

GOULBURN BROKEN  
CATCHMENT MANAGEMENT AUTHORITY

# Annual Report 2006-07



**GOULBURN  
BROKEN**  
CATCHMENT  
MANAGEMENT  
AUTHORITY

# Highlights

## Drought response

- Drought Employment Program employed 72 people and resulted in a dramatic increase in fencing of riparian vegetation.
- 33,460 hectares of land protected from over grazing with 338 stock containment areas.
- Seven Gigalitres (GL) of water not required for water quality management was sold to irrigators. The \$2.8 million raised from the sale provided:
  - River health and water quality benefits, secured irrigator demands and took advantage of high water prices;
  - Extra funding for the Drought Employment Program in 2007-08, and
  - Funding for early warning systems on the Goulburn Weir and lower Broken Creek to mitigate the Catchment's water quality risk.
- Azolla and low dissolved oxygen problems in Broken Creek were managed by passing River Murray water and 2,703 Megalitres (ML) of Goulburn River Environmental Water Reserve through the Creek.

## Environmental Water Reserve (EWR)

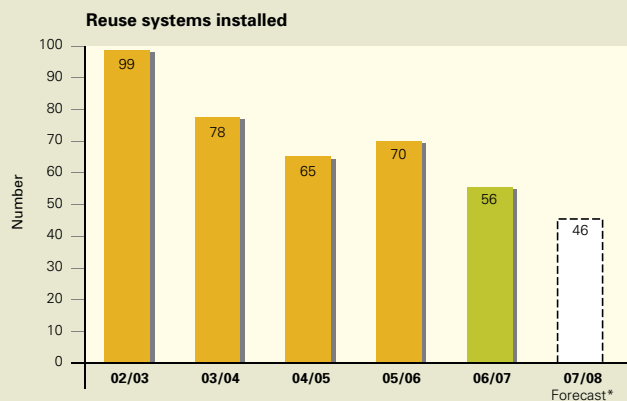
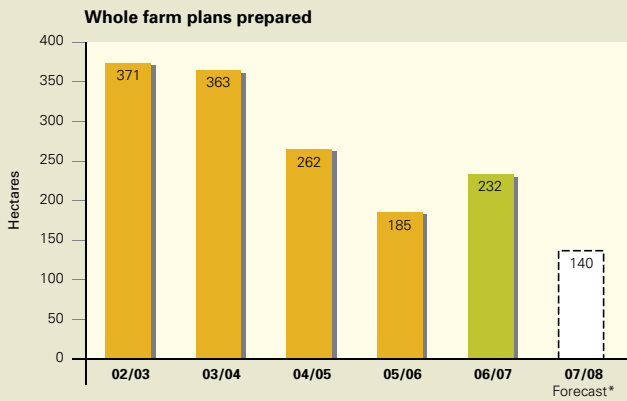
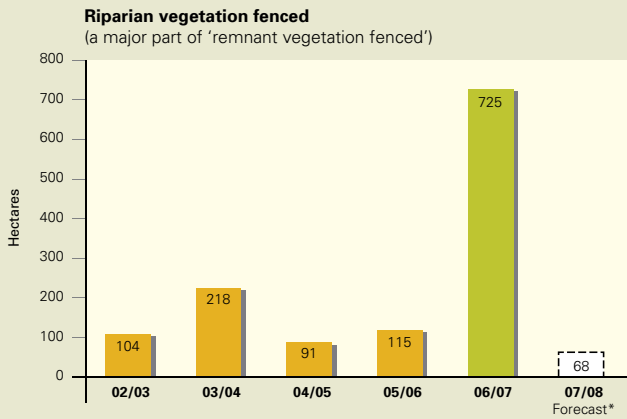
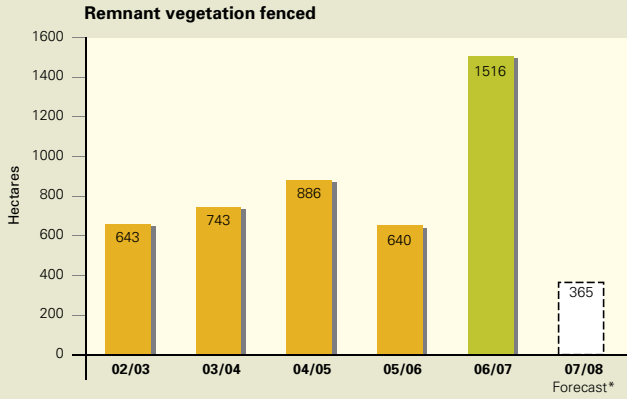
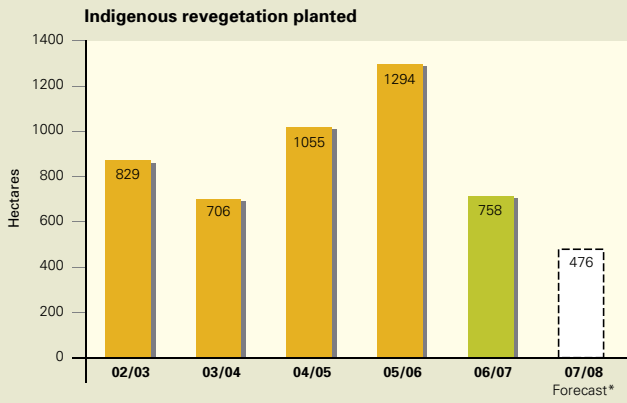
- 80:20 deal finalised (20 percent of sales pool of water now part of EWR).
- Victorian Government \$1 billion funding announcement for Food Bowl Modernisation Project providing 75 GL of water savings to EWR annually.
- Victorian Government \$52 million announcement to modernise irrigation infrastructure providing 52 GL of water savings to EWR annually.

## Water reform

- Unbundling of water entitlements including preparing Water Use Licences and New Irrigation Development Guidelines.
- Ability to carry forward water entitlements benefiting irrigators and the environment. Storing water will allow better management planning.
- Murray Goulburn interconnector feasibility study started, which could provide more than 50 GL for EWR.

## Incentives

- 756 incentives provided to land managers for activities such as fencing and the revegetation of waterways, building of stock containment areas, whole farm planning, improving irrigation and installing water re-use systems.



Great Egret

\* Output targets are currently forecast to be low in 2007-08 because of reduced indicative funding from commonwealth and state programs.

# The Goulburn Broken at a glance

## GB CMA:

The Goulburn Broken Catchment Management Authority (GB CMA) is a Statutory Authority established by the Victorian Parliament in 1997 to coordinate land, water and biodiversity management in the Goulburn Broken region. GB CMA's objectives, functions, powers and duties are further defined in the Catchment and Land Protection Act (CaLP) 1994.

## Role:

The GB CMA plays a lead role working with the community, government, research and funding organisations to achieve integrated environmental works identified as the highest priorities for the region. Works are underpinned by collaborative research combining the best available science with practical challenges of running a productive farm or maintaining a waterway for environmental and tourism benefits. All works undertaken in the Catchment fit within state, Murray Darling Basin and national strategies. During the reporting period, the GB CMA reported to former Minister for Water, Environment and Climate Change The Honourable John Thwaites.

## Funding:

GB CMA received about \$30 million in 2006-07 from state, commonwealth and regional sources. It is estimated the regional community contributes up to double that which governments contribute. An increasing amount of government funding received is from initiative funding sources. Benefit cost analysis is undertaken on parts of the business where it is possible, such as major infrastructure works.

## Board:

Members of the GB CMA Board of Directors are drawn from within the region. Together they have extensive experience and knowledge of primary industry, land protection, water resource management, waterway and floodplain management, environmental conservation, local government, business and financial management.

Under the direction of the Board, the GB CMA has developed detailed environmental management strategies. An overarching document - Goulburn Broken Regional Catchment Strategy (RCS) sets out priorities and goals for policy, funding and works.

Implementation Committees (IC) drive the implementation of projects including on-ground works to ensure the activities of the GB CMA reflect the views of local communities. The GB CMA and partner agencies offer an array of incentives to landholders wishing to undertake environmental works.

## Partners:

Landcare, the Department of Primary Industries (DPI), the Department of Sustainability and Environment (DSE), Goulburn-Murray Water (G-MW), Goulburn Valley Water (GVW) and Environment Protection Authority (EPA).

## Where:

The Catchment covers some 2.4 million hectares north of the city of Melbourne to the River Murray – the border with New South Wales, taking in Alexandra, Benalla, Cobram, Euroa, Kilmore, Kyabram, Mansfield, Numurkah, Seymour, Shepparton, Tatura, Yarrawonga and Yea.

## Environmental problems:

Degraded river health, reduced extent and quality of native vegetation, reduced water quality, dryland and irrigated salinity and loss of biodiversity.

## Population:

Over 200,000 and includes 6,000 Indigenous Australians, many of them from the traditional owner groups: the Taungurung and Yorta Yorta clans. In the Catchment's north, original settlers from the British Isles have been followed by migrants from Greece, Italy, Albania, Turkey, Iraq, Afghanistan and India.

## Land use:

About 1.4 million hectares is dryland agriculture, 270,000 hectares is intensive irrigated agriculture and 800,000 hectares is public land (with extensive areas for conservation). In addition, the Shepparton Irrigation Region (SIR) includes 70,000 hectares of the adjacent North Central Catchment in its works program for ease of management.

Industry: Irrigated and dryland agriculture (including irrigated dairy, horticulture, viticulture, dryland grazing, cropping, timber production, and thoroughbred and standardbred horses); food processing; tourism and recreation. The annual economic output of the SIR Region is estimated at \$6.1 billion.



## About this report

This report provides information on the GB CMA's performance and finances, which can be assessed against the targets as per the Goulburn Broken 2006-07 to 2010-11 Corporate Plan. The Corporate Plan can be accessed online at: [www.gbcma.vic.gov.au/Publications & Research/Published Documents/Corporate and Financial](http://www.gbcma.vic.gov.au/Publications%20&%20Research/Published%20Documents/Corporate%20and%20Financial).

This report has been prepared in accordance with all relevant Victorian legislation (refer to the Disclosure index on page 72 at the beginning of the Financial information, governance and risk management section).

The GB CMA aims to provide information which is easily accessed, easily digested and relevant to readers. More detailed and scientific data can be accessed by visiting the GB CMA website [www.gbcma.vic.gov.au](http://www.gbcma.vic.gov.au)

Feedback on this report is encouraged to help improve future annual reports. Please provide comments by 31 December 2007 to guarantee consideration. A feedback form to help direct comments is available under: [www.gbcma.vic.gov.au/Publications & Research/Published Documents/Annual Reports](http://www.gbcma.vic.gov.au/Publications%20&%20Research/Published%20Documents/Annual%20Reports).

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# Chairman's strategic overview

Ten years of low rainfall, climate change and an increasing population is placing increasing pressure on natural resources in the Goulburn Broken Catchment.

Despite another year of significantly below average rainfall and frost damage, the Shepparton Irrigation Region's food processing sector sustained its output at \$1.5 billion, compared to \$1.7 billion in a normal year. Without question, the social and economic costs of maintaining production at this level, in the face of overwhelming challenges, has taken a massive toll on our farming community.

To maintain productivity at this level, long-term visionary solutions for agriculture must be teamed with modern irrigation infrastructure. An aggressive approach is required to provide tangible solutions to protect communities and to provide environmental health for the Food Bowl of Australia.

In June 2007, a \$1 billion commitment, now known as the Food Bowl Modernisation Project, was made by the Victorian Government to upgrade ageing and inefficient irrigation infrastructure. This will fund phase one of the two-phase project. The plan, once fully implemented, will deliver water savings of up to 450,000 ML each year. About 185,000 of those savings will be returned to the environment to improve river health within our Catchment.

We enjoy strong relationships with many partners, including the Victorian and Australian Governments. Recently, our long-serving Minister and former Deputy Premier, John Thwaites, resigned from the Victorian Parliament. The vision Mr Thwaites showed with his 'Our Water, Our Future' strategy empowered the GB CMA with the extra responsibility of being the caretakers of river health and the managers of environmental flows. It has complemented our 10-year river health strategy and we now look forward to working with The Honourable Tim Holding (Minister for Water) and The Honourable Gavin Jennings (Minister for Environment and Climate Change).

The Goulburn Broken Catchment is the most significant for water resources in the state based on the amount of water used for irrigation and the amount of water generated for use downstream. Although it occupies just 2 percent of the Murray Darling Basin, the Goulburn Broken Catchment region provides 11 percent of the Basin's stream flow.



Stephen Mills

A range of activities have been initiated by the GB CMA, partner agencies and the community to protect the health of the Broken River through funding provided under the state's Victorian Water Trust 'Our Water Our Future' and Healthy Rivers initiatives.

The RCS review will be completed by June 2009. A Dryland Landscape Strategy and a review of the SIR Catchment Strategy will be developed within this review.

The GB CMA continues to lead from the front with its research and development. At the Australian National

Committee on Irrigation and Drainage (ANCID) Conference in Darwin in October 2006, seven research papers and two posters were presented. The GB CMA is committed to investments in knowledge and research through partnering arrangements with universities and research organisations. Examples include monitoring and ecological response to flow changes and fish movement as a result of the Tungamah pipeline completed in December 2006.

New threats to the Catchment are becoming apparent, but equally, opportunities are being created to overcome these. One example is the successful Drought Employment Program which employed 72 drought affected farmers, farm workers and farm service providers for up to six months this year. The Victorian Government provided just over \$3 million in initial funding for 2006-07 and the program will continue in 2007-08 with an additional \$1 million from the sale of environmental water reserves released from Eildon to irrigators in February 2007.

The next 12 months will be challenging and include the uncertainty of government funding for some programs. However, in the long-term strategic plans portraying initiative and foresight to pave the way for sustainable use of natural resources need to be identified. One of those many opportunities includes the State Government's development of a Land and Biodiversity White Paper.

### Other significant Catchment events

During the summer 200,000 to 300,000 hectares of the Catchment were damaged by fire with widespread impacts on biodiversity, erosion and water quality. The subsequent loss of ground cover followed by heavy rainfall resulted in high sediment loads and ash instream flows, with implications not only for urban water use but also other downstream water users. The GB CMA has been working with public land managers to put in place erosion control measures to minimise future damage.

Green Graze, an incentive program for landholders, allowed graziers to submit a tender to change grazing management with the goal of improving the condition of native vegetation. Successful landholders developed a management plan and tendered to receive annual payments for demonstrating the change.

On the 30 June our Catchment community was eagerly waiting for the Victorian Environmental Assessment Council (VEAC) report on the Barmah wetlands and other river red gum forests. This report will deliver a blueprint for management of one of the key environmental assets in our catchment. GB CMA has made Barmah wetlands a priority for the use of environmental water and this report will address other issues such as cattle grazing, logging and cultural issues within the wetlands.

### Acknowledgements

Our success is attributed to strong partnerships with Department of Primary Industries (DPI), Department of Sustainability and Environment (DSE), Goulburn Murray Water (G-MW), Goulburn Valley Water (GVW), local government, Landcare and the farming community in the complex way we have refined our delivery arrangements over time.

Our reputation depends on the attitude and performance of every member of GB CMA, partner agency staff and natural resource community. Thank you all for creating an enthusiastic culture and for staying focused on the huge ongoing task before us. Thank you also to our Chief Executive Officer Bill O'Kane and his team of dedicated staff for their extraordinary efforts.

Recognition must also go to government and other funding partners for having faith in the GB CMA to continue to deliver on time and on target while adopting a process of continuous strategic improvement. We must further acknowledge the Victorian Government for its part in funding the Drought Employment Program. This \$3.2 million initiative has been a huge success within our Catchment. It allowed 72 families to cope much better with the drought and facilitated a more rapid implementation of our river health strategy and sub-surface water management.

2006-07 was the first year of the current Board. The composition of the Board underwent significant change with four new directors and the loss of the DSE and DPI Directors Kevin Ritchie and Brian Thompson as a result of a change in legislation. While this posed some challenges, the Authority performed at a very high standard. Implementation Committees contributed significantly to our success and it is fitting to acknowledge Chairs Sally Simson, Peter Gibson and Chris Doyle and their Committees.

### Stephen Mills

Chairman – Board of Directors



*Goulburn Broken Catchment Management Authority Board -  
L to R: Nick Roberts, Neville Barwick, Peter Fitzgerald, Stephen Mills (Chair), John Pettigrew,  
Kevin Ritchie, Anne McCamish, Yvonne Davies, Brian Thompson, Don Cummins*

# Chief Executive Officer's report on action

Working alongside an incredibly resilient community with a dedicated team of staff, I am proud to report that the GB CMA's works programs generally remained on target for the year. The Performance Summary shows the outputs achieved for 2006-07.

Despite the crippling drought, fire and frost, which devastated parts of the Catchment during the past year, the GB CMA has continued to lead the way in natural resource management.

With the help of our partners G-MW, DPI, DSE and Landcare, landholders have completed a remarkable range of environmental works. Although the spectre of drought remains, improved commodity prices (particularly in the dairy sector) over the next year will also undoubtedly help fuel the region's recovery.

In December 2006, the GB CMA received Victorian Government funding to implement a Drought Employment Program. Seventy-two farmers, farm workers and farm service providers were employed to carry out on-ground works at several icon sites and heritage rivers across the Catchment.

Employment crews achieved an extensive amount of work which will benefit the entire Catchment. The program also gave many people involved an opportunity to provide for their families during a time when few options seemed available.

Other elements of drought response resulted in:

- Protection of 33,400 hectares of land with 338 stock containment areas built to limit stock movement;
- Sixteen groundwater pumps yielded more than 3,400 ML of groundwater for irrigation, protected 3,400 hectares from salinity and generated/preserved more than 30 jobs.

A total of 2.7 GL of environmental water was released into the Broken Creek to manage azolla and dissolved oxygen problems. Seven GL of water not required for water quality management was sold to irrigators late in the season. This water helped meet irrigator demands, particularly horticulturalists. The \$2.8 million raised from the sale provided extra funding for the Drought Employment Program in 2007 and funding for early warning systems on the Goulburn Weir and lower Broken Creek to mitigate the Catchment's water quality risk.



Bill O'Kane

The National Action Plan on salinity and water quality and the Natural Heritage Trust have been major funding programs for the Goulburn Broken Catchment. We were able to develop a true partnership with the Commonwealth Government and it is appropriate to acknowledge Tim Thelander from the Department of Agriculture, Fisheries and Forestry for his dedication and support.

RiverConnect has been another successful pilot program with a wide range of stakeholders, including the Aboriginal community and local government, allowing the GB CMA to engage in a partnership to carry out natural resource management. The partnership has provided a practical example of a shared vision for the area. RiverConnect has also set-up other diverse partnerships within the community, celebrating a link between the urban community and the river. It is hoped this model can be rolled out throughout the Catchment.

Water Use Efficiency (WUE) at both the farm and system level, has been given an enormous boost with the recent Victorian Government announcement to invest \$1 billion in the Goulburn-Murray Irrigation District. I am convinced we cannot meet our water savings targets if we focus solely on delivery infrastructure. Our experience from the Shepparton Irrigation Region Salinity Program will allow us to meet this challenge head-on. The GB CMA is working with North Central CMA, G-MW, DPI and DSE to ensure this opportunity delivers maximum social environmental and economic benefits. It is also critical that the WUE initiative moves in tandem at both the farm and system levels to create ongoing water success stories that will benefit and involve all stakeholders.

The final year of NAP and NHT programs as well as some State government programs in 2007-08 will result in funding reductions of between \$3 – 4 million to the Catchment. Delivering recovery programs on top of our existing work program will therefore be more difficult.

To meet this challenge, management has implemented a range of efficiency measures to reduce costs. It has resulted in a higher staff turnover and staff reductions. The trial of a new service delivery model in the Mid Goulburn Catchment is part of this ongoing quest for improved efficiency.



The Mid Goulburn Broken Implementation Committee Executive Officer, Phil Stevenson, resigned after seven years with the GB CMA. Phil's last major contribution was the Soil Health Strategy, which will be a significant component of the RCS review. Phil's commitment to community empowerment and development will be sorely missed.

The next 12 months will be equally challenging. Recovery programs for fire, drought and WUE will be carried out. Rehabilitation of the Catchment will be achieved with weed control and improving vegetation cover, while continuing whole farm planning to rehabilitate drought-affected areas.

We continue to push the boundaries in showing progress against our RCS targets. The 'Results Summary' section demonstrates the

links between funded annual outputs and long term environmental outcomes. This section integrates information from a number of investment areas and is at the cutting edge of Natural Resource Management (NRM) in Australia.

In conclusion, I would like to acknowledge the tremendous efforts of the GB CMA staff. We set out to become a flexible and agile public sector utility. This year, I believe, we achieved it.

**W.J. O'Kane**

Chief Executive Officer

## PERFORMANCE STORY 1

### Drought Employment Program

Seventy-two farmers, farm workers and farm service provider affected by drought were employed full-time for up to six months as part of a Drought Employment Program in the Goulburn Broken Catchment. The Victorian Government funded CMAs across the state to roll out the program from December 2006 to July 2007.

The GB CMA received just over \$3 million in funding and used the resources to employ farmers to carry out on-ground works at icon sites and heritage rivers across the catchment.

The program provided an alternative income source for farmers who were able to put their skills and experience into action working in small crews on a range of environmental projects.



*Drought employment crew workers erecting fences at Tahbilk Winery near Nagambie.*

GB CMA staff, Board members and partner agencies

were impressed by the enthusiasm and skill of the employees whose work will make a lasting contribution to the environment.

Work was carried out on a range of priority areas in the catchment including: the Barmah Forest; Murray, Goulburn, Delatite, Howqua and Jamieson rivers; and Broken, Boosey, Nine Mile, Ryan's, Holland and Seven creeks. This included:

- Fencing – construction, maintenance and removal of stock- proof fencing along waterways;
- Weed control – reduction of priority terrestrial and aquatic weeds within waterways and floodplains;
- Rubbish management – removal of rubbish from waterways and floodplains;
- Carpentry – recreational facility maintenance and construction projects; and
- Water saving projects – metre wheel rehabilitation program.

The GB CMA acknowledges the support of its partners: City of Greater Shepparton, Moira Shire Council, Parks Victoria, Goulburn-Murray Water, Department of Primary Industries, Department of Sustainability and Environment and Skilled Group.

# Performance summary

## Outputs achieved 2006-07, Goulburn Broken Region

GB threat or impact managed	Output	Mid Goulburn Broken		
		Target*	Achieved	% achieved
<b>Threat</b>				
Land and water use practices				
Stock grazing (ha = terrestrial; km = riparian)	Fence terrestrial remnant vegetation (ha)	140	224	160
	Fence wetland remnant (ha)	6	10	167
	Fence stream/river remnant (ha)	9	275	3,056
	Off-stream watering (no.)	51	36	71
	Binding Management Agreement (licence, Section 173, covenant) (ha)	1,100	1,262	115
<b>Induced Threat</b>				
Saline water and high watertables				
Surface water	Landform/lasergrading (ha)			
	Drain – primary (km)			
	Drain – community (km)			
	Weir – replace (no.)			
	Farm reuse system (no.)	10	0	0
	Drain – additional water diverted from regional drains (ML)			
	Irrigation systems – improved** (ha)	5	0	0
	Pasture – plant (ha)	200	718	359
Sub-surface water	New groundwater pumps – public (no.)			
	New groundwater pumps – private (new and upgrade no.)	2	2	100
	Volume water pumped (ML)	30	60	200
	Tile drains – install (ha )			
	Revegetation - Plantation / Farm Forestry (ha)	50	16	32
Nutrient-rich & turbid water & suspended solids	Waste water treatment plants – install (no.)			
	Stormwater management projects (no.)	4	3	75
In stream and near-stream erosion	Bed and bank protection actions (km)	21	11	52
	In stream & tributary erosion controlled (km)	15	4	27
Changed flow pattern	Water allocated - eg wetlands (ML)			
Weed invasion****	Weeds – woody weed management (ha)			
	Weeds – aquatic weeds controlled/eradicated (km)	37	23	62
	Landholders complying with requirements under CALP Act in targeted areas (%)	n.a.		
	Targeted infestations of weeds in high priority areas covered by control programs (ha)	300	0	0
Pest animals****	Landholders complying with requirements under CALP Act in targeted areas (%)	n.a.		
	Area of high priority rabbit infested land covered by control programs (ha)	200	0	0
Soil erosion, acidity, sodicity & structural decline	Application of lime (ha)			
	Minimum tillage (ha)			
Pest animals	Area of high priority fox infested land covered by control programs (ha)	7,200	27,600	383
<b>Impact</b>				
Habitat loss – terrestrial*****	Revegetation – plant natives within or next to remnants (ha)	406	340	84
	Revegetation – plant natives away from remnants (ha)			
Habitat loss – in-stream	Fish release (no.)			
	Vertical slot fishway (no.)			
	Rock ramp fishway (no.)			
	Fish barrier removal (no.)	6	1	17
	Establish SEAR (Significantly Enhanced Aquatic Refugia) (no.)	8	1	13
Habitat loss – wetlands	Reinstate flood regime			
	Construct new wetland (ha)			
Habitat loss – Threatened species	Threatened Species Recovery Plan and Action Statements (no. projects)	14	15	107
<b>Planning</b>	Whole Farm Plans (no.)	55	46	84

^ Drought Employment Program resulted from fencing, revegetation and weed control outputs; they were included in SIR even though they were delivered in Mid and Upper.

\* Targets are determined by considering level of government funds received (as listed in Corporate Plan) and do not include contributions from other fund sources. Refer to separate Results Summary for analysis of progress towards long-term targets.

\*\* There are several different ways to “improve” irrigation systems. The figures included for 2005-06 for SIR assume that figures for laser grading cover the area for all improvements.

\*\*\* 11 km were constructed during 2005-06 but 0 km were formally “handed over” to Goulburn-Murray Water for it to manage.

Shepparton Irrigation Region			Upper Goulburn			Total for 2006-07			Total achieved			
Target*	Achieved	% achieved	Target*	Achieved	% achieved	Target*	Achieved	% achieved	2005-06	2004-05	2003-04	2002-03
44	41	93	110	504	458	294	769	262	519	771	512	539
12	7	58	3	5	167	21	22	105	6	24	13	
8	269	3,363	14	181	1,293	31	725	2,339	115	91	218	104
21	10	48	57	27	47	129	73	57	89	74	86	
100	143	143	100	220	220	1,300	1,625	125	758	797	(no.) 231	
7,700	4,490	58				7,700	4,490	58	7,700	7,700	9,000	
8	6	75				8	6	75	11***	8	12	16
9	0	0				9	0	0	6	0	20	7
55	56	102				65	56	86	70	65	78	99
570	75	13				570	75	13	235	1,350	320	
640	570	89				645	570	88	8,580	1,532	10,325	2,231
			50	0	0	250	718	287	1,543	544	330	138
2	0	0				2	0	0	3	3	3	5
20	16	80	2	1	50	24	19	79	11	10	19	34
1,400	3,302	236	30	100	333	1,460	3,462	237	1,800	1,071	tba	
			50	15	30	0	0		0	0		
						100	31	31	97	129	156	224
2	0	0				6	3	50	2	2	1	
19	0.12	1	6	0.5	8	46	12	25	16	41	11	9
0	1.2		10	14	140	25	19	77	502	916	83	681
									510,000	266		
36	2	6	21	14	67	94	39	42	75	70	79	59
n.a.			n.a.			n.a.	0		33	21	0	
									96	96	94	
200	9,637	4,819	10,000	0	0	10,500	9,637	92	69,437	281,200	259,920	
n.a.			n.a.			n.a.	n.a.		95	96	95	
7	0	0				207	0	0	10,150	56,800	35,700	
										0		
										0		
8,000	38,800	485	14,400	28,010	195	29,600	94,410	319	108,856	53,000	54,200	
125	177	142	301	241	80	832	758	91	1,177	981	459	428
									117	74	248	401
									0	0		
									1	3	1	
									5	5		
2	5	250				8	6	75	4	0		18
1	0	0	1.5	0.5	33	11	2	14	1.3	17	10	
										0		
									0	3		
2	2	100	14	14	100	33	34	103	13	15	6	4
153	152	99	53	34	64	261	232	89	185	262	363	371

\*\*\*\* The Pest Plant and Animal outputs also include Second Generation Landcare Funded Program (mainly areas of pests treated). The Second Generation Landcare achievements are not collected in time for the 2006-07 annual report as community groups are usually still completing their projects. These outputs are collated every five years as part of the SGL review and added in that year's outputs.

\*\*\*\*\* The Green Graze program contributed 1,189 ha to the grazing regime change works output, which is not included in the revegetation figures.

Outputs performance and progress against target

Well below (<50%)
Below (50-79%)
Satisfactory (80-109%)
Exceed (110%+)

## Summary of annual performance and long-term progress

Fourteen investment areas (specific disciplines) have been identified under The Environment section of this report and The Business (cross-investment area integration emphasis). Management needs to focus on these investment areas separately while understanding the highly connected relationships between them.

### The Environment

Despite the decade-long dry period, landowners continued to invest in natural resource management (NRM) at surprisingly high rates in 2006-07. In fact, the long list of landowners waiting for environmental management grants shows more on-ground works could be done if more government co-investment was available.

The Victorian Government's injection of more than \$3 million into the Drought Employment Program during 2006-07 provided employment for 72 farmers, farm workers and farm service providers affected by drought and resulted in extensive works along waterways including: 338 stock containment areas, 725 hectares of fencing (up 630 percent from 2005-06) and 9,640 hectares of weed control. Community groundwater pumping was also up by 223 percent to 4,009 ML. An extra 3,142 ML of groundwater was mobilised for irrigation in the Shepparton Irrigation Region.

Funding available for salinity management in the SIR continues to decline. Consequently, 2020 implementation targets are not expected to be achieved until after 2030. This relates particularly to the regional infrastructure that was identified as part of the government cost share in the RCS. The farm investment and related surface and sub-surface implementation targets are well on track.

A review of the impact of SIR salinity management on River Murray salinity found that the original assumptions were too high. This led to a reduced impact of the SIR 'accountable actions' from 3.12 EC (Electrical Conductivity Units) to 2.87 EC as at the end of 2004. The impact of SIR plan activities to the end of 2006-07 has increased the River Murray salinity at Morgan by 3.48 EC. On the Murray Darling Basin Commission (MDBC) Salinity Register this equates to an \$825,992 cost. The management of salt disposal has been changed this year, and this will further reduce the impact of increasing salt loads at Morgan to 2.035 EC at a cost of \$463,616.

The impact of increasing dryland salinity in the Goulburn Broken Catchment is now on the MDBC register as 3.592 EC or \$931,684 with no mechanism for reassessment from the benefit of on-ground works.

Biophysical issues that are the focus of investment have been affected dramatically by the apparent shifting climate. This raises fundamental questions about future investment, including the science that underpins it. For example:

- Should we continue to invest in the management of dryland salinity if changing rainfall patterns are expected to have a far greater (positive) impact? (i.e. reduced watertables, reduced salt loads to rivers).
- How much of the SIR 1990 plan for salinity needs to be implemented based on:
  - potentially reduced water allocations for irrigation resulting from changed rainfall patterns;
  - reduced leakage from farm and broader system water-efficiency improvements;
  - less water being used in the region because of water trading out of the region; and
  - changes to the regional irrigation delivery infrastructure through reconfiguration and modernisation?
- In the face of climate change, what patterns of native vegetation are needed to allow migration of species to help secure the future of biodiversity?
- What is the impact of revegetating different parts of the landscape on water run-off (yield)?

Implementation of the Victorian Government's White Paper Securing Our Water Future Together has clarified the GB CMA's role as the caretaker of river health, and the GB CMA has assumed responsibility for managing the environmental water reserve.

### The Business

The GB CMA's reputation as innovative, agile and responsive was enhanced with the successful delivery of the Victorian Government's Drought Employment Program. GB CMA staff responded rapidly to develop a program that resulted in increased works along rivers and streams while employing farmers, farm workers and farm service providers affected by the drought. GB CMA continues to drive efficiency which has resulted in the smallest overheads of all Victorian CMAs and the highest levels of on-ground works.

GB CMA networks with Victorian and Australian Government agencies are very strong, effective and efficient and are aided by the relatively long continuity of staff and community involvement in NRM within the region. IC's continue to play a vital role in overseeing implementation and ensuring community participation in the decision-making process, especially via Landcare groups and local government.

A staff satisfaction survey yielded results that were more than 10 percent higher than the water sector average for leadership, salary and conditions and work-life balance. A human resources policy and procedures framework was endorsed and 25 percent of staff completed certificate four in project management.

The GB CMA strives to lead Victoria in linking data for regional decision making with the needs of members of the public and government funding agencies to result in the best outcomes for the region's natural resources.

The ratings given in the following table are explained in the 'Results Details' section.

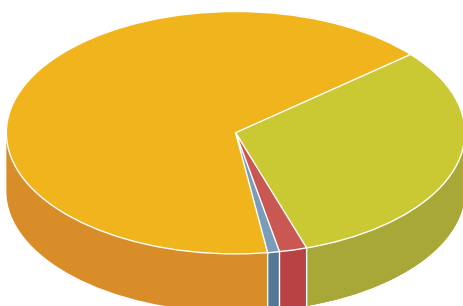
Ratings of annual performance and long-term progress within investment areas.

Investment area	Investment*				Performance 2006-07 Outputs that lead to resource condition change	Progress		
	2004-05	2005-06	2006-07	forecast 2007-08		Strategy life**	Outputs as determined by Strategy	Resource condition change from all factors***
<b>The Environment</b>	\$000	\$000	\$000	\$000				
1 SIR salinity: watertables and River Murray salinity	13,354	12,837	14,070	13,154		1990-2020		
2 Dryland salinity: watertables and River Murray salinity	3,113	3,179	3,040	2,436		1990 -		
3 Water supply and environmental flows	n.a.	n.a.	part of no. 4	part of no. 4		2004 -		
4 Riparian and instream habitat and channel form	5,129	5,738	9,376	7,537		2005-2015		
5 Water quality (nutrients) in rivers and streams	221	203	203	203		1996-2016		
6 Biodiversity	2,512	1,975	2,065	1,677		2000 - 2020 2004 - 2007		
7 Climate change	30	20	25	25		No strategic approach developed yet		
8 Flood protection	479	254	379	240		2002-2012		
9 Pest plants and pest animals	1,014	1,142	1,100	1,090		2001 -		
<b>The Business</b>								
A Corporate and statutory operations	533	1,081	1,271	1,078		Corporate plan		
B Our people	-	-	117			2005 -		
C Planning and responding	-	-	Part of A	Part of A		Corporate plan		
D Knowledge	-	-	Part of A	Part of A		2004 - 2005 -		
E Relationships, partnerships and community capacity****	1402	1,536	1,490	1,496		various		

\* Investment figures do not include interest and includes expenditure by other partners or the program.  
 \*\* Strategies vary in formality and comprehensiveness. Refer to details section for list of strategies.

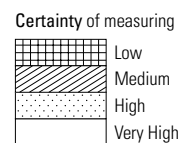
\*\*\* These ratings consider the impact of actions funded through the GB CMA and external factors, such as a long dry period.  
 \*\*\*\* Very coarse estimate; does not include SIR costs.

Goulburn Broken Investment Share



- The Environment - Community investment, \$63 million – **66%**
- The Environment - Government investment, \$30 million – **31%**
- The Business - Relationships, partnerships and community capacity, 1.5 million – **2%**
- The Business - Corporate and statutory operations, planning and responding, our people, knowledge, \$1.3 million – **1%**

Outputs performance and progress against target	Resource condition change from all factors
Well below (<50%)	Much worse
Below (50-79%)	Worse
Satisfactory (80-109%)	Maintained
Exceed (110%+)	Improved



## Resilience and catchment management

'Resilience thinking' has evolved out of our 'sustainability' and 'ecosystem services' thinking.

The following definition for resilience has been derived from the 'Resilience Alliance' website, <http://www.resalliance.org>.

Resilience is the capacity of a system to tolerate disturbance, withstand shocks and rebuild without collapsing into a different state. We depend on ecological systems for our survival and continuously impact on ecosystems. Social-ecological resilience therefore is a property of integrated systems of people and the natural environment and is defined by:

- The amount of change a system can undergo and still retain the same controls on function and structure;
- The degree to which the system is capable of self-organisation; and
- The ability to build and increase capacity for learning and adaptation.

