIX A

Major Projects Planned by Southern Rural Water

Table A1 Southern Rural Water Major Capital Projects

Project	Justification of Need	Forecast Cost in period		Basis of cost estimate	Project timing	Potential for deferral
		($m)	% total capex			
MID 2030 (Post 2013 Funding)	Improvement of efficiency of SRW supply system to make more water available for irrigation. Project includes converting most channel sub-systems to either automated channels or gravity pipelines combined with off-system storages. Key aspects include: reliable service levels, modern irrigation practices, high delivery efficiencies and accurate flow measurement.	94.8	81.0	Detailed planning and consultation process resulting in MID 2030 Discussion Paper (March 2007) and MID 2030 strategy (Sept 2007). Overall project is divided into 5 zones to be implemented over a 6 year period (2009 – 2015). Total capital investment is of the order of $116m resulting in water savings of 37,400ML.	2008/13 ongoing program of work	Limited. Detailed Business Plan and Treasury funding application currently under preparation.
Channel Automation	Ongoing program to automate the channel supple system within the Macalister Irrigation District. Work consists of automating channel regulators and customer outlets, with a total of 550 regulators and 180 outlets to be completed by 2009/10.	7.4	6.3	The project if fully funded by Government funds. $20m already invested in Stages 1 to 5 (since 2004).	2008/10	Limited – ongoing program
Metering Program	Introduction of dairy shed metering and continuation of ongoing 'consistent' metering program. Overall objective is water saving in line with Sustainable Water Strategy for Central Region and National Water Initiative.	4.05	3.5	The program is being funded through mixed sources of funding. The total cost has been split evenly as $0.81m/year in each year of the second regulatory period.	2008/13 ongoing program of work.	Limited – ongoing program
MID Carp Damage (Renewal)	Remediation and remodelling of channel banks to repair damage caused by European Carp. Program also includes rock beaching of channel slopes and replacement of access tracks and fencing.	1.4	1.2	The total cost has been split evenly as $0.28m/year in each year of the second regulatory period.	2008/13 ongoing program of work.	Limited – ongoing program
Melton Embankment Program	Dam safety/flood protection to comply with ANCOLD Risk Assessment Guidelines. Project includes concrete protection at right abutment, primary spillway and toe of embankment.	0.9	0.8	Cost estimate based on concept design of the preferred option.	2008/09	Limited. Currently at design stage with construction to commence mid-2008.

Project	Justification of Need	Forecast Cost in period		Basis of cost estimate	Project timing	Potential for deferral
		($m)	% total capex			
IT Infrastructure Upgrade	Inadequate capacity in IT infrastructure and network was identified in a 2005 Review of SRW IT Practices. IT Strategic Plan includes both operating and capital expenditure improvements. Capex includes improving server performance and replacement/upgrade of obsolete hardware.	0.7	0.6	Based on IT Strategic Plan with majority of upgrade planned for 2008/09.	2008/13 ongoing program of upgrades.	Limited – ongoing program
Blue Rock Spillway Upgrade	Raising and strengthening of spillway to improve safety and ensure compliance with ANCOLD Risk Assessment Guidelines.	0.6	0.5	Cost estimates based on previous design review. Will need to be revisited at detailed design stage.	2008/10	Possible – project not yet commenced.
Glenmaggie Drainage Lines	Part of SRW's cyclical maintenance to improve dam safety. Project includes work on pressure relief drains to reduce uplift pressures on the dam.	0.5	0.4	Based on similar work undertaken by SRW with site specific issues incorporated.	2010/11	Not recommended.
Melton Outlet Remodelling	Operational difficulties, OH&S issues, equipment at end of service life and dam safety issues. Project includes replacement or remediation of dam outlet pipe and works to improve condition of access tunnel.	0.5	0.4	Based on concept designs of the most likely preferred option.	2008/09	Not recommended.
Rosslynne Access Road	Progressive failure of access road resulting in excessive maintenance activity. Required to address OH&S and public safety issues.	0.5	0.4	Based on rates used by SRW for previous roadworks.	2011/12	Not recommended.
TOTAL SRW Capital Expenditure for 2008/13		**$117.09**	**95.1**			