Using an example to illustrate our thinking in the following table, our socio-ecological systems in terms of water quality are much more resilient in 2007 than they were in 1990. Relatively small additions of phosphorus within the catchment in the early 1990s were likely to trigger blue-green algal blooms in some of our waterways and wetlands. Since then, significant investment in works, such as major water treatment facilities, improved irrigation layouts (including re-use systems) and revegetation of waterways, has reduced phosphorus loads entering waterways and wetlands, which has increased the resilience of the whole of catchment system (and resulted in an improved resilience rating). This also has benefits downstream, and a similar story applies to water quality in terms of river salinity derived from the Shepparton Irrigation Region (SIR).

Another example is improved resilience in terms of corporate and statutory operations. This is mainly due to a strengthening of institutional arrangements, especially the advent of the GB CMA in 1997.

The table on the following page shows the current resilience ratings for the major investment areas and the change in resilience since 1990.



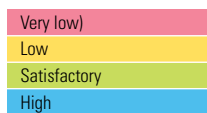
**Preliminary\* ratings of resilience within investment areas**

\* Ratings and logic have not been through a thorough consultative process. They are provided here to demonstrate the type of framework that will be explored. Ratings for 1990 have been determined using our understanding in 2007 of what the situation was like in 1990.

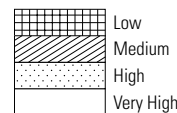
Investment area	Resilience of social-ecological systems in terms of investment area			Change
	1990**	2007	Comments	
<b>The Environment</b>				
1	Very low	Low	Very large investment in water-use efficiency since 1990 means system can better withstand a run of wet years.	More resilient
2	Low	Low	Much greater investment needed than originally thought (1990) to make a large-scale impact: If there is a run of wet years, the appropriate response is now considered to be to 'live with salt' (adjust to a transformed system).	Negligible change
3	Low	Very low	Stress on systems from decade long dry period since 1997 has highlighted vulnerability of systems. Dramatically increased water-use efficiencies in some sectors have been countered by reduced availability. Proposed increases in Environmental Reserve will improve resilience.	Less resilient
4	Medium	High	Extensive works programs have improved state of system for terrestrial and aquatic species.	More resilient
5	Very low	Low	Became an issue in early 1990s. Installation of major water treatment facilities, better managed irrigation (including reuse dams) and waterways revegetation means that the whole of catchment system has dramatically reduced phosphorus loads and reduced risk of algal blooms.	More resilient
6	Low	Low	Many systems that support biodiversity are vulnerable to changing state. Habitat loss and fragmentation threatens the viability of many ecosystems.	Negligible change
7	Medium	Medium	Not considered a major issue in 1990 even though it probably was. Recent dry years have stretched many systems to the limits but people are learning to adapt. Although we accept that climate change is a reality, we do not know how much of this extremely dry phase is due to a fundamental shift in climate and how much is due to climate variability.	Negligible change
8	Very low	Low	Built environment in better state with improved pre-development planning and flood response systems. Natural environment better placed to receive floodwater, however large opportunities remain uncaptured.	More resilient
9	Low	Low	Terrestrial and aquatic environments remain vulnerable to new and emerging weeds. Better understanding of what and how to target now, although capacity to deliver changes has declined in some areas.	Negligible change
<b>The Business</b>				
A	Low	Low	Advent of CMAs in 1997 rationalised institutional arrangements.	More resilient
B	Low	Low	Despite the decade long drought, landowners still willing to invest. Rapidly changing demographics requires programs to adjust.	Negligible change
C	Low	Low	Strategies and implementation approaches developed for many issues eg ICM, water quality, biodiversity, floodplain management, river health management. Positioned to rapidly respond to emerging issues.	More resilient
D	Low	Low	Knowledge base in many areas now far exceeds capacity to apply it. Developing system resilience approach is next phase.	More resilient
E	Medium	Medium	Constant focus for effort. Knowledge systems of government agency-landowner relationships has improved and this is resulting in better targeting, although capacity of landowners to deliver change has declined in many areas. Challenge emerging in western world since 1990 is rapid turnover of staff. Corporate memory at all levels is a major issue. Better information systems are being built to inform new staff quickly so they can more readily respond to needs.	Negligible change

\*\*1990 is an appropriate reference year because it was about this time that 'integrated catchment management' was born.

Resilience of social-ecological system in terms of investment area in 1990 and 2007



Certainty of measuring

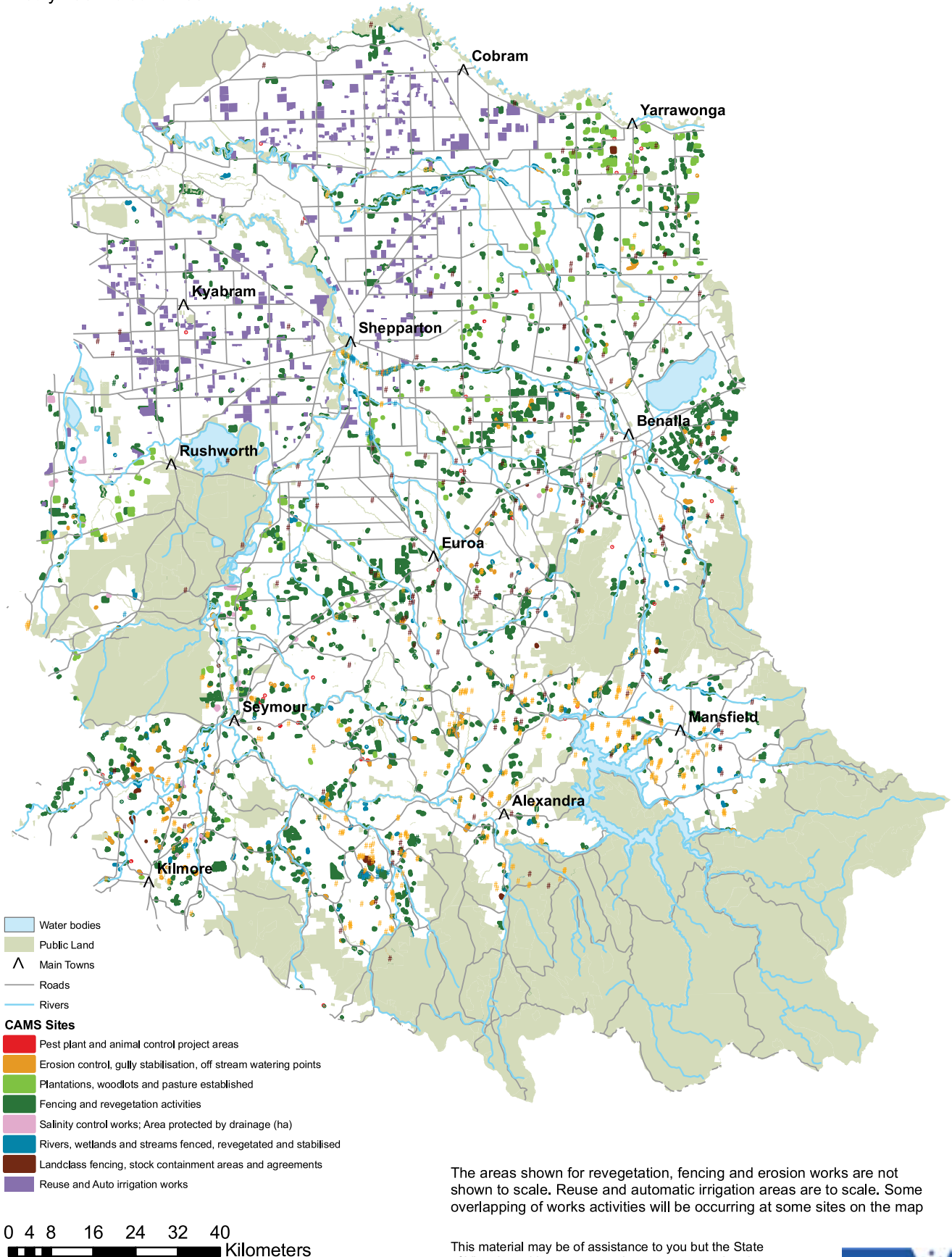


Resilience change between 1990 and 2007 from all factors



# Goulburn Broken onground works sites

July 2001 to June 2007



The areas shown for revegetation, fencing and erosion works are not shown to scale. Reuse and automatic irrigation areas are to scale. Some overlapping of works activities will be occurring at some sites on the map

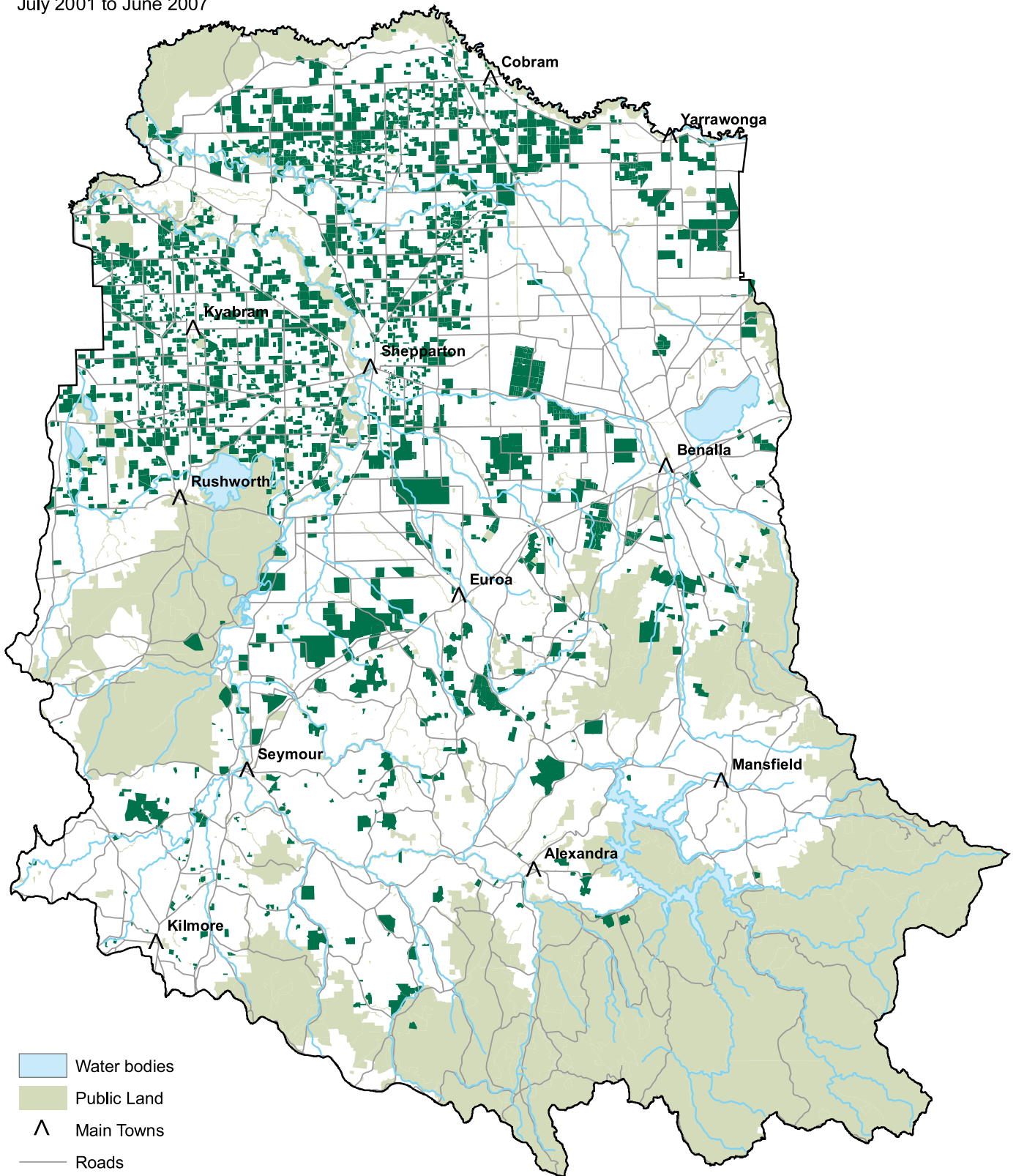
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# Goulburn Broken properties covered by a Whole Farm Plan

July 2001 to June 2007



- Water bodies
- Public Land
- Main Towns
- Roads
- Rivers
- WFP properties

0 5 10 20 30 40  
 Kilometers

Whole farm plans in the Shepparton Irrigation Region have been developed since 1987. Whole farm plans in the Dryland have been developed since 2003.

This material may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequences which may arise from your relying on any information contained in this material.



Map produced by GIS Landscape Protection Benalla, July 2007.  
 © The State of Victoria. Department of Primary Industries 2007

### Tailoring outputs for decision making

Outputs shown in this report are useful for decision making by government investors, GB CMA senior staff and Members of the Board. Monitoring finer-scale outputs and inputs are more appropriate for individual project and sub-project decision making, and are not shown in this report.

The GB CMA negotiates investment amounts and output targets each year with Victorian and Australian Governments. Outputs are often common to several investment areas and targets and achievements are aggregated from projects within those areas.

Targets and achievements do not include outputs delivered beyond GB CMA's direct control, especially by landholders who voluntarily pay for and undertake on-ground works. However, this data is critical for decision making and is captured by other means to inform long-term decisions.

### Progress ratings and decision making

Progress ratings of annual and long-term targets are self-assessments for most investment areas that help focus questions asked by investment decision makers such as the Board and government funding bodies. This year the colour coding has been adjusted i.e. red was 0 – 30 percent achievement in 2005-06 and is now 0 – 50 percent. Other colours were also adjusted upwards. These were adjusted because achieving less than half of the outputs is not a satisfactory result for the year. This is a tougher scale and colours in the table reflect more reds and yellows than they would have done in previous years.

The Performance Details section includes information to help answer such questions. Further details, including graphs and reports, are on the GB CMA's website and in relevant sub-strategies of the Goulburn Broken Regional Catchment Strategy.



*Automatic irrigation channel gate*

# Results details

As part of implementing the 2004 Goulburn Broken Monitoring, Evaluation and Reporting (MER) Strategy, the following section provides a report on progress towards sub-strategy outputs and outcomes. This is a fundamental area of work for the GB CMA, and we are striving to improve the information provided each year. We believe this work may constitute best practice for MER in natural resource management in Australia.

The following pages include two sections providing details of 14 investment areas:

## The Environment

Nine specific discipline investment areas

- 1 Shepparton Irrigation Region salinity: watertables and River Murray salinity
- 2 Dryland salinity: watertables and River Murray salinity
- 3 Water supply and environmental flows
- 4 Riparian and instream habitat and channel form
- 5 Water quality (nutrients) in rivers and streams
- 6 Biodiversity (including native vegetation)
- 7 Climate change
- 8 Flood protection
- 9 Pest plants and pest animals

## The Business

Five legislative, compliance and integration investment areas

- 1 Corporate and statutory operations
- 2 Our people
- 3 Planning and responding
- 4 Knowledge
- 5 Relationships, partnerships and community capacity

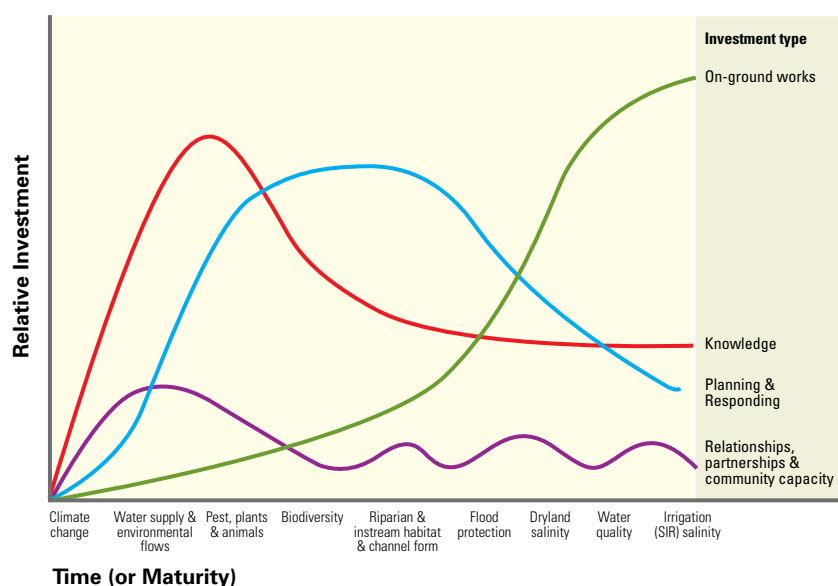
## Investment Patterns\*

Investment patterns change over time and depend on 'maturity' of investment. The following stylised patterns show the 'maturity' of investment in the GB CMA's nine environmental investment areas.

For example, investment in irrigation salinity began much earlier than investment in biodiversity, which in turn is more mature than investment in climate change.

The time scale is different for each investment area. Investment in dryland salinity is not likely to follow an exponential uptake because information has emerged that requires us to revisit our plans.

Government investment often dictates the levels of investment in each investment type although the GB CMA attempts to ensure the balance of investment between the different types is appropriate for the issue.



\* Adapted from the GB CMA's

"From the fringe to mainstream – A strategic plan for integrating native biodiversity 2004-07".

# Results details – The Environment

## Investment area 1 – Shepparton Irrigation Region (SIR) salinity: watertables and River Murray Salinity

Report compiled by: Ken Sampson, Terry Batey, Peter Howard, Rod McLennan, Terry Hunter, Carl Walters

2006-07 investment: \$14.070 million

Managing salt within the Shepparton Irrigation Region (SIR) landscape and discharges of salt to waterways are high priorities in achieving our contribution to objectives of the Murray-Darling Basin’s “Basin Salinity Management Strategy 2001-2015”, which include River Murray salinity, end-of-valley targets for tributaries, and within-valley targets for terrestrial ecosystems, farmland, cultural heritage and built infrastructure.

### Strategic references:

- Shepparton Irrigation Region Land and Water Salinity Management Plan 1990 (SIRLWSMP)
- (Victorian) Government Response 1990
- SIRLWSMP Strategic Review 1995
- SIRLWSMP Strategic Review 2000
- Shepparton Irrigation Region Regional Catchment Strategy 2000-05 (yet to be published)
- (Murray-Darling) Basin Salinity Management Strategy 2001-2015
- Draft Shepparton Irrigation Region Catchment Implementation Strategy 2007
- Mid term review of Basin Salinity Management Strategy

Resource Condition Targets (RCT) or Outcomes are:

- Keep groundwater below 2 metres and remove saline water by consistently pumping groundwater over 216,000 hectares of land; and
- Reduce increases to salinity levels of the River Murray at Morgan from the Shepparton Irrigation Region to 17.0 ECs or less by 2020.

Actions to manage salinity have significant benefits for agriculture, water security and native vegetation.

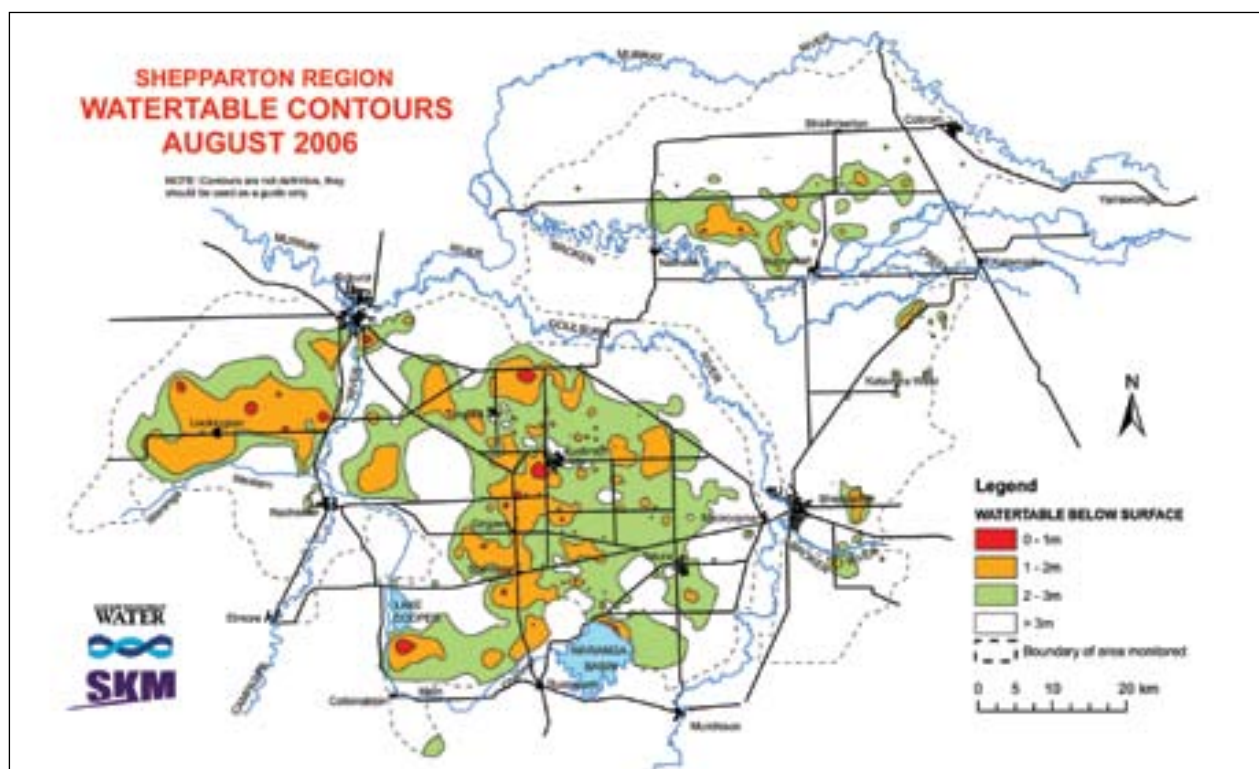
The impact of environmental flows and water trade down the river also reduces the impact of the SIR on the salinity of the river.

Resource condition change from all factors (i.e. sources, management interventions and externalities) since 1989

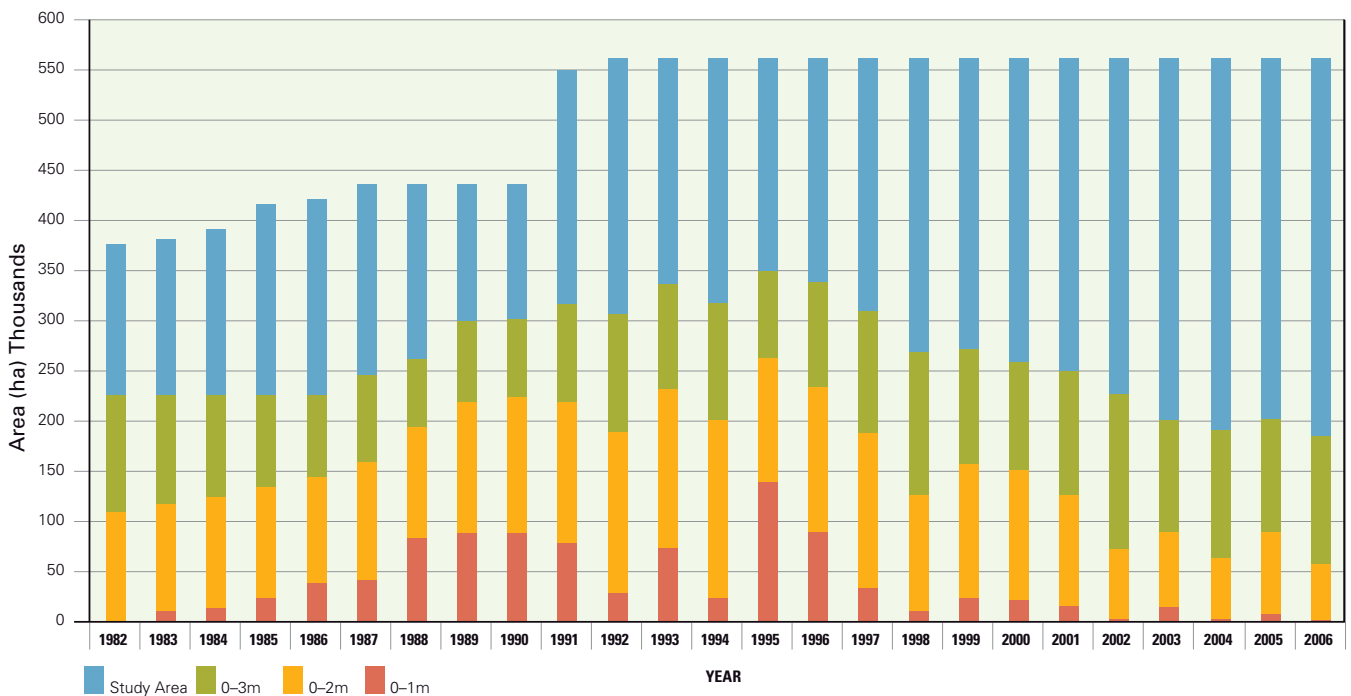


At first glance, it seems the region is well ahead of what was set out to be achieved because the water-tables are significantly lower and contributions to River Murray salinity have decreased dramatically. Farm investment in improved irrigation management and investment in regional drainage infrastructure have had a significant impact on this decrease. However, this has also been influenced by the prolonged dry period over the last decade.

We expect implementation of the RCS to continue to reduce watertables and salinity impact on the River Murray. We expect reduced water delivery in the future to have a similar effect. We expect the return of wetter conditions would result in upward pressure on the trends in watertables and contributions to River Murray salinity. The assumption that the climate will remain the same is being reviewed; there could be major watertable and salt discharge changes from a long-term climate change towards drier winter conditions and wetter summers.



August Depth to Watertable Areas – Shepparton Region (2006)



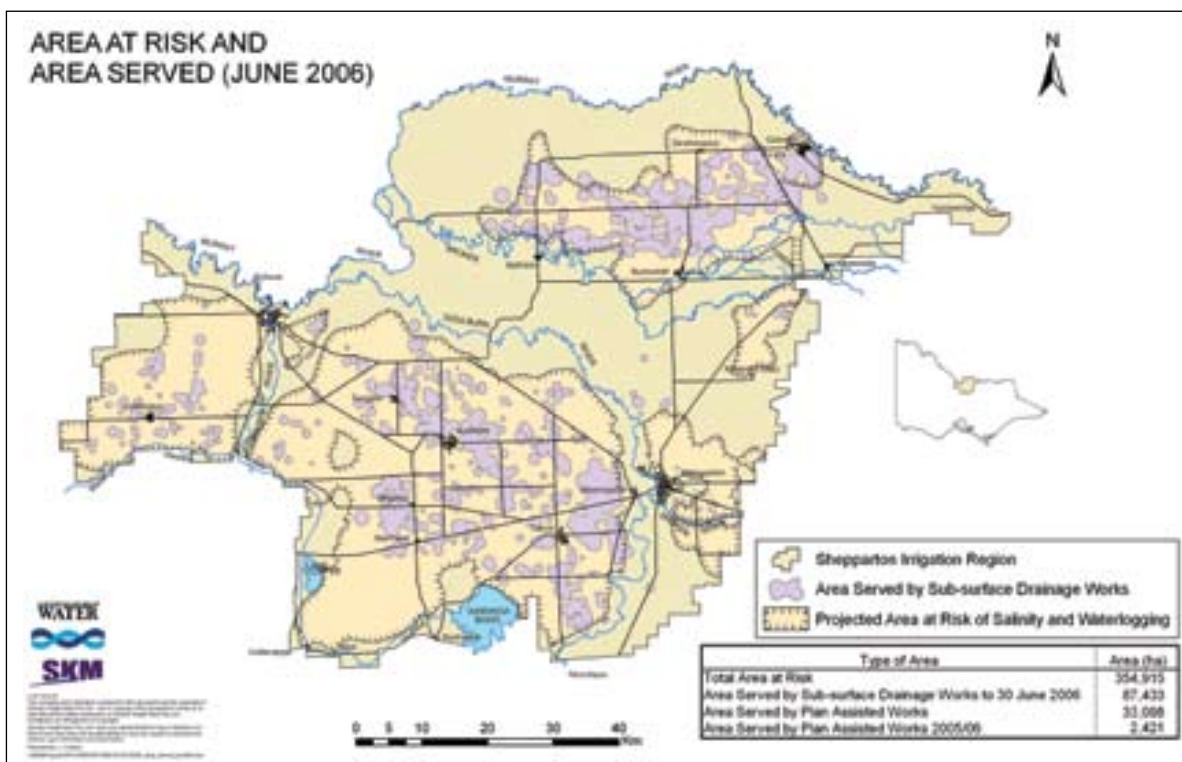
The depth to watertable area monitored was increased significantly in 1991 as a result of implementation of the SIRLWSMP. This information is imputed from over 2,000 groundwater bores in the SIR.

1982 saw the first release of a series of maps and graphs of regional watertable depth for the SIR. These maps show depth to the watertable from ground surface. Where the watertable is less than 2 metres from the surface (red and yellow areas) the land is at a much higher risk of salinisation. In the event of doing nothing to combat rising watertables, 65 percent of the region was expected to have a watertable at less than 2 metres depth by 2020.

The rise and extent of watertables across the region was rapid between 1990 and 1995. From 1996, dry seasonal conditions and the associated limited surface water allocations played a role in lowering the watertable. Catchment works are also having a significant impact on keeping watertables down.

Analysis of groundwater levels and rainfall data show that watertables rose in response to above average winter rainfall in 2005, increasing areas subjected to high groundwater levels. However, they dropped again in 2006 continuing the declining trend since 1996.

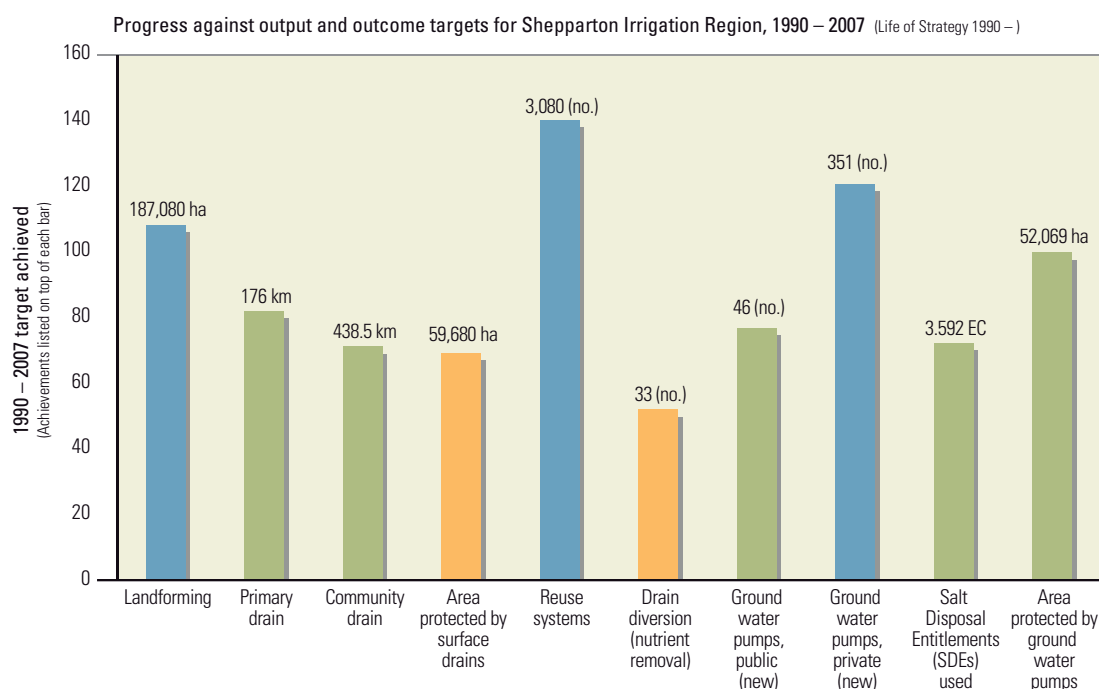
During the 2006-07 sub-surface program review, the area at risk was further refined and is described on the following map.



### Salinity Plan implementation targets achieved since 1989

Several actions to combat land salinisation and waterlogging have a negative impact on river salinity. However, the actions need to be completed as a package simultaneously to warrant investment from landholders, and the net result is progress towards RCTs. These are listed as 'accountable actions' on the MDBC salinity register.

The levels of government funding have declined in real terms since targets were set in the 1990 SIRLWSMP. Therefore, at current investment rates, we will not meet implementation targets until approximately 2030 (rather than 2020 as set in the 1990 SIRLWSMP).



### Progressive uptake of salt disposal entitlements (SDEs) in the SIR to June 2007\*

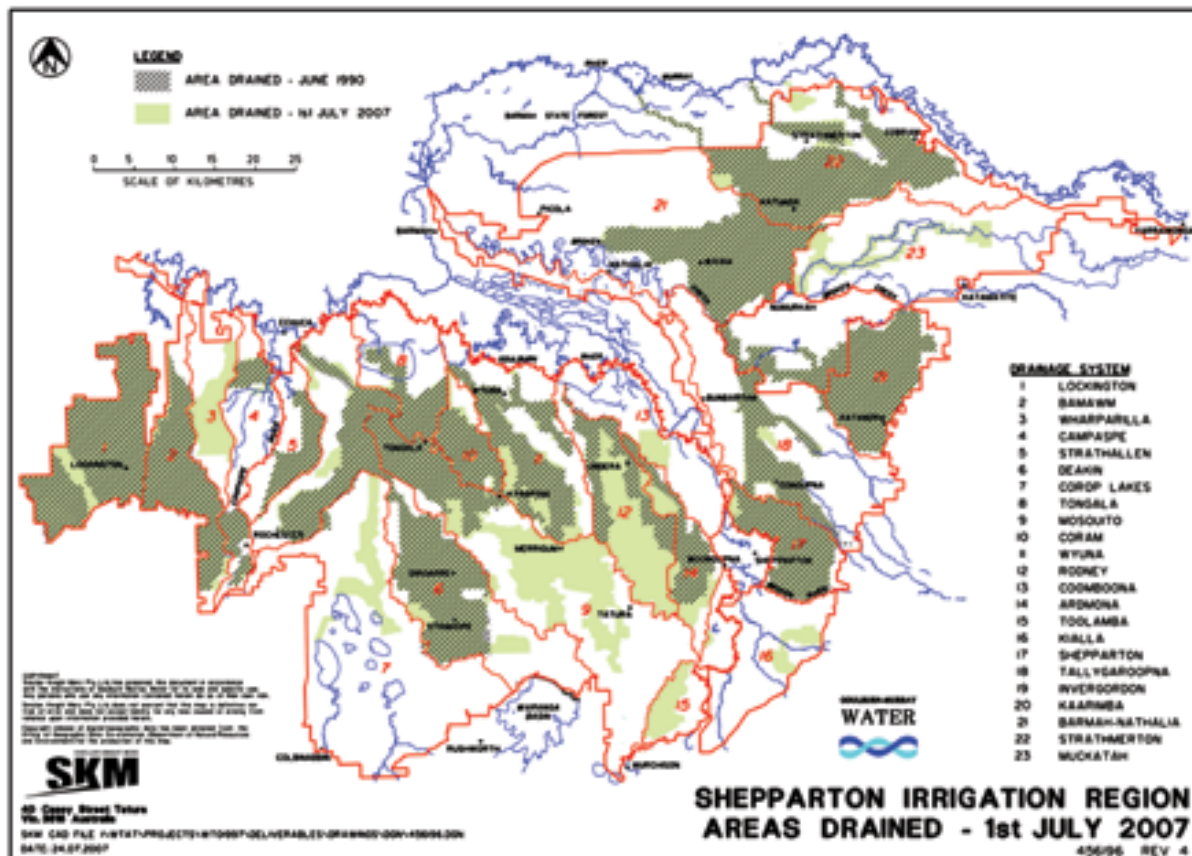
Activity	Uptake of Salt Disposal Entitlements (EC)			
	Pre-1991	Total to 2005-06	Uptake in 2006-07	Total to 2006-07
Primary Drains	0.055	0.077	0.000	0.077
Community Surface Drains	0.008	0.157	0.000	0.157
Public Groundwater Pumps	0	1.682	0.000	1.522
Private Groundwater Pumps	0	1.449	0.068	1.682
Horticultural Sub-surface Drainage	0.030	0.159	0.000	1.517
<b>Total</b>	<b>0.093</b>	<b>3.524</b>	<b>0.068</b>	<b>3.592</b>

\* Includes pre-1991 impacts

\*\* Note revised to account for the review. Not yet endorsed by MDBC.

\*\*\* The impact of increasing dryland salinity in the Goulburn Broken Catchment is now on the MDBC register as 3.592 EC or \$931,684 with no mechanism for reassessment from the benefit of onground works.

Outputs performance and progress against target	Resource condition change from all factors	Certainty of measuring
Well below (<50%)	Much worse	Low
Below (50-79%)	Worse	Medium
Satisfactory (80-109%)	Maintained	High
Exceed (110%+)	Improved	Very High



## 2006-07 performance

### Works and extension

There was a continued uptake of whole farm plans and reuse incentives in the SIR despite the extreme drought situation. However, there was a drop in the interest in automatic irrigation as the drought intensified throughout the year.

The SIR IC reviewed the need for winter salt disposal from private groundwater pumps. This will be discontinued.

There was no groundwater pumping to dispose of salt during winter and spring 2006 (under the Murray-Darling Basin Salinity and Drainage Strategy) due to low flows in the River Murray.

Forty-seven Farm Exploratory Drilling Scheme investigations were completed and 11 found viable pumping sites and 12 of the other sites are potential public pump sites. Demand for horticultural investigations remained low and none were completed.

There are 19 systems under construction. Sixteen systems have been completed (13 new, 2 upgrades and 1 electrical conversion).

The completed systems are capable of producing 3,302 ML per year of water suitable for irrigation. This is equivalent to the creation of 41 full-time jobs into perpetuity.

There was significant progress in surface water management although no outcomes achieved. Murray Valley (MV) Dr 11 pump station and outfall commenced and completed the equivalent of 6.5 km of drain construction working in Muckatah & Stanhope Catchments. Four drains were transferred serving 1,899 hectares from local government to G-MW management.

### *Planning and responding; Knowledge; Relationships, partnerships and community capacity outputs achieved*

Government first endorsed the SIRLWSMP in June 1990. The plan was reviewed in 1995, and again in 2001 as part of the preparation of the GB Regional Catchment Strategy. The SIR IC has commenced a third review of the SIR Catchment Strategy. This information will feed into the review of the GB RCS. Significant community, agency and consultant resources have been utilised to date to ensure that the review is sound.

The SIRCIS comprises of five programs and all the program reviews are progressing well. The Sub-surface, Surface, Farm and Environment Program reviews have been completed and endorsed by the SIRIC and the GB CMA. The Waterways Program review is nearing final draft stage. The G-MW board has endorsed the Sub-surface and Surface Program reviews.

SIR IC is finalising an achievement report to the end of 2005-06 and have commenced combining the program reviews into a revised SIR Catchment Strategy. The SIR IC has incorporated the 'Irrigation Futures' four scenarios into this review process.

A number of subsidiary studies were completed as part of the review process. These are all documented in review appendices and include reviews of the Whole Farm Plan, automatic irrigation, and reuse incentives; a review of the Sub-surface Research & Development strategy.

The SIR IC completed, and reported on, a project for the Victorian Water Trust entitled 'Linking Farms, Catchments and Channel Automation'.

The GB CMA built the principles of the 'Linking Farms, Catchments and Channel Automation' project into "Newstream", a combined, and as yet unsuccessful, bid to the National Water Commission (NWC) with NC CMA and G-MW.

The SIR IC has also built these principles into an approach to link the implementation of the Catchment Strategy with channel delivery infrastructure reconfiguration and modernisation.

A major review of the assumptions relating to our accountable actions under the Murray-Darling Basin Salinity Management Strategy (MD BSMS) was completed and submitted to the Murray-Darling Basin. It has confirmed that the assumptions in the original strategy were conservative. In fact the negative impact of some of our actions on the salinity of the river is less than previously reported.

The GB CMA has cooperated with the Victorian Government in the development of a more robust reporting system for the MDBC Salinity register. The Independent Auditors Group for the MD BSMS favourably reviewed the GB CMA and our progress in implementing the MD BSMS in November 2006.

The continued implementation of the Memorandum of Understanding for Irrigation Drainage and Water Quality (IDMOU) included completion of the Catchment and operational plan for the proposed Stanhope Depression Drain; a 'decision support system' trial at Broken Creek and Loddon River (based on ecological risk assessment principles); development of Goulburn Broken Management Assumptions. This system will enable targets for irrigation drainage water quality to be

set in the North Central and Goulburn Broken CMA regions.

A detailed trend analysis has commenced and will be completed and reported next year to update the - Shepparton Irrigation Region Drainage Flow, Salt and Nutrient Generation Assessment - Goulburn Murray Water - Final February 2003. Drain flows out of the SIR continued to be below the long-term target (a positive result).

GB CMA board members, IC members, staff and staff from our partner agencies have played a major role in implementing parts of the new Water Act. They have made significant input through consultative committees and technical groups developing aspects of the new water environment.

The GB IC members and staff have played a lead role in revising the Irrigation Development Guidelines. They have been reviewed and modified to account for the new amendments to the Water Act (1989). We led a combined approach with North East, North Central, and Mallee CMAs.

The SIR IC led an active Sub-surface Drainage Program Strategic Research and Investigation (R&I) program. The 2006-7 Sub-surface Drainage Research and Investigation annual report indicated that;

- 30 Research & Investigation (R&I) projects were progressed
- 13 R&I projects were completed, and
- 3 R&I project plans were completed.

Investment and actions*		From funds received through Corporate Plan				
		Achieved			Target	% achieved
		2004-05	2005-06	2006-07		
Government investment*	\$,000	13,354	12,837	14,070	n.a.	n.a.
<b>Surface water action</b>						
A Land forming/laser grading	ha	7,700	7,700	4,490	7,700	58
B Drain – primary built	km	8	0**	0***	8	0
C Drain – community built	km	0	6	0	9	0
D Farm reuse systems installed	no.	65	70	56	55	102
E Drain – additional water diverted from regional drains	ML	1,350	235	75	570	13
F Irrigation systems – improved****	ha	8,200	8,200	5,060	8,349	61
<b>Sub-surface water action</b>						
H New groundwater pumps – public installed	no.	3	3	0	2	0
I New groundwater pumps – private installed	no.	10	11	16	20	80
J Increased volume of water able to be pumped	ML	1,071	1,800	3,302	1,400	235
<b>Planning for works action</b>						
K Whole farm plans	no.	262	104	152	153	99

\* Many actions primarily aimed at achieving salinity targets contribute to other targets also, such as those for water quality and biodiversity. Investment shown is for those funds dedicated primarily to achieving salinity outcomes.

\*\* 11km were constructed during 2005-06 but 0km was formally "handed over" to Goulburn-Murray Water for it to manage.

\*\*\* 6.5km were constructed during 2006-07 but 0km was formally "handed over" to Goulburn-Murray Water for it to manage. Handed over drains (not accounted for 2005-06 and 2006-07) will be recorded in 2007-08

\*\*\*\* Improved systems include laser grading, automatic irrigation and micro-irrigation.



## Investment area 2 – Dryland salinity: Watertables and River Murray salinity

Report compiled by: Mark Cotter, Rod McLennan  
2006-07 investment: \$3.040 million

Managing salt loads in the Goulburn Broken dryland landscape and discharges of salt to waterways are important when considering the objectives of Murray-Darling Basin Commission’s Basin Salinity Management Strategy 2001-2015. Issues that need to be taken into account include: River Murray salinity, end-of-valley targets for tributaries, and within-valley targets for terrestrial ecosystems, farmland, cultural heritage and built infrastructure.

Strategic references:

- Goulburn Broken Dryland Salinity Management Plan 1995-2001 Review (Draft)
- Goulburn Broken Dryland Salinity Management Plan (Draft) 1989
- South West Goulburn: Tree Cover for Salinity Management – final report September 2004 (SKM)
- Predicted Streamflow and Salinity Changes after Afforestation in the South West Goulburn 2004 (CSIRO Land and Water)
- (Murray-Darling) Basin Salinity Management Strategy 2001-2015

A RCT for River Murray salinity was set in 2000 in the background papers for the strategy. A RCT for land salinisation was developed in 2002. The form of both RCTs has changed since originally written, but their intent remains the same. They now read:

- Save 1,500 hectares of foothills and river valleys of highland areas from salinisation by 2050.
- Maintain increases to salinity levels of the River Murray at Morgan from the Goulburn Broken dryland at or below 1.3 ECs by 2050.

The impact of increasing dryland salinity in the Goulburn Broken Catchment is now on the MDBC register as 1.87EC. This equates to a cost of \$466,300 to mitigate the salt loads.

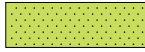

### Resource condition change from all factors since 1989

The impact of the record dry period over the last decade on land salinisation and river salinity has dwarfed the impact of human intervention with reduced rainfall levels reversing the rising watertable trend in much of the upland areas. However, in the riverine plains there is a mixed response, with some areas showing continued rising trends in groundwater levels and other areas falling in response to increased groundwater use, at least locally.

The medium term impact of reduced rainfall on salt loads is still unknown. While saline inflows from groundwater are likely to decrease higher in the landscape it will be some time before the impact on saline inflows lower in the landscape is known. Any reduction in salt loads from baseflow may be offset to some extent by the return to average rainfall conditions in 2007-08, leading to mobilisation of stored surface salt.

### Salinity Plan implementation targets achieved since 1989

This rating is an average of the two separate targets related to salinity:

- Highland salinisation implementation target 
- River salinity implementation target 





Progress towards the (end-of-valley) River Murray salinity target from the dryland has been behind schedule for several years. It is now known that the RCT is likely to be inappropriate and might need to be reset.

Reduction in salt loads from intervention of around 35,000 tonnes per year is required to meet half of the proposed end-of-valley target. Recent research suggests that this will require somewhere between 23,000 to more than 35,000 hectares to be revegetated. The current trend for works in the dryland is less than 15 percent of what is required to meet the end-of-valley target. The level of non-CMA investment in tree planting is thought (with medium-level certainty) to be over two times that funded under CMA programs (eg other government programs such as Enrironfunds, or from private investment). It is not known how well aligned this planting is with priority areas and therefore the current and future impacts are not known. The extent and location of revegetation needs to be determined through non-CMA investment to better understand the total impact of revegetation on salt loads and catchment yield (the volume of water running off the catchment).

There is a need to review the End-of-Valley-Target (EOVT) in light of changed climatic conditions and the impact on water yield. This will be the subject of on-going discussions with DSE and the MDBC.

Findings from the 2004 South West Goulburn report by SKM catalysed a major review of strategic issues in the dryland (see Dryland Landscape Strategy under Investment area C – Planning and positioning). This review focuses on technical issues within agencies so far. The Co-operative Research Centre for Catchment Hydrology commissioned CSIRO Land Water to report on the salt and water impact assessment for Commercial Environmental Forestry in the South West Goulburn.

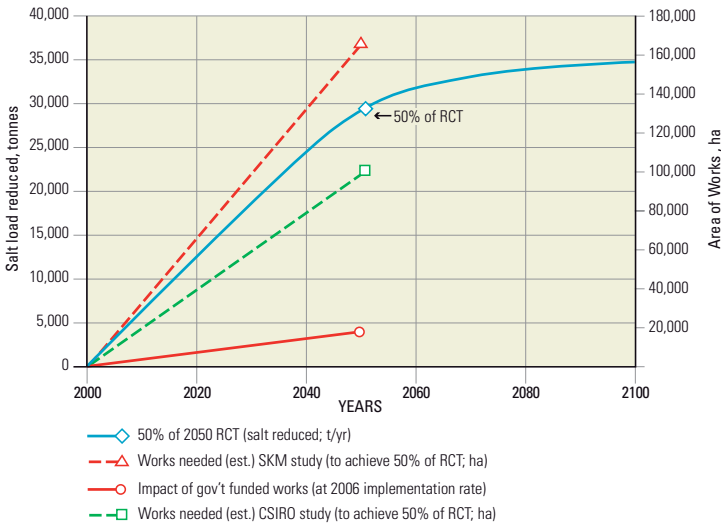
There are a couple of issues with measuring lucerne plantings and their effects. They are the length of time that the lucerne remains planted and maintained as well as the frequency of reestablishment. The other issue is determining the level of lucerne established that is independently funded outside the CMA incentives program.

Outputs performance and progress against target	Resource condition change from all factors	Certainty of measuring
Well below (<50%)	Much worse	 Low
Below (50-79%)	Worse	 Medium
Satisfactory (80-109%)	Maintained	 High
Exceed (110%+)	Improved	 Very High

**Progress towards RCT for River Murray salinity from the Goulburn Broken Dryland**

Progress towards RCT 8.3:

Maintain increases to salinity levels of the River Murray at Morgan from the Goulburn Broken Dryland at or below 1.3 ECs (equates to 67,000 tonnes per year of salt from Dryland) by 2050.



**2006-07 performance**

**Works and extension outputs achieved**

The continued dry conditions resulted in ongoing high demand for incentives to plant lucerne, especially in the first half of the year. It was decided to cap the funding level of lucerne plantings at 250 hectares.

The My Farm Our Landscape (MyFOL) program continues to be very successful, delivering 80 (as integrated planning and incentives program) level 2 whole farm plans. About 95 percent of these farm plans are referred to staff for incentive applications to undertake

works. The requirement for a landholder to complete a Level 1 farm plan before applying for incentives means that every application now includes an evaluation of the landholder's property in the context of broader catchment issues. MyFOL is readily accessed by new and small landholders and this will be promoted in 2006-07. MyFOL also forms an important component of the statewide Property Management Streamlining project and enables more effective and integrated planning with local government.

**Planning and responding; Knowledge; Relationships, partnerships and community capacity outputs achieved**

The effect of climate change on projected salt movement is the focus of a research project in partnership with Primary Industries Research Victoria (PIRVic), as part of the National Action Plan (NAP) funded project 'Exploring Trade-offs for NAP Resource Condition Change Objectives.' This will also address the issue of the impact of climate change and revegetation on flow patterns.

The GB CMA's focus on delivering integrated outcomes at operational level has increased dramatically during the past decade enabling relatively smooth adjustment to changes in strategic direction.

Research into strategic-level needs is well under way, with several projects planned for 2007-08.

The Multiple Outcomes Project in Sunday Dry Creeks has been completed and whilst highlighting the difficulties of using an assets-based approach at the sub-catchment level, it has been useful in improving linkages between strategic planning and operational decisions.

A review of salinity priorities in response to studies in the South West Goulburn and its implications for the capacity to meet the EOVT is due to be completed in September 2008. There will be a significant shift in the salinity priority areas as a result.

Investment and actions**		From funds received through Corporate Plan				
		Achieved		Target	% achieved	
		2004-05	2005-06	2006-07		
Government investment	\$,000	2,829	1,803	3,040	n.a.	n.a.
<b>Surface water action</b>						
A Discharge – saline pasture woody perennial eg saltbush	ha	- *	- *		- *	- *
B Discharge – trees (interception)	ha	- *	- *		- *	- *
C Discharge – buffers – pastures (interception)	ha	- *	- *		- *	- *
<b>Sub-surface water action</b>						
D Revegetation – plantation / farm forestry only	ha	129	97	31	100	31
E Revegetation – plant natives	ha	982	1,126	581	684	85
F Pasture – plant	ha	543	1,543	718	250	287
G New groundwater pumps – public installed	no.	0	0	3	4	75
<b>Planning for works action</b>						
H Whole farm plans***	ha	132	81	80	108	63

\* Data expected to become available from 2007-08.  
 \*\* The outputs also include those achieved by complementary investment areas (SIR salinity, riparian and instream habitat and channel form, dryland salinity).  
 \*\*\* Level 2 Whole Farm Plans only.

Outputs performance and progress against target	Resource condition change from all factors	Certainty of measuring
Well below (<50%)	Much worse	Low
Below (50-79%)	Worse	Medium
Satisfactory (80-109%)	Maintained	High
Exceed (110%+)	Improved	Very High

## Investment area 3 – Water supply and environmental flows

Report compiled by: Geoff Earl, Bill O’Kane, Wayne Tennant, Keith Ward, Scott Morath, Simon Casanelia, Rod McLennan,

Investment 2006-07: Part of Investment area 4 (total \$9.376 million)

Water is a fundamental resource for life, ecosystems and the agricultural systems and businesses we depend on. During the past 10 - 15 years, state and federal governments have been progressively improving water management and providing some water for increased environmental flows. The current string of drought years has added more urgency to this work.

### Strategic references:

- Victorian Government White Paper: Our Water Our Future (2004)
- Goulburn Broken Regional River Health Strategy 2005 (GB RRHS)
- Victorian River Health Strategy 2002
- [www.thelivingmurray.mdbc.gov.au](http://www.thelivingmurray.mdbc.gov.au)

In 2002, the Murray-Darling Basin Ministerial Council established the Living Murray – a program to return the River Murray system to a healthy working river. In the Goulburn Broken Catchment, this involves the Barmah Forest and the River Murray channel.

In its 2004 White Paper *Our Water Our Future*, the Victorian Government launched a comprehensive program for using the state’s scarce water resources wisely; providing for efficient, reliable, flexible water for urban, agricultural and business use; and increased flows to rivers and wetlands to restore and protect their health. Under the program, all the elements of the water cycle are to be managed with a sustainable water allocation regime and environmental flows integrated with other catchment management activities.

An Environmental Water Reserve (EWR) has been created to protect the environment’s right to water. The reserve includes minimum river flows (all year round), unregulated flows (predominantly in winter/spring), and specific environmental entitlements. (In the Goulburn, the water quality allowance is 30 GL.)

The GB CMA has been given operational management of the EWR. This complements the GB CMA’s role as the caretaker of river health, and the provision of waterway, regional drainage and floodplain management services. Partner agencies are responsible for allocating water resources, river flow regulation, the delivery of water, water use regulation, and wastewater disposal services.

The Regional River Health Strategy plans to improve river health by determining environmental flow needs and changing river flow regimes, particularly in the Goulburn River, Broken River, Yea River, Seven Creeks, Broken Creek and King Parrot Creek.

The Regional Catchment Strategy plans to improve the condition of 70 percent of wetlands by 2030.

Water supply and delivery efficiency are critical to improved environmental and productive outcomes, but specific targets are not yet set for the Catchment. Targeting environmental flows and using the water supply system flexibility to deliver environmental benefits are key strategies.

## Resource condition change from all factors since the 2004 White Paper

Since 2004, drought conditions have prevailed resulting in the availability of water for irrigation being well below average. Water available to rivers and wetlands has also been very low. During this period minimum flows in the regulated rivers have been maintained but there has been low to no winter or spring higher flows. Dry conditions have placed the environmental health of the Catchment’s rivers and wetlands under stress, in addition red gum health has declined. General river health should improve when wet conditions return.

The lower Goulburn River and the lower Broken Creek have been identified as key risk areas for serious environmental damage. These risks are therefore being actively managed. Dissolved oxygen levels in the lower Broken Creek have been maintained more consistently at higher levels.

Monitoring systems to detect environmental health changes on an annual basis are not in place but are being developed for the major regulated river systems.

## White Paper implementation targets achieved since 2004

Since 2004, the Victorian Government has created the EWR, and appointed GB CMA as manager of the reserve. The government, with Catchment partner support, has continued to pursue water savings in the supply and delivery system, progressing the planning for Lake Mokoan decommissioning project, completing the Tungamah pipelining project, and completing the CG1234 channel automation project.

The State Government also completed the unbundling of water entitlements in 2006-07, provided on average 120 GL of low reliability entitlements for the Living Murray. The State Government committed to complete two new water savings projects, the modernisation of the Shepparton Irrigation Area (to save 52 GL annually) and the Food Bowl Modernisation Project Stage 1 (to save 225 GL annually, including 75 GL for environmental flows).

Water use and river flow management has continued to comply with relevant bulk entitlements and the Murray-Darling Basin cap on water use in the Goulburn and Broken Rivers, protecting water availability in the EWR.

In conjunction with G-MW, flows in Broken Creek have been actively managed.

For the GB CMA, activity has been primarily focused on strategic planning on environmental flow needs and on ways to manage flows.

## 2006-07 performance

### Works and extension outputs achieved

Minimum flows in the Goulburn and Broken Rivers continued to be provided by G-MW as part of their regulation of water in accordance with bulk entitlements. The extreme drought year meant there was little unregulated flow in any river or creek.

Management of flows in lower Broken Creek continued in conjunction with G-MW, minimising azolla build-ups, limiting low dissolved oxygen

problems, and providing fish passage. Flows were diverted from the River River Murray and returned to the River Murray, bypassing Barmah Choke and providing environmental benefits in Broken Creek with minimal loss of water. Flushes were provided from the Goulburn system to manage azolla build-ups.

2,703 of the 30,000 ML Goulburn Water Quality Allowance was required to provide flushes in Broken Creek. The Victorian Government sold 7,000 ML of this allowance, late in the irrigation season, to help water users cope with the lowest Goulburn system availability on record. Funds from the sale of the water are being used to accelerate river health and water quality projects in the Catchment.

The GB CMA in partnership with the Greater Shepparton City Council, Parks Victoria and Friends of Gemmill's Swamp was awarded a community water grant to help fund the construction of a bioremediation wetland to treat stormwater before it enters Gemmill's Swamp.

Bird hides for Gemmill's Swamp were constructed under the Drought Employment Program.

Over 70 local community members attended a field day in the Highlands where a number of guest speakers spoke about the ecological values of peatlands and spring soaks and threats to their conservation.

A brochure promoting the appreciation and protection of wetlands on private land has been prepared. The brochure is expected to be released by the end of the calendar year.

A number of priority wetlands have been fenced to improve management.

***Planning and responding; Knowledge; Relationships, partnerships and community capacity outputs achieved***



Given the potential for severe drought in 2007-08, the GB CMA participated in planning on how to share the potentially very limited available water. This included preparing a GB CMA dry inflow contingency plan which identified the critical environmental assets that needed to be protected under a survival scenario.

Expert advice was obtained on the potential impacts of low flows on the Goulburn River below Goulburn Weir as part of the dry inflow contingency planning.

A study into the environmental implications of high summer flows in the Goulburn River below Goulburn Weir was completed, setting limits to flows for different environmental impacts and levels of risk.

A study into the objectives for use of the Goulburn River from Lake Eildon to Goulburn Weir was started.

A study of the constraints to delivery of environmental flows in the Goulburn River and to the River Murray was completed, finding that flooding and high summer river flows were significant constraints.

A study into the interaction between environmental flows and flooding commenced. This included obtaining comprehensive land surface elevation data for the Goulburn River and its floodplain.

A monitoring program to determine ecological response to environmental flow releases in the Goulburn River, Broken River and Broken Creek also commenced.

Comprehensive land surface elevation data for the Broken River and its floodplain was obtained by airborne laser scanning techniques.

A study of the ecological processes in Broken Creek commenced to better understand the processes generating low dissolved oxygen levels and potential mitigation measures.

A trial of mechanical removal of azolla from the Broken Creek was completed and successfully demonstrated the ability to remove azolla.

The environmental condition of the Broken and Boosey Creeks (as part of the assessment of the environmental impacts associated with the Tungamah Pipeline) was further benchmarked.

An environmental flow determination for the upper Broken and Boosey Creeks was completed, and an environmental flow determination for the Yea River commenced. Updates of the Resource Allocation Models (REALM) for King Parrot Creek and Yea River were completed.

Hydraulic modelling of flooding in the Barmah Forest progressed, with improved elevation data captured by airborne laser scanning and field surveys.

In conjunction with Yorta Yorta students, a waterbird survey was carried out in Barmah Forest, resulting in the first recording of Brolga presence.

The Barmah Forest Environmental Management Plan was updated, a new blueprint plan developed for future directions prepared, and a new vegetation monitoring program implemented.

Over 400 peatland and spring soaks were mapped and their likely occurrence modelled.

Priority wetlands in the Catchment have been identified based on their conservation significance and threats to inform resource decision making and guide the allocation of limited resources.

Flood regime determination studies are being undertaken for Moodie's, Black and Purdie's Swamps to determine current flood regimes, how they deviate from the flood regimes required to maintain or enhance their ecological values and how the required flood regimes can be implemented.

The GB CMA has been involved in developing an environmental monitoring program that will assess the impacts of the final drawdown, decommissioning and rehabilitation of Lake Mokoan on its current and desired future environmental values.

Development of wetland implementation plan for Green's Swamp, Broken Boosey Creek wetland system and mapping of peatlands and spring soaks has commenced.

Outputs performance and progress against target	Resource condition change from all factors	Certainty of measuring
Well below (<50%)	Much worse	Low
Below (50-79%)	Worse	Medium
Satisfactory (80-109%)	Maintained	High
Exceed (110%+)	Improved	Very High

Development of wetland implementation plan for lower Broken River commenced. The Kenyapella Wetland Management Plan was completed and will be signed off early next year.

A GB CMA (aquatic and riparian) weeds booklet was prepared to assist landowners and agencies identify weeds which impact on the quality of riparian lands and instream habitats. This information will be incorporated into the overall Goulburn Broken Weed booklet currently being reprinted as a third edition.

#### From Corporate Plan – Caretaker of River Health component\*

Key Result Area	Key Performance Indicator	Progress
Integrated management of the Environmental Water Reserve (EWR) and the Regional River Health Strategy and River Works Program.	Develop water management plans and works proposals. Develop management strategies. Flow regime change development. Infrastructure constraints studies. Development of wetland management plans.	Completed as per corporate plan.
Management of environmental entitlement under delegation from Minister for Environment.	Development of stream-flow management plans. Input into the Northern Sustainable Water Strategy development.	Background work completed. Has not started yet.

See also Investment areas 4 and 8

## Investment area 4 – Riparian and instream habitat and channel form

Report compiled by:

Wayne Tennant, Tom O'Dwyer, Christine Glassford, Rod McLennan

2006-07 investment: \$9.376 million (includes Investment in areas 3, 5 and 6).

Actions focused on improving the condition of rivers and streams will help achieve the Healthy Rivers, Healthy Communities vision set in 2003:

'Healthy rivers, streams, wetlands, floodplains and adjacent land that support a vibrant range and abundance of natural environments, provide water for human use, sustain our native flora and fauna and provides for our social, economic and cultural values.'

Strategic references:

- Goulburn Broken Regional River Health Strategy 2005-2015
- Victorian River Health Strategy 2002
- Our Water Our Future 2004
- Wetlands Strategy for the Goulburn Broken Catchment (Draft August 2003)
- Murray Darling Native Fish Management Strategy, Threatened Species Recovery Plans

RCTs for river condition listed in the Goulburn Broken Regional River Health Strategy (GBRRHS) act as reference points for measuring progress towards achieving this vision. Other results, such as those for environmental flows, biodiversity and water quality, should also be considered to understand the breadth of progress.

The following RCTs are modified versions of RCTs listed in the GB RRHS. (The form of these RCTs has been changed to help communication. The intent has not changed.)

- Prevent a decline in condition of all reaches in high value rivers and streams.
- Improve the condition of 30 percent of reaches of rivers and streams by 10 percent by 2015.

### Resource condition change from all factors since 2005



The condition of waterways seems to have stabilised and overall stream condition seems to no longer be deteriorating. Sites targeted for works have generally improved in condition.

### Strategy implementation targets achieved since 2005



Although the links between actions and RCTs have not been quantified, the GB CMA believes that RCTs will not be achieved until well beyond 2015 at current implementation rates. Expectations might have to be revisited.

The same impact of less than planned for funding on progress toward RCTs applies to non-works actions. Establishing long-term capacity to deliver changes, especially filling knowledge gaps, will be further progressed.

### 2006-07 performance targets



Achievements for riparian and instream activities in 2006-07 were variable because of the impact of the drought and the Drought Employment Program (DEP). Many of the engineering works were not progressed due to diversion of staff to implement the DEP. Conversely, many activities such as fencing and weed control were well above target levels due to the DEP work crews undertaking this work on priority streams. Overall, the work in the river health program was good for such an exceptional year.

### Works and extension outputs achieved



Major projects continued in the Broken River Basin under the Victorian Water Trust initiatives Healthy Rivers and Our Water Our Future. The emphasis was on the Broken River and Broken, Boosey and Nine Mile Creek systems.

Drought Employment Program work crews have carried out works along priority waterways (heritage rivers and icon sites) including fencing, woody weed removal, spraying, maintenance of revegetation sites and rubbish removal.

A Demonstration Reach Project for Macquarie Perch in upper Holland's Creek was established. Woody debris was reintroduced to the lower Broken River.

A number of projects have been achieved through the RiverConnect Project including:

- The GB CMA hosted 15 Australian National University fine art students, who visited Shepparton and depicted the Goulburn River through various art mediums. The work was presented during Water Week;
- Rehabilitation at Jordan's Bend started after bushfires in December;
- An audit of the secondary school curriculum in Shepparton and Mooropna explored how schools use the river as a resource and how it can be better utilised in the future;
- Students worked at Jordan's Bend and Reedy Swamp as part of the Victorian Certificate of Applied Learning;
- An Indigenous oral history project began; and
- Drought Employment Program works crews carried out works in the RiverConnect area including woody weed removal, spraying, building bird hides and collecting rubbish.

***Planning and responding; Knowledge; Relationships, partnerships and community capacity outputs achieved***

A review of the Lower Goulburn Waterway Plan and a review of the Kialla Streams Plan was completed.

Snapshot monitoring and detailed river assessments were undertaken and include:

- Monitoring native fish movement in the lower Broken Creek and following construction of fishways on the Broken River;
- Monitoring flora, fauna and water quality and channel morphology following flow regime changes in the Broken and Boosey Creeks;
- Monitoring Victoria's 'Index of Stream Condition' (included 15 annually monitored 'sentinel' sites first assessed in 2004 and 46 'new' sites);
- Assessing riparian projects in the Upper Goulburn Catchment using Index of Stream Condition, Vegetation Quality Assessment and Habitat Hectare methods.

The Minister approved the declaration of Water Supply Protection Areas for both the King Parrot Creek and the Yea River Catchments. The Resource Allocation Model (REALM) for both catchments was updated.

Staff contributed to statewide river health forums and product development processes, including the Victorian Waterway Managers' Forum and Co-operative Research Centre for 'eWater Product P6'.

A Crown frontage assessment was carried out on the Goulburn River from Lake Eildon to Gilmore's Bridge. A literature review of existing strategic documents associated with the management of the Goulburn River was completed.

A project brief was developed to conduct a social study to determine the effect that current practices of Crown water frontage landholders have on river health along the Goulburn River and to determine how the general community perceives the state of river health in the Goulburn Catchment.

The condition of 30 works sites on the Delatite, Jamieson, Howqua and Goulburn Rivers and King Parrot Creek were assessed for the third time to identify condition trends.

Woody debris that has been reintroduced into the lower Broken River was assessed in terms of contribution to instream diversity and flow variability.

Habitat preferences were designed, implemented and monitored as part of the assessment of the environmental impacts associated with commissioning of the Tungamah Pipeline.

Further investigations into the extent of *Cabomba caroliniana* in the Broken River and Broken Creek were conducted.

Rapid assessments of river health have been carried out in a number of the catchment's high priority rivers subjected to fire. Modified standard methods were used to score riparian condition, instream habitat and water quality at a number of sites on each of the Yea and Delatite Rivers, and the King Parrot, Seven, Broken, Holland and Hughes Creeks.

The protection of threatened aquatic and wetland species through implementation of recovery plans for Trout Cod (Seven Creeks), Macquarie Perch (Hughes Creek and Hollands Creek) and Barred Galaxias (upper Goulburn) continued to be supported.

Understanding of fish recruitment responses to restoration of the lower Goulburn River was improved. The movement dynamics and the reliance of native fish populations in the Goulburn River on River Murray recruits were investigated.

Investment and actions*		From funds received through Corporate Plan				
		Achieved			Target	% achieved
		2004-05	2005-06	2006-07		
Government investment*	\$,000	5,129	5,738	9,376	n.a.	n.a.
<b>Stock grazing action</b>						
A Fence wetland remnant	ha	24	6	22	21	105
B Fence stream/river remnant	ha	91	115	725	31	2,339
C Off-stream watering	no.	74	89	73	129	57
<b>Nutrient-rich and turbid water &amp; suspended solids action</b>						
D Stormwater management projects	no.	2	2	3	6	50
<b>Instream &amp; near-stream erosion action</b>						
E Bank protection actions	km	41	16	12	46	25
F Instream & tributary erosion controlled	km	916	502	19	25	77
<b>Changed flow-pattern action</b>						
G Water allocated eg wetlands	ML	266	510,000			
<b>Weed invasion action</b>						
H Weeds – aquatic weeds controlled (managed)	ha	21	33	39**	94	42
<b>Habitat loss management</b>						
I Vertical slot fishway	no.	3	1			
J Rock ramp fishway	no.	5	0			
K Fish barrier removal	no.	0	4			
L Establish Significantly Enhanced Aquatic Refugia	no.	17	1.3	2	11	14
M Construct new wetland	ha	3	0			





\* Many actions are undertaken via projects that are primarily aimed at achieving something else, such as water quality and biodiversity RCTs. Also, investment in riparian and instream habitat and bank stability contributes to other RCTs, especially those for water quality and biodiversity.

\*\* Target 94 ha, more than 9,000 ha achieved through Drought Employment Program

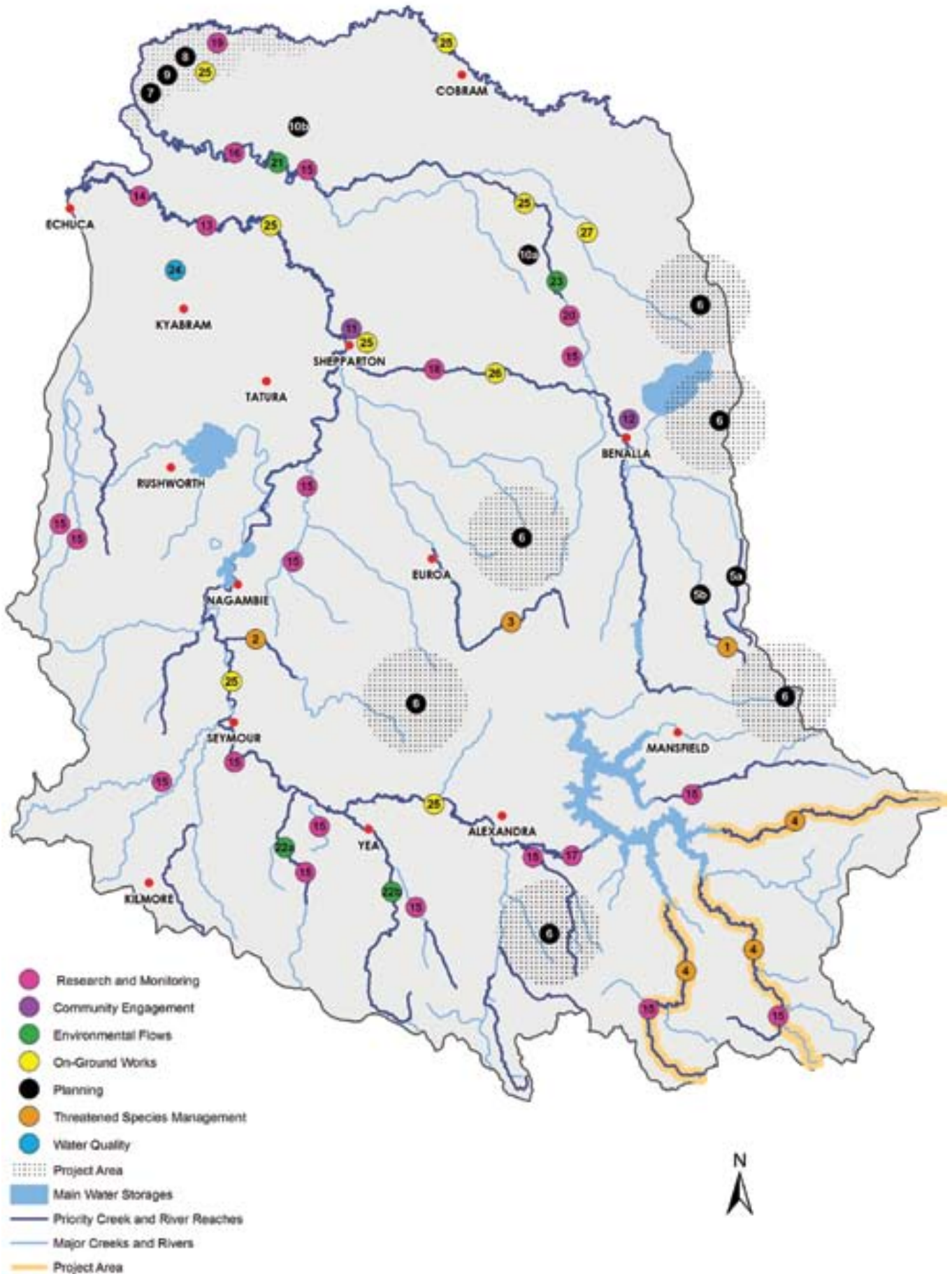
#### From Corporate Plan – Caretaker of River Health component\*

Key Result Area	Key Performance Indicator	Progress
Development and implementation of on-ground river restoration works programs.	Projects and studies delivered on time and within budget.	80% completed within measure.
Authorisation of works on waterways permits.	Respond within 30 working days of application.	80% completed within measure.
Referral Authority for any proposed works on or in relation to a dam.	Respond within 30 working days of application.	

\* See Floodplain protection component under Investment area 8

Outputs performance and progress against target	Resource condition change from all factors	Certainty of measuring
Well below (<50%)	Much worse	 Low
Below (50-79%)	Worse	 Medium
Satisfactory (80-109%)	Maintained	 High
Exceed (110%+)	Improved	 Very High

River health projects undertaken in high priority areas, 2006-07





Project Type	Project No.	Description
Threatened Species Management	1	Macquarie Perch demonstration reach on a branch of the Hollands Creek
	2	Macquarie Perch status assessment in Hughes Creek
	3	Investigation of the downstream movement of Trout Cod within Sevens Creek
	4	Implementation of the National Recovery Plan for the Spotted Tree Frog
Planning	5a	Ecological Risk Assessment for Ryans Creek
	5b	Ecological Risk Assessment for Hollands Creek
	6	Identification and mapping of peatland and spring soak wetlands
	7	Collection of an improved LiDAR data set for the Barmah-Millewa Forest to develop a digital elevation map and application of a hydraulic model
	8	Development of the Barmah-Millewa Icon Site Environmental Management Plan
	9	Development of options to improve fish passage past regulating structures in Barmah Forest
	10a	Our Water Our Future, Broken River Vision Project – Moodies Swamp flood regime determination study
	10b	Our Water Our Future, Broken River Vision Project – Murray Valley Drain 11 Complex management plan
Community Engagement	11	Public walks & talks at Jordan's Bend in Shepparton
	12	Improving flow and habitat in the Broken River - Three community initiatives (Rakali, Indigenous Gardens and Landcare Initiatives)
Research & Monitoring	13	Fish recruitment responses to restoration of the lower Goulburn River
	14	Movement dynamics and the reliance of native fish populations on River Murray recruits
	15	Index of Stream Condition – Sentinel Sites and Riparian Trend
	16	Research into the management, biology and impacts of azolla in the Broken Creek
	17	Assessment of Crown Water Frontages along the Goulburn River from Eildon to Thornton
	18	Commenced the application of the VEFMAP Framework to the Broken River and Goulburn River
	19	Waterbird survey with Yorta Yorta indigenous students at Barmah Forest
	20	Our Water Our Future, Broken River Vision – Research on the ecological impacts of flow regime reversal
Environmental Flows	21	Management of flows in Broken Creek and mechanical harvesting to reduce the impacts of azolla
	22a	Update of the Yea River resource allocation model
	22b	Update of the King Parrot Creek resource allocation model
	23	Our Water Our Future, Broken River Vision – Upper Broken Creek flow determination study
Water Quality	24	Goulburn Broken Dairy Nutrient Management Case Study Project: <ul style="list-style-type: none"> <li>• host farms have been identified</li> <li>• soil sampled and relevant data collated</li> <li>• EfMP's being finalised</li> <li>• soil sample results have arrived and are being used in Nutrient Management Plan</li> <li>• Northern Nutrient Management Plan template has been created</li> </ul>
On-ground Works	25	Drought Employment Program: <ul style="list-style-type: none"> <li>• employment of 72 farmers, farm workers and farm service providers for a six- month period</li> <li>• training (first aid, chemical users and OH&amp;S)</li> <li>• fencing of riparian land, weed control, water savings, construction of bird hides</li> </ul>
	26	Improving flow and habitat in the Broken River: <ul style="list-style-type: none"> <li>• habitat rehabilitation in three key reaches</li> <li>• construction of an urban wetland</li> </ul>
	27	Our Water Our Future, Broken River Vision - habitat rehabilitation for the Boosey Creek

## Investment area 5 – Water quality (nutrients) in rivers and streams

Report compiled by: Sue Botting, Wayne Tennant, Ken Sampson, Greg Smith, David Hodgkins, Carl Walters, Rod McLennan

2006-07 investment: \$203,000 (also co-funded in other investment areas e.g. 1, 2, 4 and 6)

Elevated nutrients have been identified as a high priority issue for water quality in the Goulburn Broken Catchment because they stimulate excessive algal growth. Phosphorus loads indicate for water quality in rivers and streams because it is a limiting factor in the development of toxic blue-green algal blooms and flow-dependant blooms of azolla which have been linked to fish deaths in the Broken Creek.

**Strategic references:**

- Goulburn Broken Water Quality Strategy 1996-2016
- Goulburn Broken Regional River Health Strategy 2005-15
- Surface drain water quality performance against targets – 3rd quarter 2006-07 (memorandum by Greg Smith)
- Review of Goulburn Broken Water Quality Strategy 1996-2016 (Brian Garrett and Associates 2001)

The Goulburn Broken Catchment community's goal for water quality set in 1996 and reviewed in 2002 is:

'Improve and maintain water quality at optimum levels within and downstream of the Catchment for native ecosystems, recreation, human and animal consumption, agriculture and industry.'

Targets for phosphorus loads are therefore reference points for progress toward this goal.

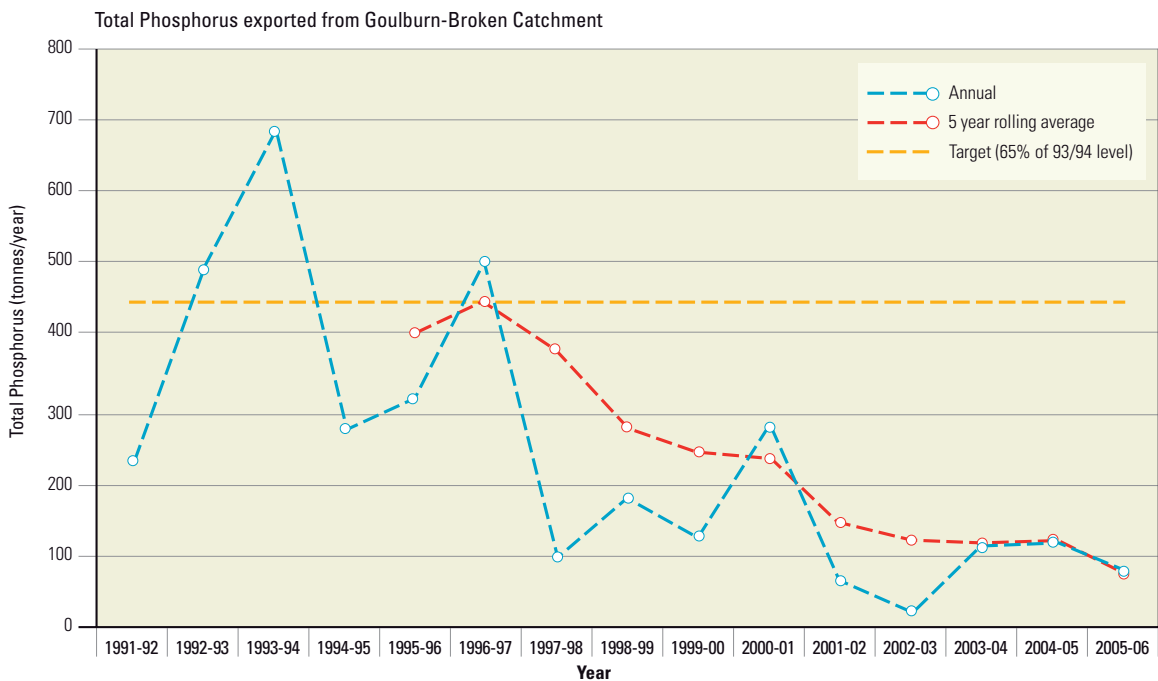
Resource Condition Targets set in 1996 are:

- Reduce potential phosphorus loads by 65 percent by 2016 by reducing phosphorus loads from:
  - irrigation drains by 50 percent;
  - dryland and diffuse sources by 20 percent;
  - wastewater management facilities by 80 percent;
  - urban stormwater; and
  - intensive agricultural industries and local water quality issues.

Targets were not set for nitrogen loads because the reduction of phosphorus and subsequent increase in nitrogen-to-phosphorus ratio was the strategy's emphasis. Opportunities to reduce nitrogen, particularly where they were associated with phosphorus reductions, were pursued if it was cost effective.

### Resource condition change from all factors since 1996

Phosphorus loads (five-year rolling average) from the Goulburn Broken Catchment are below the long-term targets. This currently equates to a reduction of 80 percent from the benchmark year of 1993-94. However, it has been influenced by extended drought, since 1997-98.

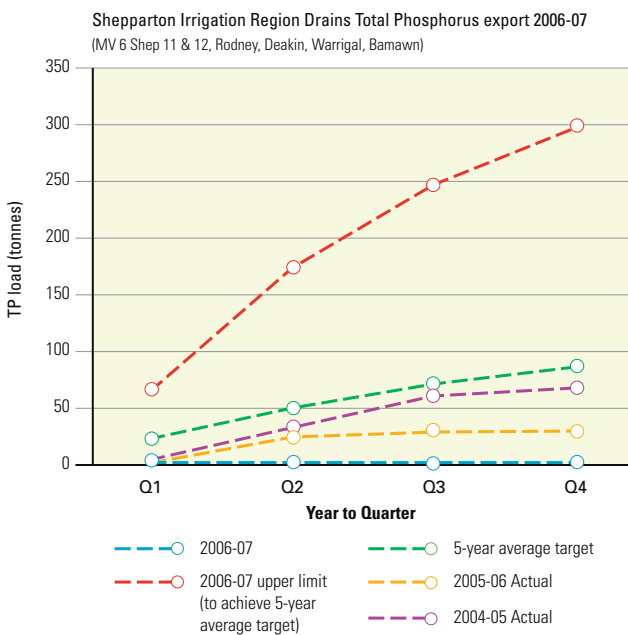


Notes: 2006-07 data could not be compiled for the graph to be updated in time to meet the deadlines for the Annual Report: 2005-06 data are the most recent available.

Estimated total phosphorus loads discharged from irrigation drains are still below the long-term target. The five-year rolling average has levelled out and remains well below target. This correlates with substantially lower volumes of drain flows. Statistical and trend analysis of irrigation drainage water quality and quantity, which has been undertaken every two years, shows significant declines in flows and nutrient loads leaving drains.

During 2005-06 less than 3 percent of water delivered into the SIR flowed out in drains. It is the fifth successive year the Goulburn Broken Catchment has been below long-term nutrient targets. It is an excellent environmental result.

Preliminary information from 2006-07 indicates a record low year for phosphorous from drains.



More graphs and notes associated with this graph can be found at [www.gbcm.vic.gov.au](http://www.gbcm.vic.gov.au)

Upgrading the region's wastewater management facilities resulted in the Wastewater Management Facilities Program meeting its targets by 2002.

**Strategy implementation targets achieved since 1996**

A new Water Quality plan is being developed in consultation with other CMAs and the DSE. The plan will align with the Regional River Health Strategy. It will also incorporate programs from the Goulburn Broken Water Quality Strategy 1996-2016 and the application of ecological risk assessments, which is required by State Environment Protection Policy (Waters of Victoria).

The review of the Water Quality Strategy 1996 in 2001 found that the program exceeded work targets. The most important was the establishment of water management facilities (which was many years ahead of schedule). It translated into significant reductions in phosphorus loads, again, many years ahead of schedule.

There has been significantly greater investment in communicating achievements of reducing phosphorus from irrigation drains. This has included development of a multi-agency memorandum of understanding (MoU).

**2006-07 performance**

**Works and extension outputs achieved**

Excavation work for the stormwater treatment wetland at Gordon Drive (Kialla Lakes) has started. Stages one and two are being delivered in partnership with the Greater Shepparton City Council.

The program was initiated to assess the cost benefit analysis of nutrient testing, mapping and budgeting. It involved field days, demonstration farms, soil analysis and community field days.

There has been ongoing support for Goulburn Broken (GB) dryland off-stream catchment protection incentives and ongoing riparian grants throughout the catchment.

**Planning and responding; Knowledge; Relationships, partnerships and community capacity outputs achieved**

Continued implementation of the ministerially-endorsed Goulburn Broken Regional River Health Strategy (GB RRHS) and regionally adopted Water Quality Strategy.

The mid-term review of Goulburn Broken Water Quality Strategy 1996-2016 continued.

Staff contributed to the statewide Water Quality Coordinators' Network and maintained involvement in the North East Water Quality Monitoring Network.

The Irrigation Drainage Memorandum of Understanding (IDMoU) with catchment partners (EPA, DSE, G-MW) was implemented, with development of Decision Support Systems (DSS) for establishing key performance indicator targets at receiving waterways and also management action targets to ensure progressive improvements in water quality.

Scoping for priority Ecological Risk Assessments was initiated. Priority areas under investigation are the Delatite and Mid Goulburn Rivers and Holland's and Ryan's Creeks.

Rapid assessments of river health were carried out in a number of the catchment's high priority rivers that were exposed to fire. Modified standard methods were used to score riparian condition, instream habitat and water quality at a number of sites on each of the Yea and Delatite Rivers, and the King Parrot, Seven, Broken, Holland's and Hughes' Creeks.

Outputs performance and progress against target	Resource condition change from all factors	Certainty of measuring
Well below (<50%)	Much worse	Low
Below (50-79%)	Worse	Medium
Satisfactory (80-109%)	Maintained	High
Exceed (110%+)	Improved	Very High

The Waterwatch Program provides educational and extension support to schools and communities. Highlights included:

- Almost 11,000 community members (mainly school students) participated in Waterwatch activities;
- 38 schools were involved in Catchment Capers;
- 150 trained community members collected water quality data from local waterways;
- 270 sites on the Goulburn and Broken Rivers and tributaries were monitored at least four times;
- 510 students participated at the two 'Matter of Salt' days at Seymour and Euroa;
- 4000 students and community people attended 25 performances by 'Vox Bandicoot';
- More than 700 students produced the Catchment Mural; and
- 500 entries received for school competitions.

Investment and actions*		From funds received through Corporate Plan				
		Achieved			Target	% achieved
		2004-05	2005-06	2006-07		
Government investment*	\$,000	221	203	203	n.a.	n.a.
<b>Stock grazing management action</b>						
A Fence wetland remnant	ha	24	6	22	21	105
B Fence stream/river remnant	ha	91	115	725	31	2,339
C Off-stream watering	no.	74	89	73	129	57
<b>Surface water<sup>^</sup></b>						
D Drain – primary***	km		***			
E Drain – community	km					
F Farm reuse system@	no.	65	70	56	65	86
G Drain – divert water	ML	1,350	235	75	570	13
H Irrigation systems – improved#	ha					
<b>Nutrient-rich and turbid water and suspended solids</b>						
I Stormwater management projects**	no.	2	2	3	6	50
<b>Instream and near-stream erosion</b>						
J Bank protection actions	km	41	16	12	46	25
K Instream and tributary erosion controlled	km	916	502	19	25	77
<b>Habitat loss management – wetlands</b>						
L Construct new wetland^^	ha	0	0	0	0	

\* Many actions are undertaken via projects that are primarily aimed at achieving something other than water quality targets, such as riparian health and salinity targets. (Through integration, water quality outcomes are also achieved through complementary projects.) Investment shown is for those funds dedicated primarily to achieving water quality outcomes, which are mainly for coordination and education (WaterWatch).

<sup>^</sup> Surface drainage enables the removal of excess rainfall run-off from irrigated lands, alleviating soil salinity. Nutrient loads collected by the drains are managed through drainage reuse and management plans, and monitored against the resource condition target (6.1.1).

@ Reuse dams allow for the collection and re-irrigation of high nutrient run-off, reducing the water and nutrient loads leaving the farm.

# Improved systems include laser grading, automatic irrigation and micro-irrigation.

\*\* Stormwater management projects are undertaken on a one-to-one funding basis with local government. Projects include gross pollutant traps at Asim Drive and Colliver Road in Shepparton and Lowry Street in Benalla.

<sup>^^</sup> 3 ha recorded in 2004-05 did not have any link to water quality RCTs.

\*\*\* 4.8 km of fencing and 2.3 km of laneways relocated along primary drains to control stock (Murray Valley Drain 13). 17.4 km of drains also hydro-mulched and seeded to provide vegetative cover on bare batters.

## Investment area 6 – Biodiversity

Report compiled by: Tim Barlow, Vanessa Keogh, Carla Miles, Rod McLennan

2006-07 investment: \$2.065 million

In accordance with the Australian and Victorian Government’s commitment to reverse the national decline in native vegetation extent and quality, the GB CMA has, over the last seven years aimed ‘... to secure the future of native species of plants, animals and other organisms within the Catchment’.

Strategic references:

- Goulburn Broken Native Vegetation Management Plan 2003 (updated the Native Vegetation Management Strategy 2000)
- From the Fringe to Mainstream – A strategic plan for integrating native biodiversity 2004-07

The Resource Condition Targets set to achieve this vision are:

- Maintain extent of all native vegetation types at 1999 levels in keeping with the goal of ‘net gain’ as stated in Victoria’s Biodiversity Strategy.
- Increase the extent of all endangered and applicable vulnerable ecological vegetation classes (EVCs) to at least 15 percent of their pre-European vegetation cover by 2030.
- Improve the quality of 90 percent of existing (in 2000) native vegetation by 10 percent by 2030.

In addition, a complementary target for threatened flora and fauna is to:

- Increase the 2002 conservation status of 80 percent of threatened flora and 60 percent of threatened fauna by 2030.

Further targets relating to the health of wetland and riparian biodiversity within the Catchment are discussed in ‘Investment area 4 – Riparian and instream habitat and channel form’.

### Resource condition change from all factors since 2000

A qualitative assessment suggests that biodiversity condition across the Catchment is no worse than it was in 2000, and arguably better in some respects. The amount of legal and illegal vegetation clearance has declined; many important sites have been purchased or covenanted for conservation; natural regeneration of woodlands is increasing; and considerable revegetation has occurred. Box-ironbark woodlands are better protected as a result of changes in land tenure and improved appreciation by the community. Environmental water allocations are being delivered to important swamps and floodplains, and eutrophication has diminished. However, large old trees that are of high significance for fauna, continue to decline in quality and number, and represent a major conservation concern. Threatened species, particularly woodland birds, continue to decline – a legacy of past land-use (clearance) that requires sustained action.

One of the greatest challenges facing biodiversity management is the difficulty in quantitatively measuring ‘biodiversity’ (compared with, for example, phosphorus in a river), and access to monitoring approaches that can readily measure any changes that are either attributable to management actions, or require management attention.





### Strategy implementation targets achieved since 2000

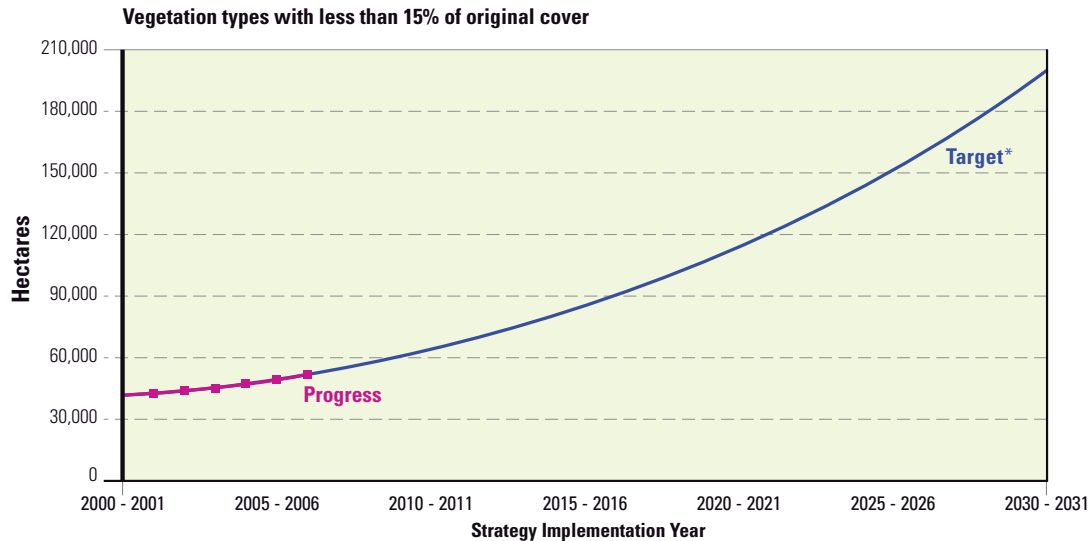
Increasing progress protecting and restoring native vegetation is being made to (see graph below). Importantly, ecological outcomes have been achieved with limited resources, larger sites have been targeted and landscape connectivity improved. Since 2000, 5,494 hectares has been secured by Trust for Nature’s covenanting and revolving fund program, and 1,188 hectares of threatened EVCs have been purchased for conservation through the National Reserve System program. Riparian and dryland revegetation (including Bush Returns) has resulted in 3,914 hectares of new vegetation being established. In addition to this, innovative approaches to achieving landscape scale changes continue to be developed. Market-based approaches, such as Bush Returns and Green Graze, where landholders nominate their own price for management activities in a competitive tender, have proven particularly effective in implementing large and ongoing, value-for-money biodiversity protection and restoration projects.

While progress has been made in protecting and restoring native vegetation, the graph below shows that the rate of progress must be sustained for the next couple of decades to reach targets. A difference is being made, but not yet at the rate required.

Progress is being made in making sense of available data to inform strategic thinking. For example, the ability to understand the effectiveness of actions has been improved by organising data on outputs and linking this to outcomes to produce the following graph. This prompts key issues that will be addressed in forthcoming reviews of the Strategic Plan for Integrating Native Biodiversity 2004-07 and the Native Vegetation Management Strategy 2003. An interim review of these major strategies indicates that most major tasks are on schedule or completed.

An increased ability to understand the effectiveness of actions has also prompted consideration of the appropriateness of RCTs for the next RCS. For example, rather than focusing on increasing cover of threatened Ecological Vegetation Classes to a fixed percentage of pre-European extent (RCT 3.2), it might be more appropriate to look at increasing vegetation cover in a way that increases the functionality of native vegetation (e.g. how useful it is for biodiversity in terms of size, connectivity and climate).

Outputs performance and progress against target	Resource condition change from all factors	Certainty of measuring
Well below (<50%)	Much worse	 Low
Below (50-79%)	Worse	 Medium
Satisfactory (80-109%)	Maintained	 High
Exceed (110%+)	Improved	 Very High



\* Resource Condition Target: "Increase cover of all endangered and applicable vulnerable Ecological Vegetation Classes to at least 15% of their pre-European vegetation cover by 2030".

Assumptions and notes associated with this graph can be found at [www.gbca.vic.gov.au](http://www.gbca.vic.gov.au)

Additional references: Goulburn Broken Biodiversity Condition and Values Report January 2007, Contact GB CMA Shepparton (Vanessa Keogh)

**2006-07 performance**



**Works and extension**

758 hectares of indigenous revegetation was established through natural regeneration (Bush Returns), direct seeding, or hand planting (environmental management incentives).

1,516 hectares of remnant vegetation was fenced to protect these sites from inappropriate grazing, assist water quality outcomes, and increase the chance of natural regeneration. The figure is substantially higher than previous years due to the outputs of the Drought Employment Program.

Trust for Nature secured 1,476 hectares of high priority vegetation through its conservation covenant program. An additional 128 hectares was purchased and incorporated into the National Reserve System, and 21 hectares of existing crown land was converted to conservation management.

The Bush Returns project promotes natural regeneration of native vegetation and has signed up four additional landholders to manage a further 40 hectares for natural regeneration. Melbourne University is continuing to monitor factors influencing natural regeneration at Bush Returns sites. This includes site, climatic and management factors.

'Green Graze', a NHT-funded project delivered under contract for the Commonwealth Department of Agriculture Forestry and Fisheries is designed to encourage ecologically-sensitive grazing of native pasture and protection of remnant vegetation on farms, has secured 1,189 hectares for improved grazing management and native vegetation outcomes.

A project designed to foster best practice in revegetation and vegetation management is continuing. This year has seen an emphasis on the management and expansion of seed production areas across the Catchment to ensure long-term supplies of seed for revegetation, and to relieve pressure on remnant plant populations.

A project to improve the identification and understanding of EVCs by key biodiversity stakeholders in the catchment is in progress. This involves the development of an electronic tool which will provide distinguishing features and examples of different EVCs.

A landscape-scale fox control program was implemented throughout the Broken Boosey Conservation Management Network area to help protect (particularly) the Bush Stone Curlew, Brolga and Carpet Python. This involved more than 100 landholders and public land managers and covering about 80,000 hectares.

A new (DSE funded) Conservation Management Network (CMN) is being established in the Goulburn Broken Goldfields (Whroo – Graytown Box – Ironbark district). This will build on the Broken Boosey model.

A range of projects were implemented focusing on improving the security and understanding of threatened species. For example, remote camera equipment to detect Spot-tailed Quoll has been purchased and will be deployed in Spring 2007. The Leary's Creek (Marysville) Barred Galaxias population was relocated to aquaria as a drought precaution (the creek did dry out in 2007). Captive breeding program for Spotted Tree-frog, and Mountain Pygmy-possum to build up restocking populations have also been initiated. A grazing management plan to maintain habitat for Golden Sun-moth at Mt Piper has been developed by DSE and Parks Victoria (PV).

A number of landholder field days focussing on the habitat of the Striped Legless Lizard have resulted in new populations being identified in the Upper Catchment.

DSE continued to develop the Victorian Native Vegetation Management Framework, including an extension program to assist local government with its implementation responsibilities.

**Planning and responding; Knowledge; Relationships, partnerships and community capacity outputs achieved**

Landscape Logic (Victorian Retrospective Study) – the GB CMA is involved in a multi-regional and multi-state Commonwealth Environmental Research Facility (CERF) project which aims to improve decision making and reporting capacity on landscape-scale change in native vegetation condition. The project will assist CMAs to identify links and interactions between management actions and RCTs to improve investment planning ([www.landscapelogic.org.au](http://www.landscapelogic.org.au)).

Vegetation Incentives Analysis – a comparison of various vegetation incentive programs operating in the Goulburn Broken dryland region was undertaken as part of the Dryland Landscape Strategy Project. The aim of the project was to objectively measure the performance of each of the relevant programs to provide a basis for improved planning and investment. Recommendations will be relevant for the next three years.

Assumptions Review – The assumptions used to report on progress towards biodiversity targets (i.e. linking outputs to outcomes) have been updated to reflect new information and thinking. One of the projects under way to improve assumptions is an analysis of how much native vegetation management activity is occurring on private land outside GB CMA funded activities, e.g., privately funded, land-use change resulting in natural regeneration or landholder participation in other programs outside of the Regional Management Plan. Currently we assume that as much activity is occurring outside of the GB CMA funded activities as within the Management Plan. However, this assumption will be far more accurate with results from this project, which will use a combination of spatial analysis and landholder surveys.

Biodiversity Visioning – As part of the Dryland Landscape Strategy Review, work continues on the development of a clear spatial vision of biodiversity assets, threats and priorities for the catchment. The outcomes of this work will contribute substantially to more targeted investment in the future and enhanced integration of programs. This work is being assisted through collaboration on an Australian Research

Council funded project with Monash University's Australian Centre for Biodiversity.

CSIRO is continuing research into the role of soil biota in revegetation, trialling the effectiveness of dual inoculation of rhizobia and mycorrhizal fungi in direct seeding.

Monash University's Australian Centre for Biodiversity Analysis, Policy and Management is researching tree hollow dynamics in floodplain woodlands ([www.biolsci.monash.edu.au/research/acb](http://www.biolsci.monash.edu.au/research/acb)).

Collaboration on two ARC-funded projects with Melbourne University ('Abiotic limitations to native plant restoration') and Monash University ('Quantifying landscape connectivity using genetic markers').

A feasibility study on plantation forestry on floodplains has shown there is considerable potential to develop privately-owned forestry operations on low rain-fall floodplains of the Murray and lower Goulburn, to assist transition of logging out of internationally significant wetlands.

Research and promotion of the ecology and management needs of spring soaks and perched bogs has resulted in increased community awareness of these important assets, with a number of landholders electing to exclude stock and/or place conservation covenants.

Continuing input into the development and implementation of the 'Actions for Biodiversity Conservation' database, which is managed and curated by DSE to guide effective implementation and monitoring of investment in threatened species recovery activity.

A CD/DVD package documenting sites of significance for threatened grassy communities and their management needs was produced by DSE Benalla.

Biodiversity Action Planning continues to be a strategic tool for the planning of Biodiversity works in the Catchment and has provided the basis for the roll-out of many projects. Carpet Python, Grassy Woodlands, Brolga and Bush-stone Curlew, provide the focus for a number of our projects.

Actions*	From funds received through Corporate Plan					
	Achieved			Target	% achieved	
	2004-05	2005-06	2006-07			
<b>Stock grazing management action</b>						
A Fence terrestrial remnant vegetation	ha	771	519	769	294	262
B Fence wetland remnant	ha	24	6	22	21	105
C Fence stream/river remnant	ha	91	115	725	31	2,339
D Binding management agreement (licence, Section 173, covenant)	ha	797	758	1625	1,300	125
E Grazing regime change**	ha			1,189	1,000	119
<b>Habitat loss management</b>						
F Revegetation – plant natives***	ha	1,055	1,294	758	832	91%

\* The outputs also include those achieved by complementary investment areas (SIR salinity, riparian and instream habitat and channel form, dryland salinity)

\*\* Output of the Green Graze Program.

\*\*\* Natural regeneration resulting from Bush Returns projects are included in this: 40 ha for 2006-07; 502 ha 2005-06; 158 ha for 2004-05.

Outputs performance and progress against target	Resource condition change from all factors	Certainty of measuring
Well below (<50%)	Much worse	Low
Below (50-79%)	Worse	Medium
Satisfactory (80-109%)	Maintained	High
Exceed (110%+)	Improved	Very High

## Investment area 7 – Climate change

Report compiled by: Tim Barlow, Rod McLennan  
 2006-07 investment: \$25,000

Climate change presents a new kind of challenge. The impacts of climate change are yet to be felt, or have been relatively minimal to date. However, it is very likely that trouble lies ahead.

Strategic references:

- Victorian Greenhouse Strategy 2002
- National Greenhouse Strategy 1998

Although it is expected the Catchment's climate will alter, (such that Shepparton's climate will become more like Condobolin in NSW), it is likely that increased climate unreliability, rather than a change in climate itself, presents the major challenge for NRM.

Fire management is an example that highlights the change in thinking needed. Hotter and drier conditions will prime forests for fire; more summer thunderstorms will increase lightning strikes, many resulting in wildfires; these fires may be more difficult to manage due to low relative humidity, and there may even be limits on water supplies available for fire suppression work. These fires will cause further drying of vegetation increasing susceptibility to wildfire, and reduce catchment water yield due to water uptake by regrowth. River health will be impacted by reduced flows and occasional heavy sediment loads during heavy rainfall.

The Shepparton Irrigation Region Implementation Committee's (SIRIC)'s 'Irrigation Futures' project has developed strategic approaches for different futures, particularly for the irrigation industries and water security. The experience gained through this work will be important in developing adaptive climate change strategies.

### Resource condition change from all factors since 2000

Climate change will impact on all facets of NRM, as has been seen in this year's severe drought and fires

Biophysical issues that are the focus of investment have been affected dramatically by the apparent shifting climate. This raises fundamental questions about future investment, including the science that underpins it. For example:

- Should investment continue into dryland salinisation if changing rainfall patterns are expected to have a far greater (positive) impact anyway?
- How much of the 1990 plan for salinity is needed to implement given changed circumstances including:
  - potentially reduced water allocations for irrigation resulting from changed rainfall patterns;
  - reduced leakage from farm and broader system water-efficiency improvements;
  - less water used in the region because of water trading out of the region; and
  - changes to the regional irrigation delivery infrastructure through reconfiguration and modernisation?

- In the face of climate change, what patterns of native vegetation are needed to allow migration of species to help secure the future of biodiversity?
- What is the trade-off impact of revegetating different parts of the landscape and the impact on water run-off (yield)?

The past 12 months have been the worst of a 10-year drought, with rainfall in 2006 the lowest on record for many parts of the Catchment. For example, Nathalia received just 146 mm for the year, compared to its long-term average of 463 mm.

Compounding the dry conditions were severe out-of-season frosts which wiped out entire crops heavily impacting on the horticultural industry and some cereal production. Emergency measures were implemented to salvage remnant populations of rare fish (Trout Cod, Barred Galaxias) from streams where flows had virtually ceased. The dry decade had a substantial influence on the magnitude of wildfires occurring in 2003 and 2006.

Reduced rainfall and recharge has lowered ground water levels and reduced discharge, but has also negatively impacted on river flows, water quality, and biodiversity values. Sustained dry periods have also threatened town water availability and irrigation security.

Strategy implementation targets achieved:

The GB CMA is clarifying its strategic objectives for climate change. The GB CMA promotes resilience and adaptation to climate change impacts.

### 2006-07 performance

A 2003 'directions paper' is under review. A draft Climate Change plan is in preparation.

The Goulburn Valley Greenhouse Alliance was established in collaboration with Resource GV. The alliance will involve all local governments in the Catchment in developing greenhouse gas abatement programs, primarily through implementing increased fuel and energy efficiency measures. The alliance will also help local governments to participate in the Cities for Climate Protection program and to develop comprehensive climate change/greenhouse gas strategies.

Climate change thinking is strongly influencing sub-strategy reviews being undertaken in preparation for the forthcoming review of the RCS.

Greater emphasis is being placed on the importance and development of major biolinks to allow for the movement of individuals and gene-flow between flora and fauna populations.

GB CMA personnel have initiated a 'Reducing our Footprint' program to promote greater energy efficiency and resource conserving behaviour within the organisation. Initiatives range from switching to more energy-efficient transport (including hybrid vehicles), battery recycling, and reduced power usage in the offices. The GB CMA has formed a partnership with Resource Smart, a Victorian Government pilot program to reduce energy and resource consumption, and encourage environmentally-friendly waste disposal practices.



## Investment area 8 – Flood protection

Report compiled by: Guy Tierney, Rod McLennan  
 2006-07 investment: \$379,000

The GB CMA coordinates the implementation of the Goulburn Broken Regional Floodplain Management Strategy. Following the completion of a number of floodplain management plans, responsible authorities are implementing the plan recommendations with funding through local, Victorian and Australian Government grants.

Strategic references:

- Goulburn Broken Regional Floodplain Management Strategy 2002

The vision set in 2002 to plan for and manage floods is:

“...to achieve best practice floodplain management for the benefit of current and future generations...”

To achieve this vision, understanding of engineering concepts such as hydrology (the study of rainfall run-off) and hydraulics (the study of water movement over terrain) is required.

This helps to better understand flood impacts on urban and rural communities. Once the consequences of flooding are understood, mitigation techniques are explored with the community. Options include flood warning and emergency management arrangements, structural solutions such as levees, and planning controls.

Two long-term targets have been proposed to provide measurable reference points of progress towards achieving the vision:

- Reduce the impact of flooding on the built environment; and
- Provide ecosystems with natural flooding patterns where appropriate.

Long-term change from all factors since 2002

Since 2002, the prolonged dry period has made flood damage negligible with the exception of significant flooding of the Barmah-Millewa Wetlands during 2005-06.

Floodplain Management Strategy implementation targets achieved since 2002

Implementation of the strategy is opportunistic and is subject to funding under Australian and Victorian Government incentives. The strategy has nine programs. An in-house review is shown below.

A technical model exists showing the benefits of investing in flood mitigation. A new model is under development, to better communicate with community members, targets set and progress made in reducing the cost of flood damage.



Flow through the Katandra Weir is monitored.

Outputs performance and progress against target	Resource condition change from all factors	Certainty of measuring
Well below (<50%)	Much worse	Low
Below (50-79%)	Worse	Medium
Satisfactory (80-109%)	Maintained	High
Exceed (110%+)	Improved	Very High

Program	% progress against tasks scheduled to be completed		
	by 2012	by 2007	Comments
1 Asset management	70	70	No further progress likely. A significant contribution to modelling of environmental water release of 510 GL to flood Barmah-Millewa wetlands was made.
2 Flood studies and floodplain management plans	60	80	All high priority studies are completed or progressing. Low priority studies are unlikely to proceed. Some lower priority studies have also been completed. Areas which have undergone major investigations since 2002 include Benalla, Shepparton, Nathalia, Tatura, Violet Town, Yea, Mansfield, Merrigum, Seymour, lower Goulburn, River Murray region, Barmah-Millewa and Numurkah. These complemented previous studies on the Broken Creek, Euroa, Seymour and Jamieson. Many study recommendations have been implemented. Numurkah Flood Study will start in 2007/08.
Floodplain works	70	70	Started to accelerate in 2006-07. Euroa, Benalla, Nathalia and Tatura are well under way as priority urban centres. Shepparton Mooroopna Emergency Flood Warning arrangement finalised. Works on Public Works Department levees carried out on behalf of DSE.
3 Statutory Land Use Planning	75	100	<p>Planning reforms gazetted into five municipal planning schemes, including updated mapping, strategic statement, schedules and local floodplain management plans for Campaspe, Greater Shepparton, Murrindindi, Mitchell and Strathbogie shires. Moira Shire is ready to advertise. These initiatives have helped to streamline planning referrals and remove the need for unnecessary referrals.</p> <p>100-year Annual Return Interval flood levels have been gazetted for Benalla, Euroa, Seymour, Shepparton and Mooroopna following public exhibition.</p> <p>Further flood level declarations gazetted for Jamieson, Mansfield, Yea, Merrigum, Tatura and Nathalia.</p>
Infill (improve) flood mapping	75	100+	<p>Priority areas surrounding urban centres have been included in most planning schemes. Flood mapping within most rural areas have been reviewed during planning scheme amendment exhibition. Considerable field inspection with community consultation has improved flood mapping.</p> <p>Improved flood mapping in remote rural areas is reliant on flood data capture including flood photography and flood levels. Lack of ground level data is the largest and most expensive impediment that prevents improved flood mapping. As more digital terrain information is captured, flood mapping improvements may follow. Given little demand on development in remote areas priority will remain low and unlikely to be reviewed. It is expected that new mapping including the River Murray and lower Goulburn regional areas will be ready for 2007-08.</p>
4 Development assessment guidelines	100	100	This is strongly linked to program 3. Ongoing reviews are needed.
5 Control of works and activities	N/A	100	This is no longer regarded as a program and it highlights the number of tools available.
6 Emergency response planning	20	100	The North East Regional Monitoring Network Agreement (2005) has largely resolved many of the issues listed in the strategy. Municipal Emergency Management Plans Flood Sub Plan requires significant work across the GB CMA.
7 Flood monitoring action	60	100	The Flood Response Action Plan requires urgent review and testing and this will be done in 2007-08.
8 Information management systems	50	100	New integrated Planning and Waterway System (iPAWS) geodatabase has been developed and installed in 2007 and is operational. New flood data Geographic Information System (GIS) layers have been installed as well.
9 Education and communication	30	100	<p>Has started, with an emphasis on Lake Mokoan. The program was widened with a heightened profile this year.</p> <p>GB CMA is leading the development of a statewide flood web-portal, with consultants to be engaged by June 2007.</p>

## 2006-07 performance targets\*

2006-07 included further implementation of:





- Benalla Rural City Council started a water (flood mitigation) scheme for Benalla (ongoing);
- Moira Shire Council started detailed design for flood mitigation works for Nathalia; and
- Greater Shepparton City Council started detailed design for mitigation works for Tatura.

Investment and Actions*		From funds received through GB CMA's Corporate Plan	
		Achieved	Performance* or progress in 2006-07
Government investment*		\$379,000	n.a.
<b>Integrating knowledge into planning</b>			
A Subdivisions	no.	300	Responded within statutory time frames to applications to the eight municipalities in the GB CMA 98.5% of the time.
B Dwellings	no.	370	
C Retail, Shop or Office buildings	no.	200	
D Planning amendments gazetted	no.	0	80% completed - Two planning scheme flood amendments were completed and gazetted. These included new mapping, exemptions and incorporated performance-based criteria documents.
E Flood levels declared	no.	6	
F VCAT and panel hearings attended	days	5	
G Flood warning systems arranged	no.	1	Broken Creek to Nathalia
H Planning, other		200	Includes whole farm plans.
<b>Gathering new knowledge</b>			
I Urban flood studies and management plans	no.	4	80% of tasks completed. (Grants are handled through municipal councils.)
J Regional flood studies and management plans	no.	3	85% of tasks completed.
<b>Creating awareness</b>			
K Flood education and awareness program	no.	2	Significant investment in raising awareness of flooding issues with Lake Mokoan. Statewide flood web-portal is being developed.

\* Most actions are performed reactively so no targets are set annually.

## From Corporate Plan – Floodplain component

Key Result Area	Key Performance Indicator	Progress
Floodplain Management: provide advice about flooding and controls on scheme amendments, planning and building approvals to local councils in the capacity as a referral authority: S55 of the Planning and Environment Act 1987.	Provide advice within 28 working days for referral/advice.	At least 95% provided on time.
Provide technical advice to councils and community on flooding.	Provide advice within 28 working days for referral/advice.	At least 95% provided on time.
Develop and coordinate implementation of Regional drainage management plan.	Provide %age of drainage management plan implemented.	None to date.

Outputs performance and progress against target	Resource condition change from all factors	Certainty of measuring
Well below (<50%)	Much worse	 Low
Below (50-79%)	Worse	 Medium
Satisfactory (80-109%)	Maintained	 High
Exceed (110%+)	Improved	 Very High

## Investment area 9 – Pest plants and pest animals

Report compiled by: Greg Wood, Lilian Parker, Wayne Tennant, Tony Kubeil, Tim Barlow, Rod McLennan

2006-07 investment: \$1.090 million

- Strategic references:
- Catchment and Land Protection Act 1994
  - Goulburn Broken Weed Action Plan 2001-05
  - Wild Dog Management in North East Victoria 2005-08
  - Goulburn Broken Regional River Health Strategy 2005-15
  - Victorian Noxious Weeds Review (2004 to present)
  - GB CMA Pest Animal Plan 2007-12 (in preparation)
  - Goulburn Broken Rabbit Management Action Plan 2000-05
  - Victorian Pest Management Framework 2002

Managing the impact of pest plants and animals on agriculture and the environment is a critical element of all NRM programs in the Goulburn Broken Catchment.

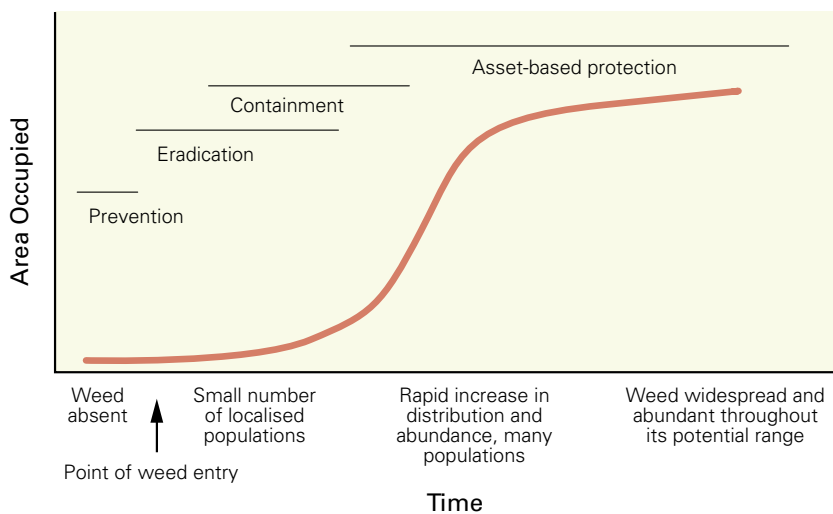
Private land managers make the most significant contribution to pest management, with strong support from the DPI and public land managers such as Parks Victoria and DSE Forests.

Private land managers target a wide range of pest species, especially those species that are well established.

DPI targets new and emerging weeds, Victorian priority weeds, established weeds, foxes, wild dogs and rabbits. DPI's emphasis, particularly in weed management, has shifted to new, emerging and highly threatening species. Many weed species may have a changed priority as a result of the Victorian Noxious Weeds Review.

The balancing of investment in pest management is guided by the following diagram:

**The four phases of a plant invasion** (derived from draft working papers from DSE 2007)



**New and Emerging Weeds:** The management approach is still being developed. Management plans have been developed for serrated tussock and ragwort and all known infestations are treated annually. Target species for the future will be driven by the results of the current Noxious Weed Review.

**Regional Priority Weeds:** Target species are gorse and blackberry. All known gorse satellite infestations are currently under management plans and are being treated annually.

In priority project areas, management plans for gorse and blackberry are developed for all affected properties and infestations of the target species are treated for containment or reduction.

Resource condition change from all factors since 2001



*Change in condition with respect to pest plants*



A number of extremely dry seasons contained the spread of established and new weed infestations. Improved access to many weed infestations because of the dry conditions, particularly along waterways, resulted in dramatically more effective control programs.

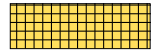
However, land managers need to remain vigilant because considerable quantities of drought fodder have been brought into the region, with the potential to introduce new weed species.

*Change in condition with respect to pest animals*

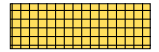


Despite extended dry periods and reduced income, land managers have been prepared to continue and even accelerate rabbit and fox control efforts across the Catchment.

Strategy implementation targets achieved since 2001



*Weed action plan targets achieved since 2001*



Our understanding of setting targets for weed management in 2001 was in its infancy and the targets were unspecific, which made it difficult to measure progress. Although new targets have not been formalised, the

GB CMA has continued to sharpen its approach and a new weed plan will be prepared in 2008-09.

The most important achievement has been promoting the message that preventing new weed establishments is more cost effective than dealing with them once they are established.

**State Prohibited Weeds:** All known infestations have been mapped, management plans have been developed and control works have been undertaken annually.

*Pest animal targets achieved since 2000*



As with weed management, understanding of setting targets for pest animals is in its infancy. The targets are unspecific, which makes it difficult to measure progress. Although new targets have not been formalised, the GB CMA continues to sharpen its approach and the GB CMA Pest Animal Plan 2007-12 (a pilot for Victoria that is being prepared) will include improved targets. The plan will also clearly define regional roles in pest management, monitoring and evaluation.

Wild dog programs have been quite successful. The wild dog program continues to operate around the Mansfield and Alexandra areas. Local Area Control Plans have now been developed in corporation with the North East Wild Dog Management Group and the general community. These plans will now guide the implementation of trapping and baiting activities. Fox and rabbit programs are a small component of government agency budgets and service is largely provided via community groups rather than to individuals. Community group demand for fox baits has grown over the last few years despite the extended dry.

**2006-07 performance**



**Weed Management Programs**



The new and emerging weeds project aims to stop introduction or establishment of new species. Infestations of state prohibited weed species were located and treated during 2006-07 and follow-up treatments will occur in subsequent seasons. More than 100 'Weed Spotters' (community and government agency volunteers) were registered and trained to report new infestations of high threat species. A high proportion of the region's retail and wholesale nurseries were inspected to make sure no high threat species are being traded or offered for sale.

Blackberry, gorse, serrated tussock and ragwort were targeted under the Victorian Community Weeds project.

Extension and compliance programs for gorse and blackberry started in the Merton, Home Creek, Swanpool, Creighton's Creek, Glenaroua, Girgarre/Stanhope, Invergordon and Dhurringile areas. DPI compliance activities will continue in these areas through next summer to ensure high levels of participation.

Serrated tussock is a major threat south of the Catchment. Surveillance ensures new infestations are treated before they become established. VicRoads is a key partner (as the major freeways and highways leading out of Melbourne are a primary pathway).

Only a few infestations of ragwort occurred in the Toolangi area and they were all treated during 2006-07.

The DPI's established weeds project helps communities manage well-established weeds. Weeds such as Paterson's curse and St. John's wort are widespread throughout the Goulburn Broken region and can only be effectively managed by well-coordinated community action. Many established weed species did not germinate due to drought conditions, so activity in the established weeds area was minimal.

The Cabomba Project Management Committee's 'Defeating the Weed Menace' proposal for Cabomba caroliniana was approved. This project is supported by the Noosa and District Landcare Group and Benalla Rural City Council.

The Rural Extension Program (REP) continued in a revamped format in 2006-07 as a partnership between Landcare groups, DPI and the CMA. This was achieved using State Second Generation Landcare funding.

**Pest Animal Management Programs**



Despite drought conditions, the level of pest animal management undertaken by landholders was extremely high.

DPI sold a record number of fox baits to private and public land managers and a number of broad-scale coordinated fox baiting programs were undertaken. One very successful project targeted the Broken Boosey area and involved more than 100 landholders.

The DPI rabbit management project was also well supported by landholders and Landcare groups. In the Strathbogie Ranges, a number of coordinated baiting campaigns achieved excellent results. Landcare coordinators play a key role in its coordination.

DPI implemented a rabbit compliance program in the Highlands area involving 70 landholders. Forty-eight work plans were issued, with only one landholder choosing not to be involved. Compliance entry was undertaken in that instance, requiring the fumigation of more than 400 burrows. The project area will be extended in 2007-08.



Outputs performance and progress against target	Resource condition change from all factors	Certainty of measuring
Well below (<50%)	Much worse	Low
Below (50-79%)	Worse	Medium
Satisfactory (80-109%)	Maintained	High
Exceed (110%+)	Improved	Very High

# Results details – The Business

The following investment areas apply across all of the GB CMA's activities, including investment areas listed under 'The Environment'.

- A Corporate and statutory operations**
- B Our people**
- C Planning and responding**
- D Knowledge**
- E Relationships, partnerships and community capacity**

## Investment area A – Corporate and statutory operations

Report compiled by: Stan Gibney, Bill O'Kane, Megan McFarlane, Rod McLennan


2006-07 investment: \$1.271 million

Strategic references:

- Goulburn Broken Catchment Management Authority Corporate Plan 2006-07
- DSE Assessment of Corporate and Statutory Costs, December 2005
- Governance Guidelines for DSE Portfolio Statutory Authority Board Members

Victorian Government funding for corporate and statutory operations enables the GB CMA to perform tasks required by legislation and detailed in the Statement of Obligations (SOO).

This includes the governance required to ensure works programs are managed in a financially prudent manner, within an agreed operational risk framework.

Long-term performance 





The GB CMA aims to fulfil its corporate and statutory obligations efficiently and effectively.

Costs and achievements are benchmarked regularly against those of peer organisations and similar industries and the ratio of tasks performed by employees in-house to those outsourced is also closely monitored. Benchmarking results according to the Department's assessment in 2005 indicated that the GB CMA compared extremely favourably with its peers. Costs are funded from a direct corporate grant plus interest earned with the balance recovered from a variable corporate charge to internal only projects of up to 3 percent. Corporate charges are not applied to community groups or other partners.

2006-07 targets achieved 

The GB CMA has performed all obligations for the past 12 months. (See 'GB CMA statutory responsibilities as a Victorian Statutory Authority and Employer' under Governance).

The ongoing improvement in information management, confirms the GB CMA's position as a leader of managing the business aspects of NRM (see also 'Investment area D – Knowledge').

Outputs performance and progress against target	Resource condition change from all factors	Certainty of measuring
Well below (<50%)	Much worse	 Low
Below (50-79%)	Worse	 Medium
Satisfactory (80-109%)	Maintained	 High
Exceed (110%+)	Improved	 Very High

## From Corporate Plan – indicators relevant to ‘Corporate and statutory operations’

Key Result Area	Key Performance Indicator	Progress
Manage the GB CMA's financial resources in a responsible and accountable manner.	Use of internal key performance indicators. Monitoring of fixed cost and on-ground works.	Well-developed policies and procedures. Strong internal controls in place subject to ongoing audit.
Optimise extent of funding grants carry-over.	Project management and forward projections of percentage of works completed.	Completed. Project management framework in place. Solvency levels monitored by managing outstanding commitments against funds carried forward plus future funding.
Ensure GB CMA meets obligations in line with Ministerial Directions under the Financial Management Act.	Comprehensive internal and external audit works program to ensure compliance.	Completed.
Accurate and timely reporting.	Monthly financial reports including cashflow projections are tabled. Detailed quarterly reports provided within agreed timeframes linking financial results to output achievements.	Completed on time.
Conduct business affairs of the Board in a manner consistent with best practice principles of corporate governance.	Adoption of DSE Corporate Governance Guidelines. Directors' approvals checklist. Review of policies and procedures, Board Charter.	Reviewed at least annually.
Develop, implement and review annual Corporate Plan.	Board and individual Director's performance reviews.	Undertaken annually.
Production of Annual Report to Minister for tabling in Parliament.	Time allocated within Board meeting for Corporate Governance and financial management training.	Ongoing.
Administration of State and Commonwealth investment in NRM program funds in the region.	Corporate plan prepared in accordance with Ministerial guidelines and submitted to Minister by 30 April each year.	Completed on time and submitted within the agreed timeframe.
	Comparison of actual results to Corporate plan.	See 'Results summary'.
	Favourable audit opinion from Auditor General.	Completed. See 'Independent Audit Report'.
	Projects delivered on time and in line with agreed outputs.	Achieved. See 'Outputs summary' and 'Results summary'.
Risk management: Apply a risk-based approach to planning, budgeting and decision-making processes.	Development and review of Risk Management Framework. Implementation of Risk Register.	Risk awareness is ongoing with a complete review of the Authority's risk profile undertaken at least every 3 years or when there is a major change in the Authority's operations.
Reporting: Maintain performance management and reporting procedures that ensure accountability to the Government and other stakeholders.	Responsibilities under Statement of Obligation. Continue to work with Government to have confirmed funding approvals on time.	Common business reporting system with all other CMAs developed using Microsoft Axapta (now MicroSoft Dynamics). Funding approvals sought for at earliest opportunity in the absence of which the Authority closely monitors current and projected solvency levels, with development of 'key trigger points' by which action must be taken.
Solvency: Seamless transition to new funding sources arising from conclusion of the NAP & NHT program funding in 2007-08.	Identification of dates as 'trigger points' by which replacement programs need to be confirmed or alternate plans are in place to protect the Authority's solvency.	Process in place for monitoring.

## Investment area B – Our people

Report compiled by: Kate Pendergast, Stan Gibney, Bill O’Kane, Rod McLennan

2006-07 investment: \$3.6 million (total GB CMA employee salaries); \$117,000 (human resource support and activities)

The GB CMA seeks to attract and retain talented staff and provide opportunities for them to develop while delivering our RCS.

Strategic references:

- GB CMA Workforce People Strategy (2005)
- Public Sector Management Act 2004 (various guidelines)
- Relevant Policies and Procedures

Reference points for helping to understand short and long-term progress are being listed in our People Strategy under two themes:

- 1 Capability
- 2 Organisational Culture

### Long-term strategy targets achieved

Our relatively stable workforce (particularly in senior management) has provided the continuity necessary for a strong and long corporate memory. Staff stability has also allowed the GB CMA to provide strong leadership within

Program	Progress		
	Tasks scheduled to be completed by 2009, %	Tasks scheduled to be completed by 2006-07, %	Comments
1. Workforce Planning	60	70	Attraction and retention of quality staff is a focus of current human resource planning.
2. Developing People	50	60	Inclusion of Learning and Development plans in all performance plans. Reporting to commence 2007-08 performance cycle.
3. Developing Leaders	70	70	Management and Leadership Development Program implemented.
4. Employee Relations	100	100	Human Resource Policy Framework developed and adopted and accessible to all staff on portal.  A full range of flexible work options promoted using models from organisations that have adopted best practice.  27- month enterprise agreement currently being finalised which reinforces the culture of flexibility and agility of the organisation.
5. Health & Safety	100	100	The GB CMA consolidated its Occupational Health and Safety (OH&S) management and focused on ensuring consultation with all levels of staff on OH&S matters, reflecting requirements under the Act.
6. Morale, Reward & Recognition	90	100	People Matter Survey completed. Exit Interviews completed. Team Health activities completed.
7. People Management	100	100	Management skills development program to improve skills and competency of those engaged in people management.

Progress toward 2006-07 targets

### People Matter Survey 2006

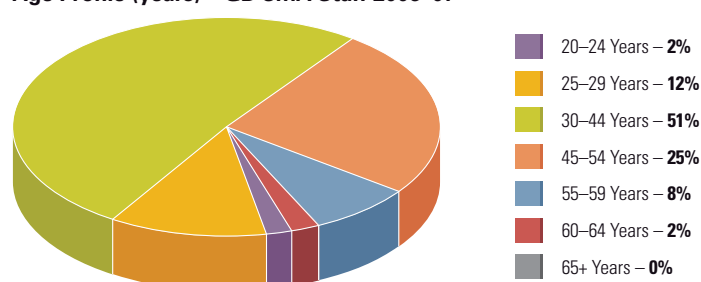
Element	Result/Comment	Summary of findings
Current Level of Job Satisfaction	Satisfaction above the sub-sector* average.	The level of staff satisfaction with the key elements of the culture and management of staff was in all areas above the sub-sector* average. Areas for further development identified were in growing the management skills of direct line supervisors. The focus on this area was also reinforced with feedback from exit interview processes.
Confidence in Leadership & Supervision	Satisfaction with leadership is above the sub-sector* average.	
Confidence in Application of the Values and Employment Principles	Staff are satisfied with the application of the values and principles.	
Commitment and Retention	The retention rates of the GB CMA are better than the sub-sector*.	

\* sub-sector is the water sector



Human resource demographics					
	2003-04	2004-05	2005-06	2006-07	Comment
<b>Gender and Employment Type</b>					
Part-time male	0	0	1	1	47% female; balance of employment type and gender satisfactory
Part-time female	4	9	9	9	
Full-time male	23	26	28	26	
Full-time female	16	17	17	15	
Total	43	52	55	51	
<b>Employment status</b>					
Fixed term			12	17	33% fixed term meets business flexibility needs
Ongoing			43	34	
<b>Age Profile</b> (years, by tally)					
20-24			1	1	Good age profile with a demographic that is younger than other regional Victorian public sector employers.
25-29			8	6	
30-44			26	26	
45-54			13	13	
55-59			6	4	
60-64			1	1	
65+ 0			0	0	
<b>Years of Service</b> (%)					
12 months or less			6	11	Tighter labour market might result in higher turnover in future as younger generation staff are expected to change employers more rapidly.
1-3 years			17	32	
3-5 years			11	14	
5+ years			21	43	
<b>Turnover</b>					
			4%	19%	Turnover influenced by structural change in organisation.
<b>Absenteeism</b>					
			1.8%	2.1%	
<b>Employment growth</b>					
	10%	28%	11%	-7%	
<b>Training expenditure</b> (% of salary budget)					
			2.2%	1.5%	

Age Profile (years) – GB CMA Staff 2006-07



## From Corporate Plan – indicators relevant to 'Our people'

Key Result Area	Key Performance	Progress
Develop and retain a skilled workforce.	Staff turnover ratios.	Higher than 7-10% target (19%; because of restructure).
Develop an innovative culture which utilises cost-effective new techniques and technologies.	Quantification of productivity savings.	Incorporated into 2007-09 Enterprise Bargaining Agreement

Outputs performance and progress against target	Resource condition change from all factors	Certainty of measuring
Well below (<50%)	Much worse	Low
Below (50-79%)	Worse	Medium
Satisfactory (80-109%)	Maintained	High
Exceed (110%+)	Improved	Very High

## Investment area C – Planning and responding

Report compiled by: Megan McFarlane, Rod McLennan, Bill O’Kane

2006-07 investment: Included as part of investment area A.

Planning and responding is a standard requirement for all investment areas. However, strategic planning, analysis and responding is needed to integrate plans, take advantage of opportunities and recognise emerging challenges. ‘Planning and responding’ is a new focus for this year’s annual report.

### Strategic references:

- Regional Catchment Strategy 2003-08 (and predecessors)
- Corporate Plan 2006-07 to 2010-11
- Update of GB RCS 1997-2003 Process review 2004
- GB Regional Catchment Investment Plan 2006-07

### Long-term performance

The GB CMA has a reputation for being a responsive, leading, innovative and action-focused natural resource manager. The regional community invested about \$2 for every \$1 in government funding, despite devastating circumstances from 2006-07. This provides evidence that implementation and development of GB CMA programs is highly relevant to community needs. As a result, the GB CMA has a high strike rate of attracting funds when project bidding processes are with open and transparent processes.

*“Some CMAs provide an infinitely greater volume of detail on their project outcomes and achievements than others. The Goulburn Broken CMA appears to be leading the pack both in this regard and in the sheer volume of its effective on-ground works.”*

– The Weekly Times editorial, 23 August 2006.

The first comprehensive integrated natural resource management strategy in Australia was developed by the Goulburn Broken community in 1990: the Shepparton Irrigation Region Land and Water Salinity Management Plan. Subsequent pioneering regional approaches in emerging fields were documented in the Goulburn Broken Water Quality Strategy (1997), Native Vegetation Management Strategy (2000), An Inventory of Ecosystem Goods and Services in the Goulburn Broken Catchment (2001) and the Strategic Plan for Integrating Native Biodiversity (2004).

Implementation and integration of these strategies occurs annually through various planning processes and documents.

The GB CMA has simplified and linked disparate planning demands from government funding agencies – Regional Management Plan, Regional Catchment Investment Plan, Corporate Plan, Regional Catchment Strategy, Monitoring, Evaluation and Reporting Strategy and the Annual Report. This has increased the clarity of planning processes and fostered community ownership of strategy development and implementation.

The GB CMA’s commitment to whole farm planning as a pre-requisite for government funding from the early 1990s was over a decade ahead of other areas in Australia. This approach was adopted in the GB dryland in 2003. Whole farm planning is a key entry level environmental activity for many land managers in the Catchment.

Research in 2005 in the south west Goulburn area, on dryland salinity processes, showed a major overhaul was needed. This was also evident elsewhere in Australia, and was the catalyst for a major review of all dryland issues. The review began in 2005 and will result in a Dryland Landscape Strategy in 2008. This strategy will have strong integration flavour, grappling with issues such as future land use and changing demographics and the trade-offs when managing water, salinity and biodiversity.

The GB CMA has developed close relationships with industry and academic institutions to ensure research and development is current and relevant (see Investment area D – Knowledge).

The GB CMA, its partner agencies and community leaders, have developed planning and management systems that enable the region to adjust rapidly to changing conditions and opportunities. The aim is to cultivate an agile organisation and responsive systems. Examples of rapid adaptation (some of which are explained in detail elsewhere in this report) include:

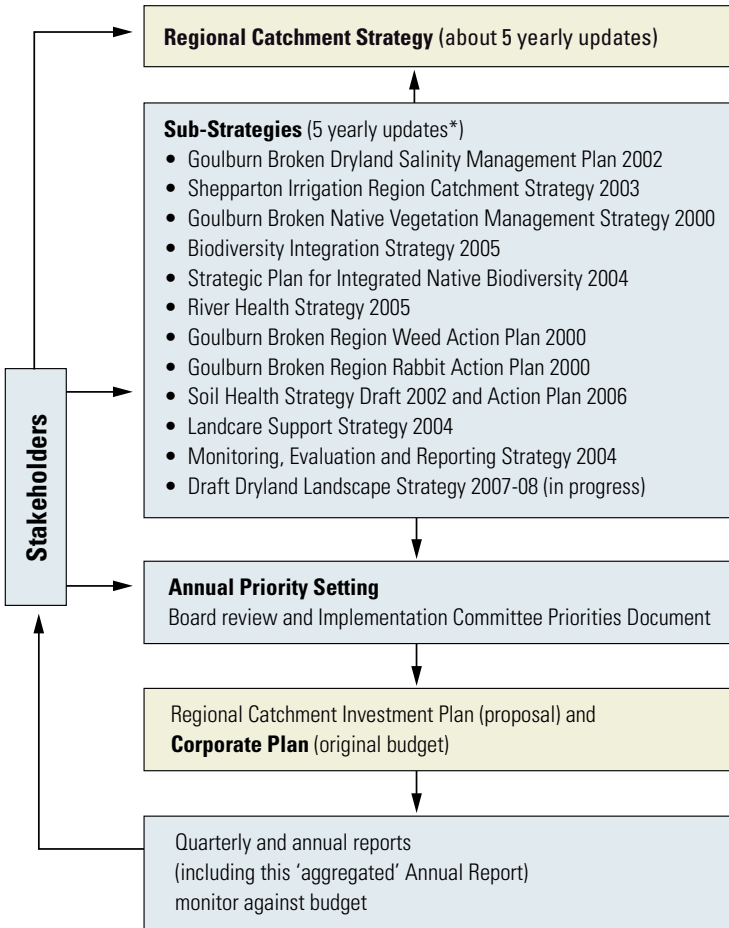
- The Drought Employment Program which provided full-time work for up to six months for farmers, farm hands and farm service providers, delivered extensive on-ground works in 2006-07;
- Input into the Foodbowl Alliance plan to upgrade irrigation infrastructure which was unveiled in 2007;
- Development of self-targeting, multiple-benefit incentives approach 2002 (Environmental Management Incentives);
- Bush Returns (started 2004) and Green Graze (2006-07). These market-based grant schemes involve landholder agreements to secure large-scale, ongoing management change to improve native vegetation. Green Graze, one of five national pilots funded by Department of Agriculture, Forestry and Fisheries, builds on learnings from Bush Returns and Farm Business and Biodiversity projects, funded by Australian Wool Innovations and Land and Water Australia; and
- The Broken Basin Vision, a three-year initiative now in its final year, aimed to improve the health of the Broken River floodplain. This was a large-scale, multi-agency plan with extensive community input.

There are increasing opportunities for the GB CMA to access funding sources that are outside the normal base funding programs (often known as initiative funding). However, having the resources to attract such funding can be costly, particularly for a lean organisation. Therefore the region attempts to analyse likely success rates, the scale of funding available and other approaches (such as partnering) in order to efficiently manage attracting funding in an increasing bureaucratic environment. The downsides of having increasing numbers of funding sources are confusion and complexity, alienation of regional and local organisations, fragmentation of resources, inefficiencies and non-strategic (or priority) activities being funded.

Community groups struggle to keep up with the large numbers of funding sources available. They have less capacity to analyse all the funding sources, let alone spend time applying and managing increased administrative requirements. The GB CMA aims to simplify the process for community groups to apply for funding through the GB CMA (such as having a two-page Expression of Interest form). The GB CMA’s role is also to convey to governments that excessive bureaucracy and a confusing number of funding programs discourages volunteer community groups to take part in natural resource management.

A review of approaches in all investment areas will feed into the update of the RCS in 2009.

**Indicative planning framework that links long-term RCS to annual Corporate Plan.**



\* Each of the major strategic approaches undergo periodic review.

**2006-07 performance**

The original Corporate Plan budget for the year increased 14 percent or \$3.8 million from \$27.1 million to \$30.9 million (\$28.2 million excluding contributed capital of \$2.45 million and asset sales of \$0.25 million). This was largely due to the receipt of just over \$3 million for the Drought Employment Program and \$0.3 million for related stock containment grants.

Under the State Government's Drought Employment Program, 72 farmers, farmhands and farm service providers were employed for up to six months. This Program received a funding boost of \$1.0 million through the sale of environmental water reserve released from Eildon to irrigators. About 2,703 ML of water under the Goulburn Water Quality Allowance was used to flush the Broken Creek.

GB CMA Board members, staff and staff from partner agencies have played a major role in implementing parts of the amended Water Act as a result of the state government's white paper on water, through consultative committees and technical groups. GB CMA staff played a lead role in revising irrigation development guidelines.

Recent discussions on Victorian Government directions towards NRM land stewardship, as described in the call for submissions on land and biodiversity at a time of climate change, is in line with Goulburn Broken regional community work over the last two decades. The GB CMA has been working on a Dryland Landscape Strategy over the last 18 months that aims to be in line with new government directions.

The RiverConnect Project continued to attract attention in the urban and rural communities around Shepparton.

The project has struck a chord with a number of influential partners including the City of Greater Shepparton Council, Yorta Yorta Joint Body, Parks Victoria, Goulburn Murray Landcare Network and educational institutions.

**From Corporate Plan - indicators relevant to 'Planning and responding'**

Key Result Area	Key Performance	Progress
Develop an annual Regional Management Plan (RMP) in line with RCS objectives.	Development of Regional Catchment Investment Plan (RCIP) and finalisation of RMP within agreed time frames for inclusion in Corporate Plan.	Completed on time.
Annual review and identification of issues affecting RCS objectives.	Annual review to measure progress against targets in RCS.	Completed. Information contained in this report.
Review RCS every 5 years to ensure relevance and test assumptions.	Undertake appraisal of review of previous RCS.	Guidelines not available until after the White Paper on 'Land and biodiversity at a time of climate change'. Some planning underway.

Outputs performance and progress against target	Resource condition change from all factors	Certainty of measuring
Well below (<50%)	Much worse	Low
Below (50-79%)	Worse	Medium
Satisfactory (80-109%)	Maintained	High
Exceed (110%+)	Improved	Very High

## Investment area D – Knowledge

Report compiled by: Rod McLennan, Mark Cotter, Megan McFarlane, Bill O’Kane, Annie Squires

2006-07 investment: Included as part of investment area A.

**Strategic references:**

- Monitoring, Evaluation and Reporting Strategy for the Goulburn Broken Catchment 2004
- IT Strategic Plan 2005-08

Communicating, managing and acquiring knowledge are becoming increasingly complex tasks. This is due to:

- An increase in data availability as a result of the information age;
- Community desire for increased transparency and accountability;
- Rapidly changing agency personnel within and outside the catchment;
- Rapidly changing land ownership;
- A changing emphasis of the CMA’s activities in response to a shifting climate; and
- Centralised government bureaucracies wanting to know region’s knowledge needs.

‘Knowledge’ includes information technology and management; monitoring, evaluation and reporting; succession planning and research and development. This is a new focus in this year’s Annual Report.

Knowledge is managed in the various disciplines that make up NRM. Each discipline has evolved its own approach over several decades to monitor, evaluate and report on, research and develop, and communicate its programs.

Integrated catchment management involves decisions based on information from different disciplines, such as salinity, biodiversity and sociology. Presenting information from these disciplines so that benefits and trade-offs are well understood results in better decisions and helps build trust between the community, agencies and government investors. The GB CMA is developing a structured approach to knowledge management for each of the discipline areas to adopt. Much of this structure includes elements advocated in various national and state policy documents.

### Long-term performance

The ‘Monitoring Evaluation and Reporting (MER) Strategy 2004’ lists actions of a general MER capacity building nature. Significant progress has been made, although many actions are ongoing. The following table shows a summary of progress in implementing the GB MER Strategy.

MER Strategy action area	Progress of actions scheduled to be undertaken by 2007	
	% done*	Comments
1 Participative decision-making	90	<ul style="list-style-type: none"> <li>• Targeted engagement process developed and is being adopted as components are reviewed to update the RCS in 2009.</li> <li>• Feedback loops included in project management frameworks, including this annual report.</li> </ul>
2 Community and industry MER activities	80	<ul style="list-style-type: none"> <li>• Large efforts in 2005-06 and 2006-07 to separate and link information between government agencies, regional decision making, community groups, land managers and the general public.</li> <li>• This Annual Report reflects an additional step in this convergence of information, tying the Victorian Government’s Statement of Obligations Key Performance Indicators against the GB CMA’s major investment areas.</li> <li>• Ongoing and new partnerships with industry and academic researchers have helped to keep the region at the forefront of evaluative thinking. Partners include Murray Dairy, Australian National University, Arthur Rylah Institute, and the University of Tasmania, CRCs.</li> </ul>
3 Data knowledge and quality – environment, economic, social and institutional	100	<ul style="list-style-type: none"> <li>• Great progress in linking often uncertain understanding of complex issues to the reality of business management. The McLennan O’Kane formula: ‘Outcomes = Assumptions x Outputs’ provides the structure to map the vast amounts of knowledge still needed.</li> <li>• Significant progress has been made in several disciplines e.g. ‘Biodiversity Monitoring Action Plan’ (2006).</li> <li>• A targets information gap summary based on the national ‘matters for target’ was prepared in 2006-07. We have built upon our consolidated list of works ‘outputs’ that appeared in the past three annual reports and have provided explicit ratings and discussion of progress towards targets.</li> <li>• Consistency in MER is critical in integrated decision making. The GB CMA has led the development of output standardisation and resource condition target reporting to greatly assist this.</li> </ul>
4 Project and issue management	70	<ul style="list-style-type: none"> <li>• The structure of this Annual Report, initiated in 2005-06, shows how the GB CMA’s business structure and associated performance indicators are being aligned to more accurately reflect its role: to deliver environmental outcomes efficiently and in a socially responsible way.</li> <li>• Government funding agency data demands generally remain relatively unrefined and require close scrutiny and involvement of GB CMA staff.</li> </ul>
5 Database management and information exchange	70	<ul style="list-style-type: none"> <li>• Opportunities from improved information technology (especially internet-based data) is expected to result in far greater accessibility of meaningful information during 2007-08.</li> <li>• This ‘knowledge’ report is part of the GB CMA’s striving to extract synergies by converging information needs of information technology, monitoring, evaluation and reporting, and research and development disciplines.</li> </ul>

\* Estimate from commentary and ratings of progress updated 16 January 2007.

The IT Strategic Plan 2005-08 ensures that information technology (IT) is positioned to support GB CMA's Corporate Plans through the alignment of business objectives to IT projects. The following table shows a summary of progress in implementing the IT Strategic Plan 2005-08.

The following table shows expenditure on implementing the Information Technology Strategy.

2005-06	\$102,000	budget
2006-07	\$156,900	budget
2007-08	\$143,500	forecast budget for 2007-08

IT Strategy	Progress against tasks to be completed		
	during 2006-07	by 2005-06 or 2006-07	Comments
<b>Data</b> (Initiatives to improve the quality and availability of data to all users regardless of their location)	100	80	<ul style="list-style-type: none"> <li>The Data Audit undertaken in 2005-06 highlighted several key areas for improvement - electronic document management and GIS Data Management. These are being addressed through the current EDMS project and GIS Strategy initiatives during 2006-07 and 2007-08.</li> <li>Mobile Data improvements have been achieved through the use of DPI/DSE application MYFOL which utilises hand held devices with GPS for data collection and management of waterway grants."</li> </ul>
<b>Infrastructure</b> (Network and Hardware installation and upgrade/improvement projects)	110	110	<ul style="list-style-type: none"> <li>An IT Capacity Planning exercise was undertaken in 2005-06 and this continues to be reviewed as an ongoing project.</li> <li>Key recommendations from the Communications Review in 2005-06 has resulted in upgrades to data links between offices and deployment of secure systems to enable staff to have remote access to the corporate data network during 2006-07.</li> <li>Additional IT resources enabled early completion of the Standard Operating Environment project.</li> </ul>
<b>People and processes</b> (Initiatives to review and improve current work practices to improve effectiveness and efficiency)	100	75	<ul style="list-style-type: none"> <li>The Information Technology Disaster Recovery Plan (subset of Business Continuity Plan) was developed in 2005-06 and further refined during 2006-07.</li> <li>GIS Strategy (2005-06) initiatives are providing a framework and resources to improve data management and training in this area.</li> <li>IT Skills training was undertaken in-house during 2006-07 to coincide with relevant software upgrades. This training program will continue during 2007-08.</li> <li>Completion of several low priority projects (Service Level Agreements and Workflow/Process Mapping) was deferred to 2007-08.</li> </ul>
<b>Total</b>	<b>105</b>	<b>89</b>	

#### 2006-07 targets achieved

Knowledge highlights are reported under each investment area and demonstrate progress towards a consistent approach including: Biodiversity Action Plans finalised and being implemented with partner agencies;

- Key Performance Indicator Annual Report for Sub-surface Drainage Program in SIR; and
- Website upgrade (provides access to information referred to in this Annual Report).

See [www.gbcma.vic.gov.au/publications/annualreport/2006-07/](http://www.gbcma.vic.gov.au/publications/annualreport/2006-07/) for further reports:

- 2007 GB MER Scoreboard
- MER Strategy Action Plan Implementation Report
- Targets information gap summary
- Biodiversity Action Plan
- Key Performance Indicator Annual Report for Sub-surface Drainage Program in SIR

Outputs performance and progress against target	Resource condition change from all factors	Certainty of measuring
Well below (<50%)	Much worse	Low
Below (50-79%)	Worse	Medium
Satisfactory (80-109%)	Maintained	High
Exceed (110%+)	Improved	Very High

## Investment area E – Relationships, partnerships and community capacity

Report compiled by: Ken Sampson, Lilian Parker, Bruce Cumming, Rick Felton, Megan McFarlane, Bill O’Kane, Neville Atkinson, Rod McLennan, Wayne Tennant, Scott Morath

2006-07 investment: \$1.490 million.

### Strategic references:

- Goulburn Broken Community Landcare Support Strategy 2005-2010
- Goulburn Broken Monitoring Evaluation and Learning Plan
- Goulburn Broken Landcare Annual Performance Story 2005/06
- Shepparton Irrigation Region Implementation Committee Communication Strategy
- Goulburn Broken Communication and Community Engagement Plan for preparing the RCS (draft 2007)

Most investment in natural resource management is controlled by individuals and organisations other than the GB CMA, so there is a heavy emphasis on targeted engagement and partnerships with government and philanthropic funders, community groups individuals and politicians.

Nurturing relationships and partnerships can be challenging due to an extremely diverse population of 200,000 people including 6,000 Indigenous Australians (many of them from the traditional Taungurung and Yorta Yorta Nations). In the Catchment’s north, original settlers from the British Isles have been followed by migrants from Greece, Italy, Turkey, Iraq, Afghanistan, India, the Republic of Congo and many other countries. The Iraqi community alone numbers 6,000.

Three geographically-based implementation committees (ICs) play a pivotal role in establishing the most effective and efficient ways of engaging communities, providing a conduit between the community and the GB CMA and its Board of Directors. The Board appointed Upper Goulburn, Mid Goulburn Broken and Shepparton Irrigation Region ICs comprise community representatives and non-voting members from partner agencies.

IC works programs reflect priorities of the Regional Catchment Strategy and are delivered by the GB CMA and partner organisations notably DPI, DSE, G-MW, Landcare and local government. ICs receive strategic and administrative support through the GB CMA to undertake their responsibilities.

Based on extensive community engagement, the ICs develop locally meaningful sub-catchment strategies, prioritise works programs and monitor implementation of integrated NRM programs in their areas. (See the quantities of work undertaken in the ‘Performance Summary.’

Waterway Working Groups for each of the implementation areas also draw in skills and networks of community members with a particular interest in water, river health and recreational issues.

## Mid Goulburn Broken

The Mid Goulburn Broken Implementation Committee (MGBIC) is responsible for the implementation of the GB CMA’s Regional Catchment Strategy in the Mid Goulburn Broken area. Some of the main functions are integration of the various sub-programs, community and stakeholder engagement and overseeing the roll-out of the annual programs. Many activities are conducted jointly with the other dryland Upper Goulburn Implementation Committee (UGIC).

## Shepparton Irrigation Region Implementation Committee

The Shepparton Irrigation Region Implementation Committee (SIRIC) plans and delivers an \$18 million annual program funded by the Victorian and Australian Governments through programs including Our Water Our Future, National Action Plan for Salinity and Water Quality and the Natural Heritage Trust (NHT).

The continued success of SIRIC is due to strong community links, partnerships with other agencies, local, state and federal governments, Landcare, Goulburn Murray Landcare Network and via Local Area Planning. As well as taking an integrated approach to NRM.

Working groups cover the four program areas overseen by the IC – Farm and Environment; Sub-surface Drainage; Waterways and Surface Drainage. The groups comprise agency staff and community members including representatives from G-MW, Water Services Committees, the Victorian Farmers Federation (VFF), local government and environment groups.

The Shepparton Irrigation Region IC receives support from an Executive Support Team, and agency staff provide technical input through a Technical Support Committee and project teams.

## Upper Goulburn Implementation Committee

The UGIC is responsible for the implementation of the GB CMA’s Regional Catchment Strategy in the Upper Goulburn area. Some of the main functions are integration of the various sub-programs, community and stakeholder engagement and overseeing the roll-out of the annual programs. Many activities are conducted jointly with the MGBIC.

## Summary of relationships between GB CMA Implementation Committees and partners

<p>Multiple agency, community groups, individuals</p>	<ul style="list-style-type: none"> <li>• A Catchment Partnership Memorandum of Understanding was signed during 2006-07 to acknowledge the major partners' ongoing commitment to work together for the environment. Signatories were GB CMA, G-MW, DSE, DPI and EPA Victoria.</li> <li>• RiverConnect was initiated by the GB CMA in the Shepparton-Mooroopna area in 2005 and the Steering Committee includes representatives from the GB CMA, City of Greater Shepparton, education, the aboriginal and broader communities, Goulburn Murray Landcare Network, Parks Victoria, DSE Forests and DPI.</li> <li>• Diverse activities such as tree planting projects, fish circuses, drought breakfasts, and strategy development, involve equally diverse groups such as Landcare, GB CMA, DPI, Rotary, MDBC, local government, Goulburn Valley Water, Trust for Nature and Goulburn Valley Resources.</li> </ul>
<p>Individuals</p>	<ul style="list-style-type: none"> <li>• Extension advice and 756 incentives were provided to land managers via agency partners.</li> <li>• Programs tailored to working with individuals and their needs.</li> </ul>
<p>Indigenous people</p>	<ul style="list-style-type: none"> <li>• Indigenous participation is being increased across the three ICs through the fostering of mutual understanding and trust between the wider and Indigenous communities by our Indigenous facilitator who was appointed in 2005. This is occurring through formal and ad hoc involvement of the Indigenous facilitator in various forums, such as the Gemmill's Swamp Steering Committee and the Barmah Indigenous Biodiversity Project. There is separate Indigenous representation of the Taungurung people on the Upper Goulburn Waterways Working Group.</li> <li>• The Indigenous facilitator liaises with a broad range of works program planners and on-ground supervisors.</li> <li>• Close links with the Yorta Yorta Joint Body are provided by the Indigenous facilitator.</li> <li>• The Indigenous facilitator chairs the Aboriginal Participation Working Group of the RiverConnect Steering Committee. The RiverConnect project is making huge steps in conveying Indigenous knowledge and understanding to the broader community in the Shepparton area.</li> </ul>
<p>Landcare and community groups</p>	<ul style="list-style-type: none"> <li>• Landcare has been identified as a priority organisation supported by the dryland ICs.</li> <li>• Implementation of Community Landcare Support Strategy through eight facilitators and coordinators, one Regional Landcare Coordinator, National Landcare Program Facilitator and Regional NRM Facilitator. Projects include grants on the gateway, weeds road shows, biological soils farm courses and field days, dung beetle field days, history of Landcare in the GB, and a wine grower NRM course and local area planning in the dryland and funding seminars.</li> <li>• Twenty-seven groups and three networks in Upper Goulburn, 28 groups and 3 networks in Mid Goulburn Broken. Links with Goulburn Murray Landcare Network in SIR – 48 groups.</li> <li>• Community Catchment Education and Awareness Grants.</li> <li>• Implementation of 8 Local Area Plans in SIR. Evaluation report for review done.</li> <li>• Land management directories have been reviewed with local government.</li> <li>• Support for school cluster projects on wetlands, biodiversity and threatened species.</li> <li>• UGIC sub-catchment meetings with community groups including Landcare, environment groups, field naturalists and recreational groups in each shire.</li> </ul>
<p>Local government</p>	<ul style="list-style-type: none"> <li>• Three local governments (City of Greater Shepparton, Moira and Campaspe Shires) contribute to, and are represented by, the Municipal Catchment Coordinator on SIRIC and various forums. SIRIC has annual meetings and annual briefings at each municipality.</li> <li>• GB CMA Board Directors are councillors on Moira and Murrindindi municipalities.</li> <li>• UGIC holds sub-catchment meetings with each local government (Mitchell, Murrindindi and Mansfield Shire Councils).</li> <li>• CMA representatives (Implementation Committee Executive Officers) on Murrindindi Shire Council and Benalla Rural City drought and fire recovery committees.</li> <li>• UGIC is represented on Mitchell Shire Council's Environment Committee and Murrindindi Shire Environment Advisory Committee.</li> <li>• CMA and IC representation on Murrindindi Shire Rural Living Guidelines reference committee, Tackling Weeds on Private Land project steering committee and Rail Trail Advisory Committee.</li> <li>• Direct liaison at project level is enhanced by at least one environment officer at each local government.</li> <li>• Regular and ad hoc meetings between CMA staff, ICs and councillors and senior staff.</li> </ul>

**Summary of relationships between GB CMA Implementation Committees and partners (cont.)**

<p><b>Department of Primary Industries</b></p>	<ul style="list-style-type: none"> <li>• Representative sits on each IC.</li> <li>• Service agreement and partnership Memorandum of Understanding (MoU) is signed off with GB CMA.</li> <li>• Delivery of bulk of extension and grant assessment services, including whole farm planning, for SIRIC's Farm and Environment Programs, and UGIC and MGBIC's Sustainable Landscape Program and Stock Containment Area Program.</li> <li>• Provide research services in such fields as fisheries (UGIC area), irrigation, salinity, soil health and pest plants.</li> <li>• Contributing to development of GB Pest Plan.</li> <li>• Provides technical support to SIRIC and its processes.</li> </ul>
<p><b>Goulburn-Murray Water</b></p>	<ul style="list-style-type: none"> <li>• Representative sits on each IC.</li> <li>• Service agreement and partnership MoU is signed off with GB CMA.</li> <li>• Project management and delivery of most of Surface and Sub-surface Water Management Programs in SIR and 'Engineering Options in the Dryland'.</li> </ul>
<p><b>Department of Sustainability and Environment - regional</b></p>	<ul style="list-style-type: none"> <li>• Provide research services in areas such as water quality, dams and irrigation and deliver engineering, irrigation and groundwater management options and groundwater mapping.</li> <li>• Provides technical support to SIRIC and its processes.</li> <li>• Representative sits on each IC.</li> <li>• Service agreement and partnership MoU is signed off with GB CMA.</li> <li>• Manage extensive areas of public land in the Catchment – especially forests in the Upper Goulburn and the Barmah Wetlands.</li> <li>• Deliver projects that assist threatened species such as woodland birds, Barred Galaxias, Mountain Pygmy Possum, Striped Legless Lizard, and Spotted Tree Frog.</li> <li>• Manager of community engagement and fire recovery in Upper Goulburn and Ryan's and Holland's Creeks and reported to Board and ICs on fire implications and recovery processes.</li> <li>• Contributing to development of GB Pest Plan.</li> </ul>
<p><b>Department of Sustainability and Environment – head office - and Commonwealth Government</b></p>	<ul style="list-style-type: none"> <li>• GB CMA's Regional Catchment Investment Plan (funding proposal) is developed for DSE.</li> <li>• DSE Pest Action Planning Working Group.</li> <li>• DSE State Landcare Team.</li> <li>• Statewide Sustainable Irrigation Landscapes Team.</li> <li>• Victorian Salt Disposal and Investigations Working Group.</li> </ul>
<p><b>Other groups</b></p>	<ul style="list-style-type: none"> <li>• ICs develop close relationships as needs arise during research, planning and implementation with many organisations. Some of the more commonly involved groups include Parks Victoria, Victorian Farmers Federation (VFF), Goulburn Valley Environment Group, and other local environment groups (Mansfield, Alexandra, Broadford), Goulburn-Valley Water, Murrindindi Climate Network, GV Greenhouse Alliance and Trust for Nature.</li> </ul>

**Long-term performance**

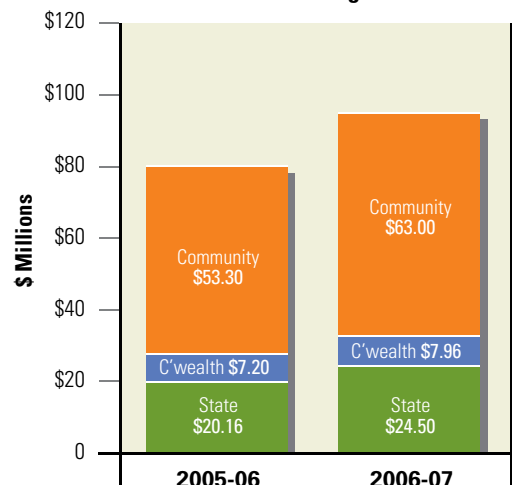


The Goulburn Broken regional community has a wide reputation for delivering on-ground changes to improve its natural resources. This reflects the strength of relationships between its many and varied individuals and organisations.

When a MOU was signed in 2006 between the GB CMA, DPI, DSE, G-MW and the EPA, a method of evaluating (Goal Attainment Scaling) was developed to monitor progress of the health of relationships. Initial analysis of 2006-07 data indicates that the relationship is strong.

Outputs performance and progress against target	Resource condition change from all factors	Certainty of measuring
Well below (<50%)	Much worse	Low
Below (50-79%)	Worse	Medium
Satisfactory (80-109%)	Maintained	High
Exceed (110%+)	Improved	Very High

**Major contributors to natural resource management**



\*The contribution by governments and community is shown in the above graph. The estimated community contribution is derived from cost sharing estimates as part of the annual Regional Catchment Investment Plan.



## 2006-07 performance

The GB CMA received \$31 million from Australian and State Governments in 2006-07 including contributed capital. This is about 20 percent more than any other CMA in Victoria. However, when the intensively managed SIR's irrigation components are taken out, this figure reduces to just \$17 million – which is less on a unit area (hectare) basis than most other CMAs (based on 2005-06 figures).

Case studies demonstrating integration and engagement in the IC areas are shown in the next section. Highlights included:

- The extensive level of on-ground works and employment achieved through the Victorian Government's Drought Employment Program is testament to the GB CMA and its IC's ability to respond quickly; and
- The GB CMA and its strong IC relationships with the water and food sectors played a significant role in the region being able to offer a win-win solution for water supply problems for Melbourne and the region.

The GB CMA has continued to strengthen its relationship with the local Indigenous community and identified many common goals in NRM. An Indigenous facilitator, appointed in 2005, has driven progress during the past 12 months. Work on major projects includes:

- Barmah-Millewa Wetlands: ecological and cultural heritage planning, and monitoring of the 510 GL environmental flow for the River Murray;
- Living Murray Significant Environmental Asset Plan for the Barmah-Millewa wetlands;

- RiverConnect: strategic direction through Indigenous participation at a grassroots level;
- A project for traditional knowledge exchange within Indigenous and broader communities;
- Mokoan – return to wetlands project: future land use and site planning;
- Waterways management: identification and protection of cultural assets;
- Gemmill's Swamp Master Plan;
- Broken Basin Vision;
- Commonwealth department's water policy section; and
- Aboriginal Affairs Victoria involvement in SIR's Surface Water Management Program.

The GB CMA received positive media coverage on a number of programs. The Drought Employment Program was the subject of extensive media coverage across all mediums locally. The program was featured on ABC national news on radio and television. News items portrayed the program as an effective initiative that provided a positive outcome for farmers and the environment during a tough time.

Waterways works also received widespread coverage with a focus on fishways and river restoration works.

The media provided an important vehicle for supplying the community with up-to-date information on multi-agency projects such as the Mokoan – return to wetlands project and the Foodbowl Alliance plan.

## From Corporate Plan - indicators relevant to 'Relationships, partnerships and community capacity'

Key Result Area	Key Performance	Progress
Highly functioning Implementation Committees performing in line with their Charter.	Monthly and detailed quarterly reporting to Board. Authority Chair and IC Chairs meet every six months. Annual review of IC Charter.	Quarterly reports 100% completed on time and technical support provided adequate.
A well-informed catchment community which understands the objectives of the RCS and their role in its implementation.	Effective Landcare Network. Review progress on Regional Landcare support strategy.	Effective Landcare networks; regular monitoring, evaluation and learning reporting of facilitator and coordinator activities to ICs and DSE including via 'GB Landcare Annual Performance Story 2005-06'. Landcare Awards in SIR. 100% completed each year.
	Landcare facilitators to monitor Expressions of Interest/grants/relationships.	Roundtable meetings between ICs and Landcare each year (Mid and Upper). Meetings with each local government at least once a year (Upper). Regular meetings between ICs and Landcare and NRM groups and functioning Local Area Plan coordinators in SIR. Local Area Plans evaluated. Community Grants administered. 100% completed each year.
	Survey of CMA's role within their catchment (Statewide survey).	To be done in 2007-08.
Effective working relationship with partners e.g. DSE; DPI; G-MW; GV Water; Local Government and EPA.	Annual review of relationships.	Last year's analysis indicated strong relationships.
Effective working relationship with key stakeholders as per the Hierarchy of Target Audiences.	Annual review and appraisal.	Last year's analysis indicated strong relationships.
Effective working relationship between the Board and management.	Formal protocols between Board and Management contact. Senior managers invited to attend Board meetings to give briefings.	Review of RCS under way and the major driver sub-strategies are being presented at each Board Meeting.

# Implementation Committees

## Delivering the results

The previous section (Investment area E – relationships, partnerships and community capacity) describes how the community is engaged, especially through Implementation Committees to assist delivery of the Regional Catchment Strategy.

### About the Implementation Committees

Under the provisions of Section 180 of the Water Act 1989 the GB CMA established three geographically based Implementation Committees.

The Implementation Committees develop and oversee the implementation of an annual integrated natural resource management program within their IC regions. The Committees have a charter with the Board for key responsibilities such as:

- To provide advice to the Board on CMA Policy the Catchment Strategy and resource management objectives;
- To develop sub-catchment strategies which communicate natural resource management issues and priorities and encourage partnerships with agencies, local government and the community;
- To prioritise and provide comment on proposed works programs and to negotiate an Annual Business Plan with the Board; and
- To monitor implementation performance of Investment Plans and Works Programs.

The Implementation Committees undertake their community engagement roles effectively through developing and maintaining partnerships at a regional level with community, agencies, local government and businesses. They also ensure implementation of the Goulburn Broken Community Landcare Support Strategy and report on Landcare outcomes achieved for the catchment.

ICs comprise of eight community representatives appointed by the GB CMA, and one non-voting representative from each of the Department of Sustainability and Environment, Department of Primary Industries and Goulburn-Murray Water.

IC members are encouraged to maintain close contact with their constituency including Landcare, local government and natural resource based industries. In so doing, the committees have an important role in identifying issues and providing input to refinement and review of the Regional Catchment Strategy.

This section includes case studies that show how GB CMA Implementation Committees (ICs) are committed to:

- stakeholder involvement;
- integration of disciplines; and
- on-ground works.

The three Implementation Committees are:

- 1 Mid Goulburn Broken (MGBIC)**
- 2 Shepparton Irrigation Region (SIRIC)**
- 3 Upper Goulburn (UGIC)**

## Mid Goulburn Broken Implementation Committee

### Relationships, partnerships and community capacity

The MGBIC provides ongoing support to Landcare and other natural resource NRM groups in the Catchment by funding facilitators and projects. Landcare is an effective way to engage the community in NRM while supporting existing networks with common goals. Since 2000, community members have been rewarded for their hard work.

This year, John McGregor from Burnt Creek was nominated for the MGBIC annual excellence award for 20 years of NRM in the region including rabbit control. John has been a member of the Burnt Creek Landcare Group since it was established. In the mid-1980s, an increasing rabbit problem led John to join a group of landholders to form one of four rabbit control groups in Victoria.



#### *Mid Goulburn Broken Implementation Committee*

*L to R: Sally Simson (Chair), Tony Kubeil (GB CMA), David Dore, Dave Smith (DPI), Menon Parameswaren, Stephen Feiss (G-MW), Dougal Gilmore, Heather Bradbury, Doug James.*

*Absent: Bernie Ryan, Melinda Shepherd and Merv McAliece (DSE).*

### Planning and responding

#### Lake Mokoan

The 'Mokoan - Return to Wetlands' project is one of the largest wetland restoration projects in Australian history. The project will see Lake Mokoan decommissioned in 2009 and provide water savings of up to 44,000 GL annually. The GB CMA is represented on the project control board which comprises four members from three agencies including the DSE and G-MW. A Lake Mokoan Future Land Use Steering Committee (LMFLUSC) was set-up to work with the community to develop a vision, strategy and plan for future land use at the site. The Future Land Use Strategy (FLUS) aims to provide a management plan to restore the area, which is made up of a number of wetland areas and surrounding dryland ecosystems. The FLUS will address an area of land known as the primary industry precinct which has lower ecological and cultural values. Other key components of the FLUS include tourism, education and recreation with cycle and walking paths planned for the area. A discovery centre and ecotourism accommodation has also been proposed for the site.

A monitoring plan for the wetland restoration will be developed to assess effectiveness and will be followed by a plan to address post decommissioning issues, including the re-establishment of a diverse range of habitat for native fauna and the control of pest plants and animals. Environmental assessments of the project have been submitted to the Australian and Victorian Governments looking at a broad range of environmental issues for all components of the project. Initial monitoring has started at Lake Mokoan, focusing on the protected migratory waterbird species (Latham's Snipe) and wetland fringing vegetation.

The Tungamah Pipeline was completed in December 2006 to provide year round water supply for the first time to 400 properties delivering significant environmental benefits for the Murray and Snowy Rivers.

### International Landcare Conference

Seven landholders, four IC members and seven Landcare staff attended the four-day International Landcare Conference held in Melbourne in October 2006.

Highlights included talks by national and international water resource and climate change experts, as well as presentations on natural resource policies, programs and projects by agencies, researchers, staff, landholders and community members from the 14 countries represented at the event. In addition, workshops were run on traditional land management and engagement, as well as changing community demographic and social issues.

Three posters were accepted, prepared and manned by community representatives from Landcare in the Mid Goulburn Broken region; these featured as part of 80 competitively selected posters shown at the event. These local posters received much interest throughout the three days, and covered the Rikali, Life on the Broken, and Balanced Productive Soils projects.

More than 1,000 people travelled from 14 countries around the world to attend the event, and a debriefing meeting was held for all Goulburn Broken attendees to determine which projects, including sister Landcare projects with overseas countries, could be progressed in the region for the future.

### Works and extension

#### Landholder program sees foxes under control

In 2005 the Broken Boosey Conservation Management Network began a highly successful fox-control program in the Nathalia district in northern Victoria. The Bush Stone-curlew was selected as an icon species that would benefit from fox control to encourage participation amongst landholders.

The project aimed to involve as many landowners as possible in the Picola and Nathalia districts to undertake the four-week program to decrease the fox population and reduce the threat of predation by foxes on native fauna.

A 'baiting model' was developed in consultation with the community to make the process simple for landholders. Farm chemical user certificates, agricultural chemical user permits, 1080 baits and relevant paperwork was provided to participating landowner's free of charge. Landholders kindly donated their time.

Prior to the program only four landowners in the area were baiting. In the first year the program attracted 47 landholders covering an area of about 18,000 hectares. By the third year, the program had grown significantly, involving more than 100 landowners and covering an area of more than 80,000 hectares.

Annual spotlighting surveys indicate the fox population in the baited area is decreasing, which suggests that baiting is having an impact on fox numbers.

The Broken Boosey CMN is working with other agencies and private landowners to determine the status of the Bush Stone-curlew population within the Broken Boosey CMN area. This will be used as a benchmark to monitor the Bush Stone-curlew population.

This program demonstrates that community consultation and facilitation can help large numbers of landowners achieve common goals. There is significant community interest to expand the program to cover an even larger area, which will require additional funding. The Broken Boosey CMN will work with agency staff and the local community to develop funding submissions to ensure the community support that has been created by this project is not lost.

This project is run in both the Mid Goulburn Broken and Shepparton Irrigation Region Implementation Committee areas.

### Environmental management incentives

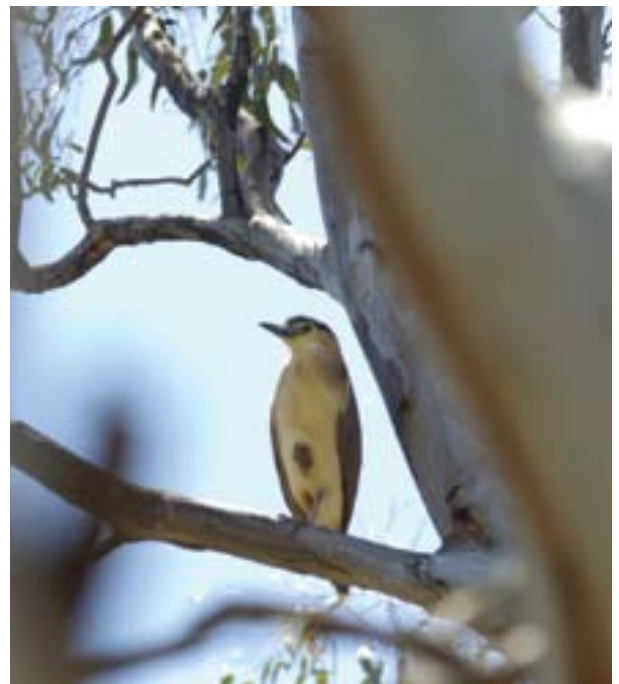
Incentives for landholders to undertake works have been in their present format for the past four years and in 2006-07 fenced 224 hectares of remnant vegetation and revegetated of 210 hectares. Other works contributing to catchment improvement through revegetation include erosion stabilisation and plantations for greenhouse emission reduction. With ongoing drought conditions more than 140 landholders, across the catchment (but mostly in the MGB), have installed stock containment areas for livestock feeding. This has protected about 40,000 hectares of grazing country from exposure and erosion.

### Knowledge

#### Landcare

The first Goulburn Broken Landcare report card was launched in December 2006 at the Benalla Art Gallery to highlight achievements made during 2005 – 2006. The A3-size brochure shows a map of all groups and Landcare outcomes in each IC region. The report card, which is available on the Goulburn Murray Landcare Network website, shows RCS and Landcare Support Strategy actions and targets which have been addressed.

The publication helps quantify and promote Landcare outcomes and contributions to NRM for the Goulburn Broken region. The publication will be prepared annually based on data recorded and collected directly from each Landcare group.



## PERFORMANCE STORY 2

**Green Graze piloted in the Goulburn Broken Catchment**

An incentive scheme for graziers, known as Green Graze, was successfully piloted from July 2006 – July 2007 in the Mid and Upper Goulburn Catchments. Green Graze provides monetary incentives for farmers to improve grazing management and the condition of native vegetation on private properties.

A tender system is used, where participating graziers submit bids on what they calculate the cost to be to implement a management plan devised by a GB CMA project team and the grazier. Five successful bidders have now taken on protection works on their properties under the program.

About 18,000 hectares of grazing enterprise was assessed, about one third (6,165 hectares) was native vegetation, including native pastures. Of this, 2,032 hectares will be managed under Green Graze, with a total incentives budget of \$265,700.

Green Graze is managed by the GB CMA and funded by the Federal Department of Agriculture, Fisheries & Forestry.

Eligible landholders must:

- Be located in the Mitchell, Murrindindi, Mansfield, Strathbogie and Benalla Rural City shires, or located in the Upper Avon-Richardson or Upper Avoca Catchments, or have been involved in the recent Farm Business and Biodiversity projects;
- Have a property area of at least 500 hectares;
- Have native vegetation on their property;
- Sign a three-year contract; and
- Not have a current grant on a potential Green Graze site.

The project provided:

- Funding for new fencing, watering points and infrastructure to improve grazing management and native vegetation;
- Annual payments for changing grazing management;
- Site visit and advice from field officers;
- Whole-of-farm assessment methodology to predict native vegetation outcomes associated with changes to grazing management; and
- Grazing management plan, including maps and recommendations.



*Grazing management for native vegetation conservation is the focus of Green Graze.*

## PERFORMANCE STORY 3

### Life on the Broken

A field day was held on the Broken River for landowners and local school children. The day was organised by the Swanpool and District Land Protection Group to raise awareness about managing river health in the 21st century based on guidelines from GB CMA Waterways staff. The guidelines have helped develop a model for future field days to support a changing demographic. Farming practices along the river have changed in recent times from intense farming to lifestyle living and landholders are keen to learn ways to restore river health. The casual barbecue was an opportunity to share information about grants available to help regenerate and protect riparian vegetation. Ecologists discussed issues such as healthy stream habitat and a zoologist explained connections between riparian vegetation and stream health.

A poster was developed as a result of the Broken River field day and was displayed at the 2006 International Landcare Conference.



## PERFORMANCE STORY 4

### Vision for the Broken Basin

Currently in its second year the Broken River Vision project aims to implement a strategic and integrated approach to catchment management to achieve sustainable development, healthy ecosystems and future prosperity for the Broken Basin.

Some of the key initiatives undertaken include:

- Protecting native fish condition and numbers in the Boosey Creek at Tungamah. This is a joint initiative between the Moira Shire Council, G-MW, GB CMA and the local fishing club;
- Ongoing monitoring of the effects of the Tungamah pipeline, including design of refuge zones in both Broken and Boosey Creeks;
- Flow Determination Study completed for the upper reaches of the Broken Creek;
- Wetland system plan for the Broken Creek and focused studies for Greens, Black/Purdies and Moodies wetlands;
- Ongoing investigation into the drivers of azolla growth and low dissolved oxygen in the lower Broken Creek;
- A trial of harvesting azolla from the Broken Creek has been completed and a report is in preparation. The report will provide information on the success of the trial, quantity and quality of material and management implications; and
- Completion of a decision support system as part of the Irrigation Drainage MoU.

With the GB CMA's Drought Employment Program and Parks Victoria, the Broken River Vision project has protected significant reaches of the Broken – Boosey State Park.

The Broken Basin Vision was funded under the State's 'Our Water Our Future' initiative.



*Broken Creek site for proposed habitat refugia*

# Shepparton Irrigation Region Implementation Committee

## Relationships, partnerships and community capacity

### Catchment partners reporting day

The theme for 2006 'Don't be bored with groundwater in the Shepparton Irrigation Region' was a celebration of increasing sustainable production while respecting the environment and community engagement. More than 90 people attended, hearing a range of speakers.

Subjects included, sub-surface water management; a review of monitoring needs in the sub-surface drainage program; key performance indicators and protecting natural features with groundwater control.

### Irrigation Drainage Memorandum of Understanding

Work on Irrigation Drainage Memorandum of Understanding (IDMoU) implementation in 2006-07 focused on finalising the Decision Support System (DSS) for setting both water quality and management action targets and the finalisation of the format of Catchment and Asset Operation Plans using the Stanhope Depression Drain as a template. The Rapid Resource Condition DSS was completed for the entire Broken Creek Catchment, which includes the Muckatah, Barmah-Nathalia, Tallygaroopna and Invergordon sub-catchments. It identified total phosphorus and suspended sediment are the key water quality factors impacting on the Broken Creek's health. Additional monitoring has been recommended and the Rapid Management Action DSS (due for completion in 2007) will refine the key water quality targets before then.

### Biodiversity celebration day

'Biodiversity – Working Together' brought together more than 80 people at Drumanure, on the Nine-Mile Creek, Broken Boosey State Park in September. It successfully showcased community and agency people sharing information on biodiversity projects.

### Catchment Partnership Memorandum of Understanding

An MoU was signed by the major partners in the delivery of natural resource management in the Goulburn Broken Catchment.

GB CMA, G-MW, DSE, DPI and EPA Victoria signed the MoU acknowledging ongoing commitment to working together for the environment.

GB CMA Chair, Stephen Mills, said through the MoU the organisations were committing to fostering and continuously improving partnerships to provide improved services to clients.

Since 1988 partner agencies and the community in the Goulburn Broken Catchment have worked well together to achieve significant natural resource management gains.

The Catchment was held up around Australia and the world as a model for integrated catchment management and this success could be largely attributed to the strength of the partnerships between organisations and with the community.

We already have terrific partnerships. What this MoU does is commit us to evaluating and improving the way we work together so that the Catchment community and the environment get the utmost from every dollar we spend.

For every dollar we invest in the Catchment, the community puts in two. This illustrates how committed the community is to looking after the Goulburn Broken Catchment. It also shows that government is doubly supported when it invests in our Catchment.

The GB CMA and its partners owe a responsibility to the people of the Catchment to work together as effectively as we can to eliminate duplication, reduce bureaucracy and get the best results for the region.



*Shepparton Irrigation Region Implementation Committee*

*L to R: Peter Howard (GB CMA), Peter Gibson (Chair), Steve Farrell, John Gray, Nick Ryan, James Burkitt (G-MW), Tony Long (DSE), Roger Wrigley, Carl Walters (G-MW), Ken Sampson (GB CMA Executive Officer), Allen Canobie.*

*Absent: Peter McCamish (Deputy Chair), Bruce Cumming (DPI), Helen Reynolds.*

## Changes in community capacity through Local Area Planning

Eight Local Area Plans being implemented in the SIR were reviewed as part of the Farm Program review. The review investigated the impact of Local Area Plans on accelerating the implementation of the Goulburn Broken RCS and changes in community capacity.

The results of this evaluation have shown overwhelmingly that in the two to five years since the launch of local area plans, the capacity of the communities involved has increased.

The Local Area Plan project team developed a tool to describe and measure community capacity in the local area plans. Semi-structured interviews were conducted with members from all eight groups and the questions were based on the tool developed.

Respondents generally felt that they were proud of their efforts in developing and implementing their plans, and that their skills and confidence had grown as a result of the process. Each group discussed the opportunities Local Area Planning provided them to nurture leaders within their communities and were positive about their ability to move forward and continue implementation of their plans into the future.

Such a response was viewed as a real success of the project, particularly given the relatively short time frames, with further work planned to evaluate these changes into the future.

## Planning and responding

### Improved water management for environmental gain

Environmental Management Plans for priority wetland and terrestrial sites in the SIR are an important value-adding tool for improved water management.

The GB CMA has worked with partner agencies including the DPI, DSE, G-MW, Parks Victoria and community groups to achieve some key milestones during the past 12 months.

The Kanyapella Basin Management Plan, which has been in development for several years, was signed off at the April 2007 IC meeting. The finished plan covers 2,950 hectares.

The Mansfield Swamp Environmental Management Plan was due for sign-off later this year (2007). A draft of the Cantwells' Bushland Reserve, (renamed Millewa Nature Conservation Reserve) and an updated draft of the Wyuna River Reserve plan have been produced. Both are under review by stakeholders.

As part of the Murray Valley Drain 11 process, a draft management plan is being prepared for Greens Swamp, near Picola.

Management plans allow the GB CMA and SIRIC to support Environmental Water Allocations (EWA). Given the drought, no EWA were delivered this year. Monitoring reports for Reedy and Brays Swamps were prepared to show bird life and macro-invertebrates inhabiting the swamps when EWA is delivered.

## Shepparton Irrigation Region Catchment Implementation Strategy (SIRCIS) 15-year review

SIRCIS completed a review of major achievements and milestones between 2000-01 and 2005-06.

The State Government first endorsed the Shepparton Irrigation Region Land and Water Salinity Management Plan (SIRLWSMP) in June 1990. This was reviewed in 1995 and again in 2001 in preparation for the GB RCS. SIRIC has started a review of the SIRCIS for 2007 which will feed into the review of the GB RCS. Significant community, agency and consultant resources have been utilised to ensure the review is sound to date.

This third review provides a status report of program progress against targets. Significant changes since the last review have influenced many catchment and natural resource management programs across the Murray Darling Basin.

The SIRCIS comprises of five programs and all the program reviews are progressing well. The Sub-surface, Surface, Farm and Environment Program reviews have been completed and endorsed by the SIRIC. The Waterways program review was circulated for final edit over the next month. The review is nearing final draft stage.

The GB CMA Board has adopted the review of Sub-Surface, Farm, Environment and Surface programs. The G-MW Board has endorsed the Sub-surface and Surface program reviews.

Once program reviews have been completed and signed off the SIRCIS will be reviewed as part of the Goulburn Broken and North Central RCS review processes.

### SIR Boundary in North Central and Goulburn Broken Catchments

After a long period of consultation the Goulburn Broken and North Central Catchments agreed to a revised boundary within the SIR. The SIRIC will continue to merge the completion of the Catchment Strategy for the SIR in both catchments. All the incentives have been made constant across the SIR and new joint incentive brochure produced.

### Biodiversity action planning

This aims to identify and map high-value environmental features in a particular area, conduct a habitat quality assessment and bird counts and develop management recommendations. On-ground works are prioritised targeting the highest priority sites. There are six Biodiversity Action Planning landscape zones in the region and the Yarrowonga zone is the first to be completed. Central Creeks, Barmah and Western Goulburn Landscape Zone Plans have been completed and drafts have been prepared for Timmering and Southern Goulburn Landscape Zones. Funding has also been secured to develop a small trial Biodiversity Action Planning project in the Barmah Landscape Zone to assist with implementation.



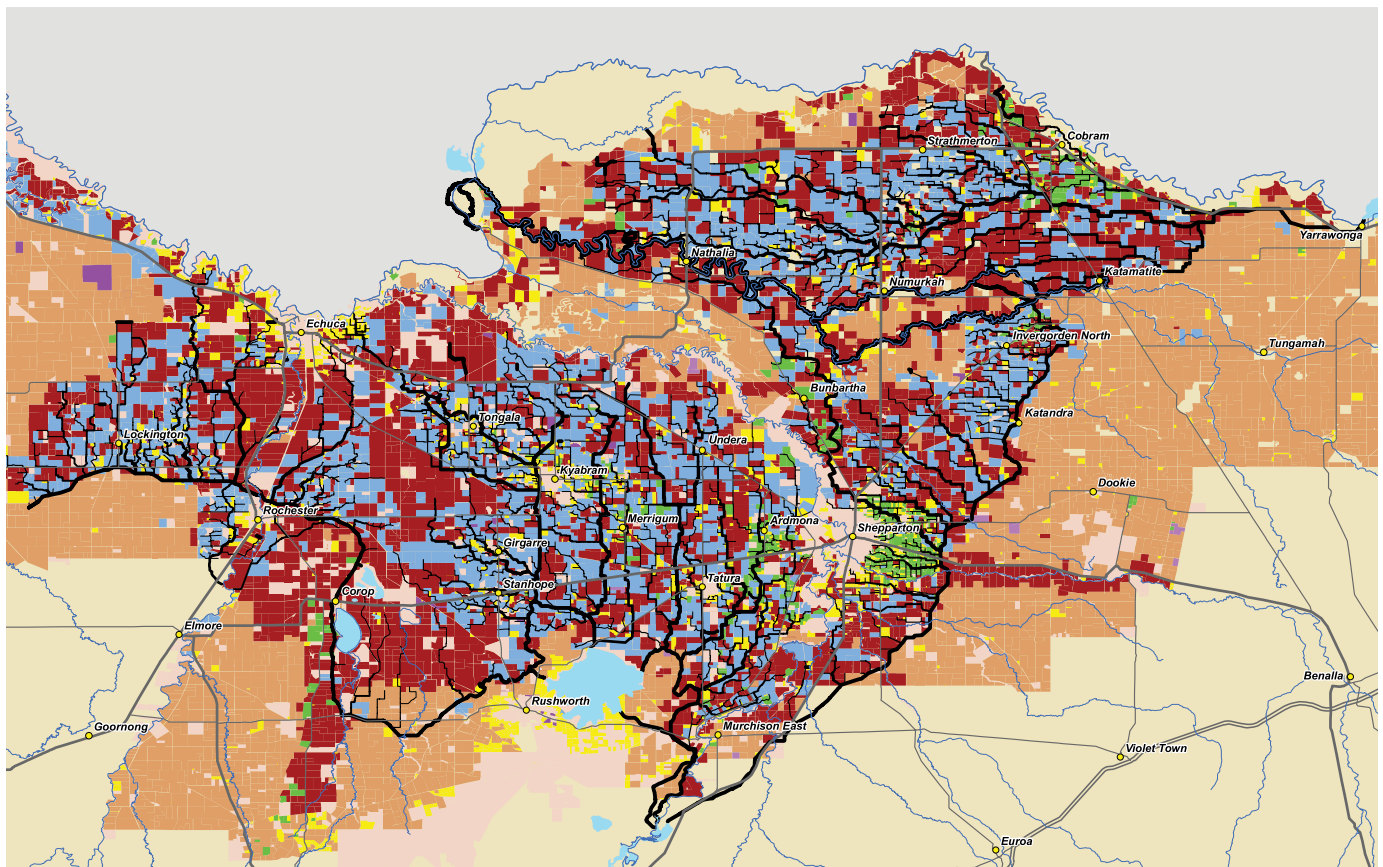
### Land and water assets mapped across the region

Reconfiguration of irrigation areas is a key initiative in the government paper 'Securing our Water Future Together'. The aim is to make rural water supply systems viable, efficient and responsive. The white paper requires rural water authorities to develop a strategic view of assets and service needs as a precursor to the development of Area Infrastructure Plans (AIPs).

Objectives of the strategic view includes:

- Reconfiguration from a total system perspective and presenting available data, at a regional level. The Shepparton and Kerang regional atlas falls into this group and includes map layers on land use, changes in irrigated area, land suitability for irrigation, salinity and water logging, local government planning and environmental risk. The water and land use under four different scenarios of the future are also presented.

- Describing the characteristics of water sub-systems including asset condition, service issues and water use. Area atlases for the six irrigation areas, Shepparton, Central Goulburn, Rochester-Campaspe, Murray Valley, Pyramid Boort and Torrumbary will focus on this dot point and they include map layers on asset condition, asset remaining life, system efficiency, water use, water trading and annualised cost. There is information on farm size, enterprise type, irrigated area, soil type and environmental sensitive areas that is additional to what is presented in the regional atlas.
- Identifying boundary issues between AIPs.
- Suggesting the focus for AIPs and hence the possible sequencing of AIPs.
- Identify stakeholder issues.

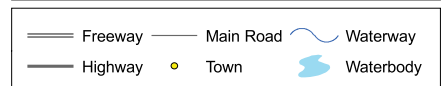
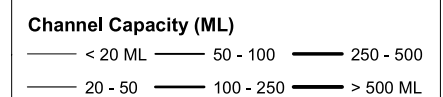
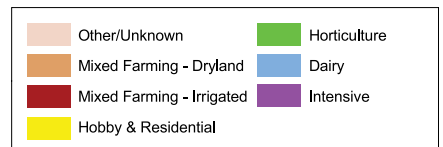
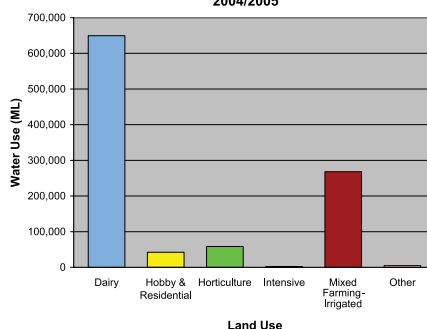


### SHEPPARTON REGION Land Use MAP 1

The Bureau of Rural Science (BRS) in conjunction with commonwealth and state agencies has developed a land use digital dataset of Australia. The Victorian Department of Primary Industries has contributed to this process completing a state wide land use map of Victoria in December 2005. The land use maps are based on a standardised classification of land use called the "ALUM Classification". The Victorian land use map presented here is based on the ALUM classification, however, it has been augmented with local government valuer general data in order to more accurately show enterprise type. For further information on the BRS land use mapping process across Australia go to [www.brs.gov.au/landuse](http://www.brs.gov.au/landuse).



Water Use by Land Use in the SIR 2004/2005



Summary of key results, implications and benefits:

- All G-MW irrigation areas have a completed first draft of the area atlas.
- Information gathered during the project has produced an unprecedented integration of many datasets across the entire G-MW region. Map groups such as land cover and land cover change are regularly being used in many current natural resource management projects. Compiling catchment scale environmental information has shown the power of spatial data integration.
- The integration of G-MW asset database information into a spatial database structure easily highlighted data inconsistencies.
- G-MW now uses spatial data. It is currently used as a stand alone product in their newly installed GIS system but the data integration techniques will soon be incorporated into its system providing up-to-date information.
- The data generated through production of regional and area atlases informs the reconfiguration process. Development of pod boundaries is a key example.
- The data generated through the production of the regional and area atlases is commonly used in many other land and water projects.

The atlas will be one of the important tools to link the Reconfiguration process with the implementation of the RCS.

An example of one of the maps is shown on the previous page.

## Works and extension

### Muckatah scoping project

The planning process for Muckatah started in February 2006, to determine the level of community interest in Community Surface Water Management Systems (CSWMS) in the Muckatah area. This follows the completion of primary systems that were completed in that catchment. The results of this planning process were:

- Eight CSWMS were judged a high priority, five were medium and the rest were low.
- Two CSWMS were identified as possible primary extension projects.
- Nearly all landowners in the high priority sub-catchments had initial meetings and seven catchments are proceeding with a feasibility study or a survey and design.

### Murray Valley Drain 11

Stage 1A of the project started in October 2006 and consisted of 1.4 hectares of open drain, a pump station, fencing, drainage inlets and minor farm works. It was broken into four stages and will provide a drainage service to 14,400 hectares of land.

Wetland management plans are also being developed for Greens Swamp and the Moor-Radin wetland area. Affected landholders will be involved in finalising management recommendations.

## Irrigation development guidelines

Staff from the Sub-surface and Farm Program have played an important role in the development and implementation of irrigation development guidelines (IDG) since their inception in the Goulburn Broken Catchment in 1998. The key purpose is to identify and minimise potential side effects of irrigation on the environment and third parties.

Since 2004 the Farm Program has taken on a greater role through an SIR Irrigation Development Coordinator. The coordinator's primary role is to help landowners through the irrigation development guideline process with a single point of referral for the landowner.

With the introduction of water-use licences in 2007, these guidelines will be applied to existing irrigation properties where redevelopment of the property will require an alteration to an existing water-use licence and to properties being developed to include irrigation and a new water-use licence will be required.

## Irrigation system selection and design guidelines

A web-based information system was developed to help landowners make informed decisions about when to consider converting to sprinkler irrigation.

The implications of pressurised irrigation systems on the natural resource issues were developed and presented as discussion papers to the GB CMA.

Key issues:

- Impacts of sprinkler irrigation on greenhouse gas emissions;
- Impacts of sprinkler irrigation on power supply infrastructures;
- Water savings/reductions in deep drainage achievable under sprinkler irrigation;
- Policy recommendations relating to surface run-off under sprinkler irrigation; and
- Impact on required surface and sub-surface drainage as a result in the uptake of sprinkler irrigation.

See also:

[http://www.dpi.vic.gov.au/dpi/vro/vrosite.nsf/pages/lwm\\_farmwater\\_efficient\\_irrigation?OpenDocument](http://www.dpi.vic.gov.au/dpi/vro/vrosite.nsf/pages/lwm_farmwater_efficient_irrigation?OpenDocument)

## Knowledge

### High value environmental features for groundwater

High value environmental features were assessed and sites most threatened by groundwater were identified as part of the Sub-surface Drainage Program.

More than 100 sites were located, mapped and assessed for habitat quality, using a modified habitat hectares assessment sheet. Bore data was collected at the sites using depth to water-table and salinity readings to assess the groundwater threat. Eleven high-value sites were identified with a high priority need for groundwater control. A number of other high-value sites did not have water-table data available, but are of concern. G-MW and DPI are developing a pilot site to assess groundwater control at high-value sites. This will be used to develop policy for public-private partnership and management of groundwater.

### Key performance indicators 2005-06 annual reports for sub-surface drainage

Now complete, this report provides a standard method for evaluating and reporting important aspects of program performance to key stakeholders, including government funding bodies, statutory and regulatory agencies, and community organisations and groups. The reporting methodology was refined this year and further aligned with the GB CMA Monitoring Evaluation and Reporting Strategy.

The report summarises performance, operation of Sub-Surface Drainage Program works, program outputs and expenditure against budget. It also looks at the annual progress against funded targets as well as progress against the cumulative aspirational targets of the Sub-Surface Drainage Program.

In summary, the annual funded targets are being met, while the longer term targets are not, because of funding constraints and the impact of drought on community participation.

### Policy instrument choice framework

The GB CMA has collaborated and supported DPI researchers in developing a Policy Instrument Choice Framework (PICF) to help natural resource policy makers in both State Government and catchment management authorities choose packages that achieve effective, efficient outcomes.

DPI researchers found existing frameworks and funding emphasised efficiency at the expense of flexibility. It was also found existing frameworks had limited value when policy makers were faced with a high level of uncertain responses from landholders and institutions to new policy instruments.

The trial so far shows that the PICF has many values.

### SIRIC research reporting day

The annual SIRIC research reporting day promoted projects undertaken at the DPI Tatura that are funded either wholly by the GB CMA and/or the DSE's Sustainable Irrigation Program. It provides important new knowledge to support sustainable irrigation, land and water management in the SIR and across Victoria.

### SIR Salt Disposal Audit

The SIR Salt Disposal Audit will provide estimates of changes to SIR salt disposal impacts since 1988. This is needed for Victoria to comply with schedule C of the Murray-Darling Basin (MDBC) Agreement.

A computer model simulated flows and salt loads generated from SIR drainage catchments. The model was validated against the actual drain monitoring data. It was used to generate drain flow and salinity time series data that represents the SIR at the 1988 (pre-plan) and current (end of 2003/2004) levels of development over the MDBC climatic reference period (1975-2000). The SIR model outputs then needed to be introduced to MDBC River Murray flow and salinity models MSM – BIGMOD to obtain estimates of salt disposal impacts.

The outputs from the MDBC models suggest that there is a salt disposal impact associated with the reduced volume of drain flow from the SIR, resulting in reduced dilution downstream in the River Murray. This component was not included in previous SIR salt disposal impact estimates. In the SIR model, the reduced drain flows are largely associated with reduced values for the Tailwater Factor (TWF) that is used to estimate the proportion of applied irrigation that discharges to the drainage system.

The audit found that the impact of the existing accountable actions was very similar to the original 1990 estimates.

### Efficient irrigation technologies to match soils and dairy farming systems

The Farm Program has continued to work in collaboration with the DPI research team. The project develops information to support farmers and catchment planners to make informed decisions about when to invest in border-check and sprinkler irrigation systems.

The project worked towards maximising:

- Environmental and economic benefits returned from private investment in dairy farm irrigation system infrastructure; and
- The impact of policy initiatives aiming to improve the efficiency of water use on dairy farms through changes to farm irrigation system infrastructure.

This involved undertaking market research to understand information needs, conducting lysimeter and farm experiments to quantify potential water savings under centre pivot and border-check irrigation.

The project (July 2003 - December 2006) produced two important outputs:

- Web-based irrigation system selection/design guidelines, to help landowners and service providers make informed decisions on when to invest in farm irrigation infrastructure; and
- A series of discussion papers to help catchment planners develop policy to ensure targeted public investment in farm irrigation infrastructure.

## Upper Goulburn Implementation Committee

### Relationships, partnerships and community capacity

The Upper Goulburn Implementation Committee (UGIC) provides ongoing support to Landcare and other natural resource NRM groups in the Catchment by funding facilitators and projects. Landcare is an effective way to engage the community in NRM while supporting existing networks with common goals. Since 2000, community members have been rewarded for their hard work. This year, awards were presented to:

**Ann Jelinek** from Taggerty was awarded the Hubert Miller Trophy for her exceptional commitment to encouraging and teaching others to carry out environmental practices on private property. She has been instrumental in the recognition of endangered sites which has led to protection works.

**Doug Lade** from Highlands received the UGIC Award for Excellence for his dedication to NRM in the Highlands region. Doug founded the Rabbit Action Group, which became the Highlands Landcare Group and was involved in the forming the Hughes Creek Catchment Collaborative.

### Local government

UGIC held sub-catchment meetings with each local government in the region including Mitchell, Murrindindi and Mansfield. The GB CMA Board also met with the Mansfield Shire Council to discuss water and development issues during its tour of the Upper Catchment in March. UGIC is represented on Mitchell and Murrindindi shire environmental committees and on Benalla and Murrindindi shires' drought and fire recovery committees. This has involved landholder meetings at barbecues and breakfasts as well as farm walks. Other activities with local government have included: contributions to roadside management planning projects, Tackling Weeds on Private Land (TWOPL) initiatives at Mitchell and Murrindindi shires, ongoing maintenance of the Wallaby Creek site near Kinglake, the Ultima-Thuyale (UT) Creek Enhancement Plan in Alexandra, Fords Creek rehabilitation in Mansfield, and Yea Wetlands development.

UGIC also supported the Tallarook Art Show and Awards – 'People, places and passion' – along with local governments in the Upper Goulburn Catchment. The winning art pieces are displayed in Mansfield, Murrindindi and Mansfield shires.



*Upper Goulburn Implementation Committee*

*L to R: - Greg Smith (G-MW), John Thompson (Deputy Chair), Heather Ingpen, Sue Ablitt, Lilian Parker (GB CMA Executive Officer), Mike Dalmau, Sally Abbot-Smith, Chris Doyle (Chair), Rita Seethaler, Alan Dobson (DSE), Margaret Hatton.*

*Absent: Bruce Radford (DPI).*



## Community education

The dryland ICs sponsored many education programs during the year including Salt Week and Water Week.

Salt Week events were held in Euroa, Alexandra and Mansfield with more than 600 students from local schools travelling to attend to learn about salt in the environment. Secondary students from Alexandra Secondary College, Mansfield Secondary College, Geelong Grammar Timbertop campus and Lauriston Girls School Howqua campus, helped run some of the activities.

Water Week was celebrated in the Goulburn Broken Catchment with about 490 students and 645 community members participating in the week's events. In the Upper Goulburn there were twilight river and wetland walks in Mansfield, Yea and Seymour and a field trip to Mt Buller was attended by 60 people. Primary schools from around the Catchment participated in an environmental show by performing arts group Vox Bandicoot. The two-week long tour travelled to seven towns including Benalla and Cobram. In all, 27 shows were performed to an audience of almost 4,000 students from 37 schools.

Students and teachers from four schools attended the 2006 International Coastal Conference in Melbourne including St Mary's Primary School Alexandra, St Patrick's Primary School Kilmore, Highlands Primary School, and Euroa Secondary College. The conference provided the opportunity for students to learn from each other and forge long-term relationships.

UGIC also targeted school children and teachers through EnviroEd, a school trip to Coastal Conference at Geelong, ASISTM biodiversity project with Murrindindi Cluster schools, Alexandra Cluster schools threatened species field trip and Arbour Week tree planting at Puckapunyal Primary School.

Teachers from 19 schools visited the UGIC's EnviroEd exhibition which provided a selection of environmental programs for use in the curriculum and of materials for the classroom. The displays highlighted partnerships with Alexandra Roots and Shoots, ResourceGV, DPI Landlearn, Yea Wetlands, Water Watch, State Forests, CFA, Origin Energy and Goulburn Broken Indigenous Seedbank.

## Works and extension

### Whole farm planning

Whole farm planning courses have been run successfully for participants in Seymour and Kilmore. These courses have involved large and small landholders, lifestyle farmers, conventional traditional farmers and landholders exploring alternative farming opportunities. Mitchell Shire is developing a whole farm planning response for subdivision and new landholders. In Murrindindi Shire, land management plans are the basis for development and subdivision under the Rural Living Guidelines. Topics delivered at the course include land classing, soils management, fire awareness and prevention, drought management, farm water supply, biodiversity and native vegetation management, pest plants and animals, pasture and grazing management.

### Environmental management incentives

Incentives for landholders to undertake works have been in their present format for the past four years and in 2006-07 fenced 504 hectares of remnant vegetation and revegetated 179 hectares. Other works contributing to catchment improvement through revegetation include erosion stabilisation and plantations for greenhouse emission reduction. With ongoing drought conditions more than 140 landholders, including 28 in the Upper Catchment, have installed stock containment areas for livestock feeding. This has protected about 40,000 hectares of grazing country from exposure and erosion.

### Groundwater exploration and development incentives

Landholders can be assisted to explore and develop groundwater bores where there is a perceived salinity benefit as well as the opportunity to develop irrigation enterprises. Three bores were installed in 2005-07.

### Planting programs

The South West Goulburn has continued to host successful planting days during winter months, involving important partnerships between Landcare, Rotary and DPI, with financial assistance from the GB CMA's environmental management incentives. Planting sites target salinity, water quality and biodiversity to help meet Goulburn Broken Regional Catchment Strategy outputs.

Planting was carried out in the Hughes Creek, Glenaroua and Dabyminga sub-catchments which contribute high salt loads into the Goulburn River. In the Glenaroua and Dabyminga sub-catchment more than 10,000 indigenous trees and shrubs were planted in 2006 and 2007. In the spring of 2006 Hughes Creek Catchment Collaborative and Scouts Australia planted 39,000 trees and shrubs with the assistance of Greenfleet and GB CMA as part of the Murray Challenge.

## Knowledge

### Landcare

A history project to capture 20 years of Landcare in the Catchment is being undertaken by a social researcher engaged by the GB CMA. Landcare identities and groups have been contacted and iconic contributors and campaigners interviewed. The results will be used to promote Landcare and archive its history.

### Fire activity

The 2006-07 north-east bushfires destroyed significant parts of the Goulburn Broken Catchment. The area from Tatong to Tolmie and across to Mt Buller and Woods Point were under threat for several weeks and private assets were lost. The fires impacted on water quality in Eildon Dam and also on the communities drawing water from the affected Catchments including Mansfield and Benalla.

The GB CMA worked with DSE, G-MW, GVW, NERWA, Department of Human Services and NECMA on the Public Lands Working Group, a sub-committee of the Hume Regional Bushfire Recovery Committee, to identify priorities for rehabilitation and recovery. Priority water bodies included urban water supplies, non-drinking water storages and delivery streams, high-value river reaches and other waterways. Priority works identified included:

- Rehabilitation of fire control activities such as containment lines;
- Monitoring water quality and quantity;
- Biological monitoring of fish populations;
- Sediment and erosion control works;
- Replacement of assets e.g. riparian fencing; and
- Opportunistic river health works e.g. weed control.

Other issues monitored include stream health impacts from ash, sediments and potentially heavy metals, and regrowth of weed species after the fires. The recovery phase will include repairs to firebreak and access racks to prevent erosion, bank repairs and infrastructure rebuilding.

### Pest plants and animals

Monitoring pest plants and animals has continued across the dryland region. The GB CMA is involved with a number of programs under way including:

- A pilot pest animal plan for 2007 to 2012 is being prepared with a focus on rabbit and fox control. The GB CMA has been offered funding to develop a regional weed plan in 2007-08.
- A review of noxious weeds in the Catchment is under way within the Victorian Noxious Weed Review Process. Recommended changes in category for some weeds have been identified in phases one and two and these are expected to be implemented in 2007-08. The third phase of the review is likely to result in several new species being added to the noxious weed list.
- A series of forums coordinated by the GB CMA and agency partners on weed management were held across the dryland catchments as part of the initiative 'Tackling Weeds on Private Land'.

DSE has undertaken a review of the 'Good Neighbour Program'. Feedback has been provided to the GB CMA and other stakeholders and a future direction for the program has been developed. Findings were applied to funding during 2006-07. Findings will be applied during 2007-08 for the development of 2008-09 projects.

### Management of stream flows

The GB CMA is in the process of developing environmental water requirements for a number of priority rivers and streams in the catchment. This will provide a recommendation for flows required to achieve a 'healthy ecosystem', as defined in the Victorian River Health Strategy.

Streamflow Management Plans (SFMPs) aim to provide a balanced use of water between all users in unregulated catchments. These are catchments where the flow is not 'regulated' by controlled releases from publicly owned dams to supply water to downstream users. In these systems, flow is simply run off the river generated from rainfall run-off in the catchment. Emphasis of the plans is on water sharing between consumptive users and the environment during periods of flow stress. SFMPs are now recognised under the Water Act 1989 (as amended 2002) and are legally binding for water users and authorities.

SFMPs develop rules for how entitlements within the stream catchment are to be managed to meet the objectives for the stream developed by a community based consultative committee.

Key initiatives undertaken in 2006-07 include:

- Completed update of King Parrot Creek (Resource Allocation Model) REALM update;
- Completed update of Yea River REALM model; and
- Initiation of a flow determination study for the Yea River.

## PERFORMANCE STORY 5

**Gobur resident donates reserve**

When Gobur resident Mervyn Shaw learnt the regrowth in one of his paddocks was protected under the Native Vegetation Retention Act, he thought twice about initial plans to bulldoze the area. In fact, Mr Shaw has donated the 36 hectare paddock as a public reserve which will be managed by Trust for Nature.

Mr Shaw runs sheep and cattle on the 2830 hectares property which he bought about ten years ago. The GB CMA, DPI and Trust for Nature made an agreement with Mr Shaw and his family to manage the reserve which will involve controlling pest plants and animals, maintaining the valuable grassland diversity with strategic grazing and carefully thinning a regenerating woodland.

Mr Shaw said he was also keen to protect an adjoining 45 hectare paddock that rises steeply to a ridgeline featuring White Box, steep eroding slopes with a patchy covering of Wallaby grass, Lomandra and a good display of Wahlenbergia. About 25 hectares of the steepest country was fenced to stop cattle grazing the slopes and allow them to graze the lower Kangaroo grass. More than 3000 trees and shrubs were planted on the steepest hill and barest valley with the help of the community.

A Striped Legless Lizard and a Bibron's Toadlet have been among the findings during surveys of the reserve. Both species are listed under the Environment Protection and Biodiversity Conservation Act 1999. The reserve provides valuable connectivity, linking numerous native grass paddocks, excellent roadside vegetation and several public reserves.

The Trust for Nature Open Day was held at the reserve on 1 October 2006 celebrating 18 months work with Mr Shaw. About 120 people attended with lots of children's activities on offer. Participants discovered bats, invertebrates and the occasional wildflower. A management committee will be set-up to ensure ongoing commitment to the reserve dubbed Mervyn's Reserve, and a wider recognition of the value of the Gobur/ Merton landscape.



*Gobur Reserve tree planting – October 2006*



*Gobur Trust for Nature Reserve Open Day – October 2006*

## PERFORMANCE STORY 6

## Get bogged

Peatlands and spring soaks are distinct wetlands in the Goulburn Broken Catchment, restricted to areas where there is a constant supply of surface or seepage water. They support a number of threatened plant and animal communities and perform important hydrological functions. To better understand their current number and distribution, Ecology Australia recently completed an inventory of peatland and spring-soak wetlands in the Catchment of behalf of the CMA. Over 400 peatland and spring-soak wetlands were identified and mapped from field surveys and information provided by agency staff and the local community. In addition, possible peatland and spring soak wetland sites were modelled, which will be verified over time by CMA field staff.

To complement this work a peatland and spring-soak field day was held in the Central Highlands on the 12th November 2006. Over 70 people attended the field day where a variety of guest speakers explained the values of these wetlands, their threats and management requirements. The highlight of the day was exploring one of the largest and best examples of a sphagnum dominated peatland outside the sub-alpine region.

The report and a number of the field day presentations can be viewed and downloaded from the GB CMA website ([www.gbcm.vic.gov.au](http://www.gbcm.vic.gov.au)).

Protecting wetlands was the focus of a field day held in November 2006 after research was undertaken by Ecology Australia to develop a management plan for spring soaks and peatlands in the Goulburn Broken Catchment.

Land managers and landholders who attended the field day "Get Bogged" learnt about the habitat and hydrological values provided by wetlands, unique plants and the fragile nature of the ecosystems. Interesting wetland flora and fauna species were discussed including sphagnum, orchids, frogs and invertebrates to convey the complexity of the environment.

Speakers included botanists, zoologists and geomorphologists from Melbourne University, Ecology Australia, DSE, Latrobe University, and Trust for Nature.

Participants provided information on the day which helped identify other wetlands. Bog experts visited the new sites to survey the areas and further works, including covenants, are now being undertaken on these properties to protect the bogs. The original research paper will be developed into a management plan. Ongoing extension and grants are required to protect spring soaks from clearing, exotic species and stock and vehicle impacts.



*"Get Bogged" participants in a sphagnum moss bog, Highlands, November 2006*



**2006-07**

**Goulburn Broken**

**Catchment Management Authority**

**Financial Information  
Governance and  
Risk Management**



## Financial information, governance and risk management

### Disclosure Index

The 2006/07 Annual Report of the GB CMA is prepared in accordance with all relevant Victorian legislation. This index has been prepared to facilitate identification of the authorities' compliance with statutory disclosure requirements.

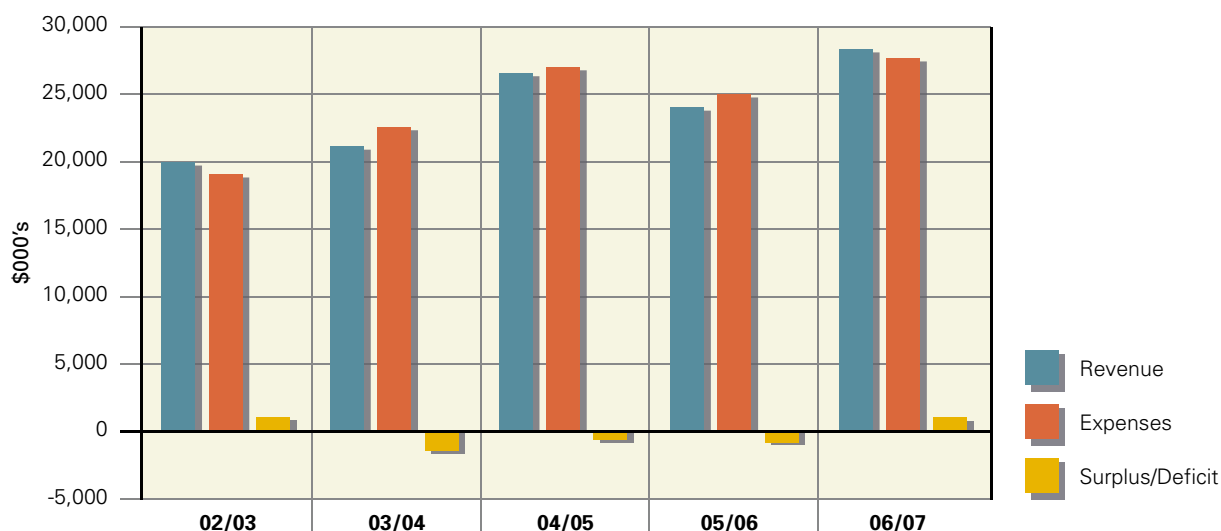
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Act	Major Item	2006/07 issues and status
<b>Statutory Authority</b>		
Catchment and Land Protection 1994	Prepare, co-ordinate and monitor and review RCS.	Review to be finalised June 2009. Currently reviewing sub strategies. On track.
	Submit Annual Report to Minister and Council by 31 August: 'A report on the condition and management of land and water resources in the region and carrying out of its functions.'	Annual report on schedule. VCMC Annual report on schedule.
	Submit Corporate Plan to Minister under the CALP Act (see below).	Submitted to Minister on 20 April 2007. Approved under Section 19C (3) of the CALP Act.
	Make Corporate Plan available for inspection.	Copy is available for inspection during business hours.
Water 1989	Members declare new interests at each (monthly) Board meeting and document it in Pecuniary Interests Register. Compliance reporting in Annual Report.	Declarations of Pecuniary Interests have been duly completed by all relevant Directors or officers of the Authority and are available for inspection.
	Submit Corporate Plan by 30 April to approve. An Authority may implement a Corporate Plan 2 months after its submission to the Minister, unless the Minister, within the time directs in writing any variations that the minister thinks fit.	(Business Plans are referred to as Corporate Plans.) Submitted to Minister 30 April 2006 and implemented from 1 July 2006. Issues relating to the linking of the Corporate Plan, the Regional Catchment Investment Plan was resolved in 2005-06.
	Make Corporate Plan available for inspection	Copy is available for inspection during business hours.
	Submit Funds of the Authority (in Annual Report) Review funds at each (monthly) Board meeting Policy for investment as per the Trustee Act 1958.	All funds were invested in accordance with the Trustee Act 1958. Interest earned is included in this Annual Report.
	Submit statement of Borrowings Review borrowings at each (monthly) Board meeting. Finance leases are borrowings and subject to Treasurer's approval.	See Business Plan under CALP Act below.
	This Authority operates under provisions of Schedule 2 of the Water Act.	The Authority operates under provisions of Schedule 2. The Authority adopted Governance Guidelines for Statutory Authority Board Members, DSE 2004 and conducted a training program for all directors. New code of conduct for Public sector - employees adopted.
	Public Administration 2004	Ensure operations of Board comply with Part 2 and Part 5.
Freedom of Information 1982	Report requests for access to documents in Annual Report. Report requests at each (monthly) Board meeting. The Act gives persons the right to request certain types of information (which are not exempt documents) held by the Authority. The Authority's FOI.	The Freedom of Information Act 1982 allows the public a right of access to documents held by the authority. Freedom of Information requests are made in writing describing the documents requested and including payment of the \$22.00 application fee. Further charges may be payable. FOI fees and charges are not subject to GST. Requests to the authority should be sent to Freedom of Information Officer, Kathy Fuller. The telephone contact number is (03) 5820 1100. Enquiries can be e-mailed to reception@gbcma.vic.gov.au. In the reporting period there were no requests for information.
Whistleblowers Protection 2001	Report actions in Annual Report. Report actions at each (monthly) Board meeting.	No actions were undertaken. Disclosures of improper conduct by the Authority or its employees may be made to Fleur Baldi (Protected Disclosure Co-ordinator) or alternatively to the Ombudsman. (See details elsewhere in Annual Report.)
Planning and Environment 1987	Authority is the Floodplain Management Authority under Division 4 of the Water Act and is a Section 55 Referral Authority under the Planning and Environment Act.	The Authority was established as a body corporate under the Catchment and Land Protection Act and then established as an Authority under the Water Act and given waterway management, floodplain management and drainage functions under Part 10 of the Water Act. For the reporting period, the Authority reported to The Honourable John Thwaites MP, Minister for Environment and Minister for Water.
	As per the Act and Victorian Planning Provision Practice Notes. Board is advised of application refusals at each (monthly) meeting.	Decisions are made in accordance with the Victoria Flood Strategy, the GB Regional Floodplain Management Strategy, the Victorian Planning Provisions Practice Notes and Authority Policy, all of which have largely been incorporated into respective municipal planning schemes as performance-based criteria. The Authority received more referrals than any other CMA in the State (1,100).
	Local government can request advice but are not required to take notice of it.	Advice was provided as appropriate.

Act	Major Item	2006/07 issues and status
<b>Statutory Authority</b>		
Privacy	As per the Act. When in doubt seek advice from the Privacy Commissioner.	The Authority has developed a privacy policy (in accordance with the Act) on how information is stored and under what circumstances it can be accessed or released to third parties.
Environmental Protection and Biodiversity Conservation 1999*	As per the Act.	All our works have a process which assesses the works against this Act. The Authority and its partners have complied with all requirements. Although the Authority has not referred any projects to the Minister in its own right, projects associated with the Minister's decommissioning of Lake Mokoan, the Deakin Drain 16 Extension project and Broken Creek surface water management were all referred.
Flora and Fauna 1988		The GB CMA continues to support the implementation of Action Statements and Recovery Plans for threatened flora and fauna by the Dept of Sustainability and Environment.
Environmental Protection 1970	Protection agencies need to report in their annual reporting processes, actions taken to implement the Policy (as per their responsibilities in SEPP (WoV) and Schedules, so that EPA[1] can then report to the community.	Initiated a process to conduct priority Ecological Risk Assessment, using Guidelines for Environmental Management Risk-based Assessment of Ecosystem Protection to determine further work required. Participated in the development of the "Regional Goulburn Broken Waterway incident Agreement" Staff have attended training with respect to emergency and incident response. (Australian inter-service incident management system)
Forest Act	Liaise with DSE as required.	Waterways in areas managed by DSE under the Act, the Authority complied with elements of the code which deal with access to waterways and crossings.
Financial Management 1994	Undertake review of its annual operations and advise Minister regarding compliance with Financial Compliance Management Framework.	Information listed in Part 9.1.3 (iv) is available on request.
Cultural Heritage 1986		Authority complied with requirements. Act changed on 28 May 2007 and is currently being reviewed to ensure compliance.
Building 1993		Authority complied with requirements.
National Competition Policy		Authority complied with requirements.
Marine Act 1988	The Authority is the Boating Authority in the Goulburn River downstream from the Eildon Weir pondage and upstream of Hughes Creek.	The Authority is reviewing boating speed limits and auditing signage and access in its area of responsibility, the Goulburn River downstream from Eildon Weir pondage and upstream of Hughes Creek. A report will be considered by the Board on 7 August 2007.
Country Fire Authority 1958	As per the Act.	The Authority has developed policies particularly relating to waterway operations which comply with the Act and reduce fire risk. Fire suppression equipment has been purchased.
<b>Employer</b>		
Workplace Relations 1996* Workplace Amendment (WorkChoices 2005)	As per the Act.	The Authority's policies have been evaluated for alignment against the Act. These policies have been reformatted and are on the Authority's portal (intranet). The Authority is renegotiating enterprise bargaining agreements with staff under provisions of Schedule 1/Collective Agreements (WorkChoices). Current agreement is Professional, Administrative and Technical Staff Enterprise Agreement 2003-06.
Equal Opportunity 1995	Annual data return reporting gender, diversity and complaints lodged and investigated.	The Authority is an equal opportunity employer. Kate Pendergast is the sexual harassment contact officer. No complaints were received in the reporting period. Of the Authority staff 47% are female and 53% male.
Long Service Leave 1992* Victorian Long Service Leave regulations 2005 Water Long Service Leave regulations 2001	Long service leave liability is reported monthly to the Board.	Policies comply with Act. Liability is reflected in financial provisions and accounting policy included in notes with this Annual Report.
Occupational Health and Safety 2004, amended 2005	Report Occupational Health and Safety issues at each (monthly) Board meeting and in Annual Report.	The Authority comprehensively reviewed its policies and procedures in 2005-06 and inducted all staff. Manuals were developed and distributed and made available for contractors. Designated work groups and health and safety representatives are part of the consultative processes reflecting updates of the Act. Policies and procedures are available on the portal (intranet).

**Summary of Financial Results – Current plus Past Four Years**

	2002/03 \$ 000's	2003/04 \$ 000's	2004/05 \$ 000's	2005/06 \$ 000's	2006/07 \$ 000's
<b>Income &amp; Expenditure</b>					
Government Contributions	19,112	19,668	25,556	23,139	29,209
Other revenues	797	1,584	1,077	931	1,445
<b>Total Income</b>	<b>19,909</b>	<b>21,252</b>	<b>26,633</b>	<b>24,070</b>	<b>30,654</b>
Expense	19,089	22,487	26,883	25,030	29,938
Interest	-	7	6	18	10
<b>Surplus/(Deficit)</b>	<b>820</b>	<b>(1,242)</b>	<b>(256)</b>	<b>(978)</b>	<b>706</b>
<b>Balance Sheet Items</b>					
<b>Current Assets</b>					
Cash	7,784	8,210	8,357	8,102	6,882
Receivables	2,288	830	981	1,261	540
Inventories	1	-	-	-	-
Prepayments	36	12	156	104	47
<b>Total Current Assets</b>	<b>10,109</b>	<b>9,052</b>	<b>9,494</b>	<b>9,467</b>	<b>7,469</b>
Fixed Assets	1,078	1,144	1,329	1,471	1,513
<b>Total Assets</b>	<b>11,187</b>	<b>10,196</b>	<b>10,823</b>	<b>10,938</b>	<b>8,982</b>
<b>Current Liabilities</b>					
Trade Creditors	1,316	2,598	1,255	2,582	1,220
GST Liabilities	64	-	116	-	-
Borrowings	21	48	63	77	74
Accruals	2,247	1,163	3,214	3,012	1,639
Provisions	119	178	165	448	558
<b>Total Current Liabilities</b>	<b>3,767</b>	<b>3,987</b>	<b>4,813</b>	<b>6,119</b>	<b>3,491</b>
<b>Non Current Liabilities</b>					
Borrowings	70	88	77	103	70
Other	214	227	295	56	55
<b>Total Non Current Liabilities</b>	<b>284</b>	<b>315</b>	<b>372</b>	<b>159</b>	<b>125</b>
<b>Net Assets</b>	<b>7,136</b>	<b>5,894</b>	<b>5,638</b>	<b>4,660</b>	<b>5,366</b>
<b>Equity Items</b>					
Contributed capital	4,134	4,134	4,134	4,134	4,134
Accumulated surplus	3,002	-	-	-	-
Reserves	-	1,760	1,504	526	1,232
<b>Total Equity</b>	<b>7,136</b>	<b>5,894</b>	<b>5,638</b>	<b>4,660</b>	<b>5,366</b>
<b>Cash Flow Items</b>					
Net Operating Activities	3,659	723	634	216	(775)
Net Investing Activities	(322)	(342)	(435)	(415)	(365)
Net Financing Activities	91	45	(52)	(56)	(80)
<b>Net Cash Movement</b>	<b>3,428</b>	<b>426</b>	<b>147</b>	<b>(255)</b>	<b>(1,220)</b>

**Financial Summary 2002 – 2007**

**Significant changes in financial results for 2006-07**

Significant changes in the financial results for 2006-07 compared to the Authority's Corporate Plan are summarised as follows:

<b>Statement of financial performance</b>	Corporate Plan \$000's	Actual \$000's
Total revenue	27,122	30,654
Total expenditure	27,115	29,948
<b>Net Profit / (Deficit)</b>	<b>7</b>	<b>706</b>
<b>Statement of Financial Position</b>		
Cash & Receivables	7,421	7,422
Other	87	47
Non-current assets	1,539	1,513
<b>Total Assets</b>	<b>9,047</b>	<b>8,982</b>
Liabilities		
Current	(2,824)	(3,491)
Non-current	(482)	(125)
<b>Total Liabilities</b>	<b>(3,306)</b>	<b>(3,616)</b>
<b>Net Assets</b>	<b>5,741</b>	<b>5,366</b>

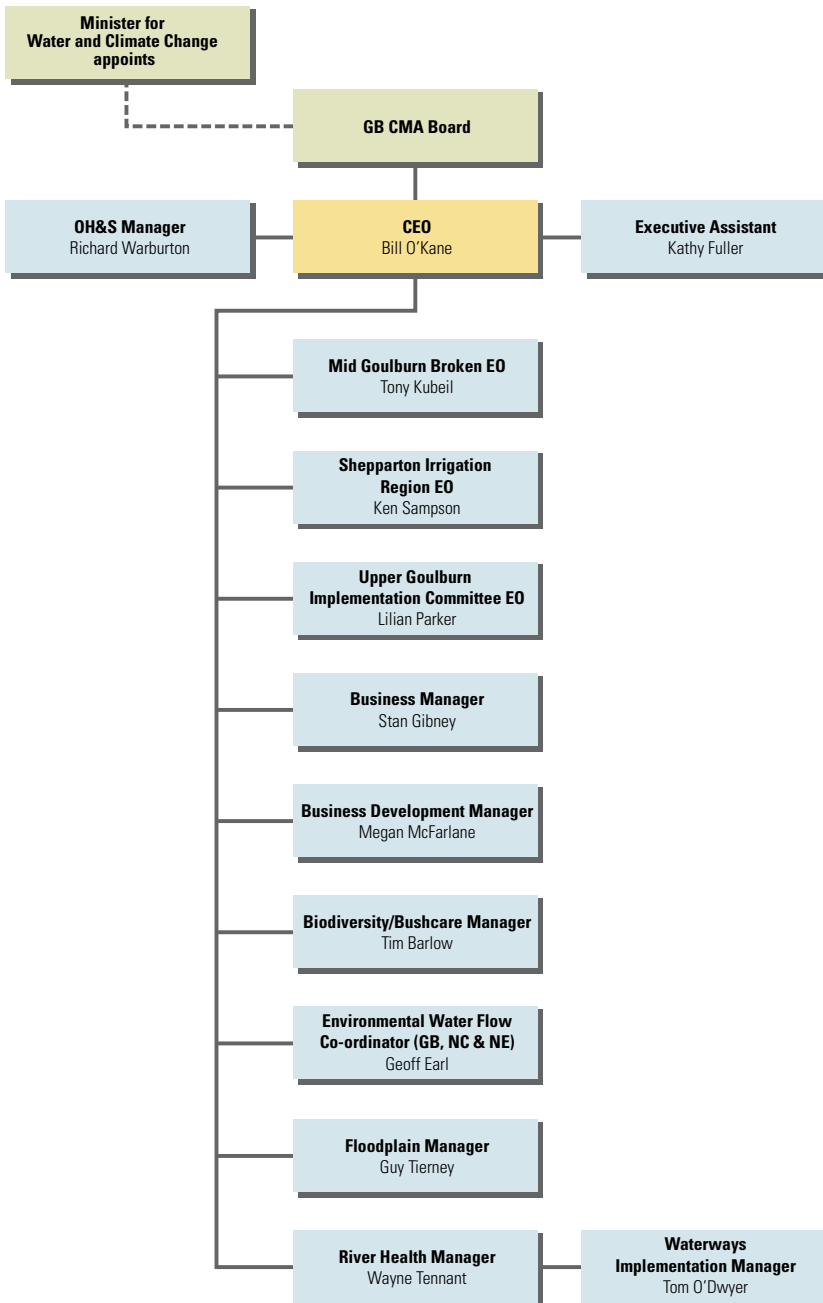
**Consultancies**

	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>
Cost	\$1,464,772	\$1,183,409	\$2,209,698
Number of consultants	18	15	23
Consultancies in excess of \$100,000	0	1	1*

\* Fugro Spatial Solutions P/L for digital airborne laser survey

## Goulburn Broken Catchment Management Authority

### Management Structure



Board members of the Authority, as appointed by the Minister for Water, Environment and Climate Change (formerly the Minister for Environment) are:

Neville Barwick  
Don Cummins  
Yvonne Davies  
Peter Fitzgerald  
Lyn Gunter  
Anne McCamish  
Stephen Mills (Chair)  
John Pettigrew  
Nick Roberts  
Brian Thompson (DPI, until 7 Oct. 2006)  
Kevin Ritchie (DSE; until 7 Oct. 2006)

The Board has established Audit, Remuneration and Compliance Committees comprising the following Board members:

#### Audit Committee

John Pettigrew (Chair)  
Neville Barwick  
Yvonne Davies  
Peter Fitzgerald

All members of the Audit Committee are independent in terms of the State's Financial Management Compliance Framework.

#### Remuneration Committee

Anne McCamish (Chair)  
Neville Barwick  
Lyn Gunter  
John Pettigrew

#### Compliance Committee

Don Cummins (Chair)  
Yvonne Davies  
Nick Roberts  
Brian Thompson (DPI)  
Kevin Ritchie (DSE)

The Chairman, Stephen Mills is ex-officio of all Board Committees and is able to attend all meetings.

Chief Executive Officer

**Bill O’Kane**

### Senior Office Holders

**Lilian Parker** – Upper Goulburn IC Executive Officer

The UGIC Executive Officer provides executive liaison with the Implementation Committee to ensure works program targets are met in line with the Corporate Plan.

**Tony Kubeil** – Mid Goulburn Broken IC Executive Officer

The MGBIC Executive Officer provides executive liaison with the Implementation Committee to ensure works program targets are met in line with the Corporate Plan.

**Ken Sampson** – Shepparton Irrigation Region IC Executive Officer

The SIRIC Executive Officer provides executive liaison with the Implementation Committee to ensure works program targets are met in line with the Corporate Plan.

**Stan Gibney** – Business Manager

The Business Manager’s role is to ensure the efficient administration of the Authority and the provision of prompt and timely financial advice to the CEO and Board.

**Megan McFarlane** – Business Development Manager

The Business Development Manager is responsible for the funding and investment processes across the Authority, as well as providing strategic advice to the CEO on monitoring, evaluation and reporting and managing the update of the Regional Catchment Strategy.

**Guy Tierney** – Floodplain Manager

The Floodplain Manager coordinates floodplain management activities across the Goulburn, Broken and part of the River Murray basins.

**Wayne Tennant** – Strategic River Health Manager

The Strategic River Health Manager provides senior professional advice and guidance to the CEO and the Board on policies, programs, implementation strategies, research activities, monitoring, and related projects.

**Geoff Earl** – Environmental Water Flow Coordinator

The Environmental Water Flow Coordinator works closely with the respective Environmental Water Resources Officers in each CMA region (North East, Goulburn Broken and North Central) and provides strategic advice on maximizing the management of stream flow to meet regional ecological and environmental flow targets.

**Tim Barlow** – Biodiversity Manager

The Biodiversity Manager is responsible for the development and implementation of major Biodiversity strategies.

**Tom O’Dwyer** – Waterways Implementation Manager

The waterways implementation manager ensures that targets and outcomes agreed in line with funding bodies agreements as well as the GB CMA’s Business Plan are achieved.

**Kathy Fuller** – Executive Assistant and Freedom of Information Officer

Provides administrative support to the CEO and the operations of the GBCMA Board and its sub committees. This includes significant liaison with senior managers and members of the Board. Kathy is also the Freedom of Information Officer for the GB CMA.

**Richard Warburton** – OH&S Manager

The OH & S Manager develops and maintains statutory obligations for compliance and maintenance of safety management system activities including policies, procedures and manuals. This is in addition to his waterways role.

### Culturally Appropriate Services

The Authority is committed to policies, programs and strategies aimed at delivering culturally appropriate services to all Victorians.

Current practices of inclusive and thorough public consultation ensure that all persons who have an interest in investigations are kept informed and have the opportunity to have input into the Goulburn Broken Catchment Management Authority deliberations.

### Manner of Establishment and relevant Minister

The Authority was established as a body corporate under the Catchment and Land Protection Act 1994 and then established as an Authority under the Water Act 1989 and given waterway management, floodplain management and drainage functions under Part 10 of the Water Act.

For the reporting period, the Authority reported to The Honourable John Thwaites MP, Minister for Water, Environment and Climate Change (formerly the Minister for Environment).

### Objectives, functions powers and duties:

In relation to the undertaking of functions for which the Authority has direct service provision responsibility i.e. waterway management, floodplain management and regional drainage functions the Authority has powers under Part 10 of the Water Act. In addition to these the Authority also has the general powers of an Authority under part 7 of the Water Act which include:

- Power to do all things necessary (Section 123),
- Power to enter into contracts (Section 126),
- Commercial ventures (Section 127) and
- General By-law powers (Section 160 and Section 219).

Specifically under Section 13 of the Catchment and Land Protection Act 1994 the Authority has the following functions:

- To prepare a regional catchment strategy for the region and to co-ordinate and monitor its implementation,
- To prepare special area plans for areas in the region and to co-ordinate and monitor their implementation,
- To promote the co-operation of persons and bodies involved in the management of land and water resources in the region in preparing and implementing the strategy and special area plans,
- To advise the Minister, and, if requested by any other Minister, that other Minister
  - o on regional priorities for activities by and resource allocation to bodies involved in the management of land and water resources in the region and;
  - o on guidelines for integrated management of land and water resources in the region; and
  - o on matters relating to catchment management and land protection; and
  - o on the condition of land and water resources in the region;
- To promote community awareness and understanding of the importance of land and water resources, their sustainable use, conservation and rehabilitation;



- To make recommendations to the Minister about the funding of the implementation of the regional catchment strategy and any special area plan;
- To make recommendations to the Minister and the Secretary about actions to be taken on Crown land managed by the Secretary to prevent land degradation;
- To advise the Minister and provide information to the Minister on any matter referred to it by the Minister;
- To carry out any other functions conferred on the Authority by or under the CaLP Act 1994 or any other Act.

### Whistleblowers Protection Act 2001

The Authority has established a Whistleblowers Protection Policy in line with its obligations under the Whistleblowers Protection Act 2001.

#### a) Contact persons within the Goulburn Broken Catchment Management Authority

Disclosures of improper conduct or detrimental action by the Goulburn Broken Catchment Management Authority or its employees, may be made to the following officers:

- The protected disclosure coordinator  
Fleur Baldi (03) 5820 1100
- Protected disclosure officer/s  
Lilian Parker (03) 5736 0100  
Wayne Tennant (03) 5820 1100  
Peter Howard (03) 5833 5343
- All correspondence, phone calls and emails from internal or external whistleblowers will be referred to the protected disclosure coordinator.
- Where a person is contemplating making a disclosure and is concerned about approaching the protected disclosure coordinator or a protected disclosure officer in the workplace, he or she can call the relevant officer and request a meeting in a discreet location away from the workplace.

#### b) Alternative contact persons

A disclosure about improper conduct or detrimental action by the Goulburn Broken Catchment Management Authority or its employees, may also be made directly to the Ombudsman.

The Authority operates the current procedures in line with its Whistleblowers Protection Policy.

#### c) Protected disclosure officers

Protected disclosure officers will:

- Be a contact point for general advice about the operation of the Act for any person wishing to make a disclosure about improper conduct or detrimental action.
- Make arrangements for a disclosure to be made privately and discreetly and, if necessary, away from the workplace.
- Receive any disclosure made orally or in writing (from internal and external whistleblowers)
- Commit to writing any disclosure made orally.
- Impartially assess the allegation and determine whether it is a disclosure made in accordance with Part 2 of the Act (that is, a protected disclosure).
- Take all the necessary steps to ensure the identity of the whistleblower and the identity of the person who is the subject of the disclosure are kept confidential.
- Forward all disclosures and supporting evidence to the protected disclosure coordinator.

#### d) Protected disclosure coordinator

The protected disclosure coordinator has a central clearinghouse role in the internal reporting system. The Protected Disclosure Coordinator will:

- Receive all disclosures forwarded from the protected disclosure officers.
- Receive all phone calls, emails and letters from members of the public or employees seeking to make a disclosure.
- Impartially assess each disclosure to determine whether it is a public interest disclosure.
- Refer all public interest disclosures to the Ombudsman.
- Be responsible for carrying out, or appointing an investigator to carry out, an investigation referred to the public body by the Ombudsman.
- Be responsible for overseeing and coordinating an investigation where an investigator has been appointed.
- Appoint a welfare manager to support the whistleblower and to protect him or her from any reprisals.
- Advise the whistleblower of the progress of an investigation into the disclosed matter.
- Establish and manage a confidential filing system.
- Collate and publish statistics on disclosures made.
- Take all necessary steps to ensure the identity of the whistleblower and the identity of the person who is the subject of the disclosure are kept confidential.
- Liaise with the Chief Executive Officer of the public body.

#### e) Available information

- Declarations of pecuniary interests have been duly completed by all relevant officers of the GB CMA.
- Details of publications produced by the GB CMA about the activities of the Authority and where they can be obtained.
- Details of changes in prices, fees, charges, rates and levies charged by the GB CMA for its services, including services that are administered.
- Details of any major external reviews carried out in respect of the operation of the GB CMA.
- Further details of any other research and development activities undertaken by the GB CMA that are not otherwise covered either in the report of operations or in a document which contains the financial report and report of operations.
- Summary of the objectives and outcomes of each visit.
- Details of major promotional, public relations and marketing activities undertaken by the GB CMA to develop community awareness of the services provided by the Authority.
- Details of assessments and measures undertaken to improve the occupational health and safety of employees, not otherwise detailed in the report of operations.
- A general statement on industrial relations within the GB CMA and details of time lost through industrial accidents and disputes, which is not otherwise detailed in the report of operations.
- A list of major committees sponsored by the GB CMA, the purpose of each committee and the extent to which the purposes have been achieved.
- Information relevant to the headings listed in Financial Reporting Direction 22B of the Financial Management Act 1994 is held at the Authority's office and is available on request subject to the Freedom of Information Act 1982.



Victorian Auditor-General's Office

## INDEPENDENT AUDIT REPORT

### Goulburn Broken Catchment Management Authority

To the Members of the Parliament of Victoria and Members of the Board of the Authority

#### *The Financial Report*

The accompanying financial report for the year ended 30 June 2007 of the Goulburn Broken Catchment Management Authority which comprises the operating statement, balance sheet, statement of changes in equity, cash flow statement, a summary of significant accounting policies and other explanatory notes to and forming part of the financial report, and the certification of the financial statements has been audited.

#### *The Responsibility of the Members of Board for the Financial Report*

The Members of the Board of the Goulburn Broken Catchment Management Authority are responsible for the preparation and the fair presentation of the financial report in accordance with Australian Accounting Standards (including the Australian Accounting Interpretations) and the financial reporting requirements of the *Financial Management Act 1994*. This responsibility includes:

- establishing and maintaining internal controls relevant to the preparation and fair presentation of the financial report that is free from material misstatement, whether due to fraud or error
- selecting and applying appropriate accounting policies
- making accounting estimates that are reasonable in the circumstances.

#### *Auditor's Responsibility*

As required by the *Audit Act 1994*, my responsibility is to express an opinion on the financial report based on the audit, which has been conducted in accordance with Australian Auditing Standards. These Standards require compliance with relevant ethical requirements relating to audit engagements and that the audit be planned and performed to obtain reasonable assurance whether the financial report is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial report. The audit procedures selected depend on judgement, including the assessment of the risks of material misstatement of the financial report, whether due to fraud or error. In making those risk assessments, consideration is given to internal control relevant to the Board Members' preparation and fair presentation of the financial report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. An audit also includes evaluating the appropriateness of the accounting policies used, and the reasonableness of accounting estimates made by the Board Members, as well as evaluating the overall presentation of the financial report.

I believe that the audit evidence obtained is sufficient and appropriate to provide a basis for my audit opinion.

# VAGO

Victorian Auditor-General's Office

## Independent Audit Report (continued)

### *Independence*

The Auditor-General's independence is established by the *Constitution Act 1975*. The Auditor-General is not subject to direction by any person about the way in which his powers and responsibilities are to be exercised. The Auditor-General, his staff and delegates comply with all applicable independence requirements of the Australian accounting profession.

### *Auditor's Opinion*

In my opinion, the financial report presents fairly, in all material respects, the financial position of the Goulburn Broken Catchment Management Authority as at 30 June 2007 and its financial performance and cash flows for the year then ended in accordance with applicable Australian Accounting Standards (including the Australian Accounting Interpretations), and the financial reporting requirements of the *Financial Management Act 1994*.

MELBOURNE  
17 September 2007



D.D.R. Pearson  
Auditor-General

## GOULBURN BROKEN CATCHMENT MANAGEMENT AUTHORITY

ABN 89 184 039 725

### CERTIFICATION TO THE FINANCIAL STATEMENTS

We hereby certify that the financial statements of the Goulburn Broken Catchment Management Authority, have been prepared in accordance with Part 7 of the Directions of the Minister for Finance under the Financial Management Act 1994, applicable Australian Accounting Standards and other mandatory professional reporting requirements.

We further state that, in our opinion, the information set out in the Operating Statement, Balance Sheet, Statement of Changes in Equity, Cash Flow Statement and notes to and forming part of the financial statements, presents fairly the financial transactions during the year ended 30th June 2007 and the financial position of the Authority as at 30 June 2007.

We are not aware of any circumstances which would render any particulars included in the financial statements to be misleading or inaccurate.

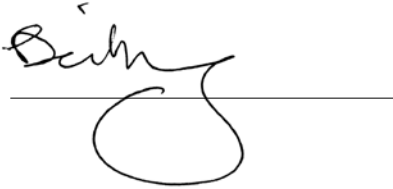
Signed in accordance with a resolution of the Board of Management dated 14th September 2007



S T MILLS, CHAIRMAN



W J O'KANE, CHIEF EXECUTIVE OFFICER



S D GIBNEY, BUSINESS MANAGER

## Operating Statement for the Financial Year ended 30 June 2007

	Note	2007 \$'000	2006 \$'000
<b>REVENUE FROM OPERATING ACTIVITIES</b>			
Government Contributions	2	29,209	23,139
Revenues from non-operating activities	2	1,445	931
<b>Total Revenue</b>		<b>30,654</b>	<b>24,070</b>
<b>EXPENSES FROM OPERATING ACTIVITIES</b>			
Operating costs to works programs	3a	(28,072)	(23,305)
Amortisation of leased assets	3c	(56)	(86)
Depreciation	3b	(306)	(294)
Administration expenses	3d	(1,271)	(1,176)
Interest		(10)	(18)
Provision for doubtful debt		(53)	-
Occupancy expenses		(180)	(169)
<b>Total Expenses</b>		<b>( 29,948)</b>	<b>(25,048)</b>
<b>Net result for the period</b>		<b>706</b>	<b>(978)</b>

The accompanying notes form part of these financial statements.

## Balance Sheet as at 30 June 2007

	Note	2007 \$'000	2006 \$'000
<b>ASSETS</b>			
CURRENT ASSETS			
Cash and cash equivalents	4	6,882	8,102
Receivables	5	540	1,261
Prepayments		47	104
<b>TOTAL CURRENT ASSETS</b>		<b>7,469</b>	<b>9,467</b>
<b>NON-CURRENT ASSETS</b>			
Property, plant and equipment	6	1,513	1,471
<b>TOTAL NON-CURRENT ASSETS</b>		<b>1,513</b>	<b>1,471</b>
<b>TOTAL ASSETS</b>		<b>8,982</b>	<b>10,938</b>
<b>LIABILITIES</b>			
CURRENT LIABILITIES			
Payables	7	2,859	5,594
Interest bearing liabilities	8	74	77
Employee Benefits	9	558	448
<b>TOTAL CURRENT LIABILITIES</b>		<b>3,491</b>	<b>6,119</b>
<b>NON-CURRENT LIABILITIES</b>			
Interest bearing liabilities	8	70	103
Employee Benefits	9	55	56
<b>TOTAL NON-CURRENT LIABILITIES</b>		<b>125</b>	<b>159</b>
<b>TOTAL LIABILITIES</b>		<b>3,616</b>	<b>6,278</b>
<b>NET ASSETS</b>		<b>5,366</b>	<b>4,660</b>
<b>EQUITY</b>			
Contributed equity	11	4,134	4,134
Accumulated Funds	12	-	-
Reserve	13	1,232	526
<b>TOTAL EQUITY</b>		<b>5,366</b>	<b>4,660</b>

## Statement of Changes in Equity for the year ended 30 June 2007

Opening Equity Balance	4,660	5,638
Net result for the period	706	(978)
<b>Closing Equity Balance</b>	<b>5,366</b>	<b>4,660</b>

The accompanying notes form part of these financial statements.

## Cash Flow Statement for the Financial Year ended 30 June 2007

	Note	2007 \$'000	2006 \$'000
<b>CASH FLOW FROM OPERATING ACTIVITIES</b>			
Government Contributions		32,671	24,887
Payments to suppliers and employees		(34,503)	(25,190)
GST remitted to Australian Tax Office		(352)	(256)
Interest received		699	535
Interest paid		(10)	(18)
Other Revenue		720	258
<b>Net cash provided by (used in) operating activities</b>	<b>18b</b>	<b>(775)</b>	<b>216</b>
<b>CASH FLOW FROM FINANCING ACTIVITIES</b>			
Proceeds from Contributed capital		-	2,060
Contributed capital transferred		-	(2,060)
Borrowings repaid		(80)	(56)
<b>Net cash provided by (used in) financing activities</b>		<b>(80)</b>	<b>(56)</b>
<b>CASH FLOW FROM INVESTING ACTIVITIES</b>			
Proceeds from sale of property, plant and equipment		248	58
Payment for property, plant and equipment		(613)	(473)
<b>Net cash provided by (used in) investing activities</b>		<b>(365)</b>	<b>(415)</b>
Net (decrease) / increase in cash held		(1,220)	(255)
Cash at beginning of year		8,102	8,357
<b>Cash at end of year</b>	<b>18a</b>	<b>6,882</b>	<b>8,102</b>

The accompanying notes form part of these financial statements.

## Notes to the Financial Statements for the year ended 30 June 2007

**NOTE 1: SIGNIFICANT ACCOUNTING POLICIES****(a) Basis of Accounting***General*

This financial report of Goulburn Broken Catchment Management Authority is a general purpose financial report that consists of an Operating Statement, Balance Sheet, Statement of Changes in Equity, Cash Flow Statement and notes accompanying these statements. The general purpose financial report complies with Australian equivalents to International Financial Reporting Standards (AIFRS), other authoritative pronouncements of the Australian Accounting Standards Board and the requirements of the Financial Management Act 1994 and applicable Ministerial Directions.

This financial report has been prepared on an accrual and going concern basis.

*Accounting Policies*

Unless otherwise stated, all accounting policies applied are consistent with those of the prior year. Where appropriate, comparative figures have been amended to accord with current presentation and disclosure made of material changes to comparatives.

*Classification between current and non-current*

In the determination of whether an asset or liability is current or non-current, consideration is given to the time when each asset or liability is expected to be realised or paid. The asset or liability is classified as current if it is expected to be turned over within the next twelve months, being the Authority's operational cycle.

*Rounding*

Unless otherwise stated, amounts in the report have been rounded to the nearest thousand dollars.

*Historical cost Convention*

The financial statements have also been prepared under the historical cost convention, except where specifically stated in Note 1(d).

*Critical accounting estimates*

The preparation of financial statements in conformity with AIFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the entity's accounting policies.

**(b) Revenue Recognition**

Government grants are brought to account on the earlier of receipt or the right to receive the contributions. The full grant receivable is reflected as revenue. Instalment receipts on the grant are credited to the receivable account. Consequently, at year-end outstanding instalments on these grants are reflected as receivable from Government.

The value of all goods and services received free of charge are recognised as revenue when the authority gains control of them. The benefits derived from these goods and services are recorded at their fair values in the financial statements.

Grants and contributions for capital works from all sources are disclosed in the operating statement as operating revenue as these grants and contributions relate to expenditure on works written off in the year the expenditure is incurred. Any grants and contributions received from the Victorian State Government which the relevant

Ministers have indicated are in the nature of owners' contributions, are accounted for as Equity – Contributed Capital. Gains or Losses on disposal of non-current assets are calculated as the difference between the gross proceeds on sale and their written down value.

*Interest and Rents*

Interest and Rentals are recognised as revenue when earned or the service provided.

**(c) Borrowing Costs**

Borrowing Costs are recognised as expenses in the period in which they are incurred.

Borrowing costs include interest on finance lease charges.

**(d) Recognition and Measurement of Assets***Acquisition*

The purchase method of accounting is used for all acquisitions of assets. Cost is measured as fair value of the assets given, at the date of exchange plus costs directly attributable to the acquisition.

Assets acquired at no cost or for nominal consideration by the Authority are recognised at fair value at the date of acquisition.

Property, plant and equipment represent non-current assets comprising infrastructure, buildings, plant, equipment and motor vehicles, used by the Authority in its operations. Items with a cost or value in excess of \$1,000 and a useful life of more than one year are recognised as an asset. All other assets acquired are expensed.

*Repairs and Maintenance*

Routine maintenance, repair costs and minor renewal costs are expensed as incurred.

*Leases*

Leases of fixed assets, where substantially all the risks and benefits incidental to the ownership of the asset, but not the legal ownership, are transferred to the Authority, are classified as finance leases. Finance leases are capitalised, recording an asset and a liability equal to the present value of the minimum lease payments, including any guaranteed residual values. Leased assets are amortised on a straight line basis over their estimated useful lives where it is likely that the Authority will obtain ownership of the asset at the end of the lease. Lease payments are allocated between the reduction of the lease liability and the lease interest expense for the period.

Lease payments for operating leases, where substantially all the risks and benefits remain with the lessor, are charged as an expense in the periods in which they are incurred.

*Valuation of Non Current Physical Assets*

Infrastructure and buildings are measured at cost.

*Plant and Equipment:*

Plant and equipment and Motor Vehicles are measured at cost.

*Leasehold improvements*

Leasehold improvements are recognised at cost and are amortised over the unexpired period of the lease or the estimated useful life of the improvement, whichever is the shorter. At balance date, leasehold improvements are amortised over a 6 year period.



## Notes to the Financial Statements for the year ended 30 June 2007

### **Impairment of Assets**

All assets are assessed annually for indicators of impairment.

If there is an indication of impairment, the assets concerned are tested as to whether their carrying value exceeds their recoverable amount. Where an asset's carrying amount exceeds its recoverable amount, the difference is written-off by a charge to the operating statement except to the extent that the write down can be debited to an asset revaluation reserve amount applicable to that class of asset.

The recoverable amount for most assets is measured at the higher of depreciated replacement cost and fair value less costs to sell. Recoverable amount for assets held primarily to generate net cash inflows measured at the higher of the present value of future cash flows expected to be obtained from the asset and fair value less costs to sell. It is deemed that, in the event of the loss of an asset, the future economic benefits arising from the use of the asset will be replaced unless a specific decision to the contrary has been made.

### **(e) Depreciation and Amortisation of Non-Current Assets**

Where assets have separate identifiable components that have distinct useful lives and/or residual values, a separate depreciation rate is determined for each component.

Depreciation is calculated using the straight-line method to allocate their costs, net of their residual values, over their estimated useful lives, commencing from the time the asset is held ready for use. The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each balance sheet date. Major depreciation rates used are listed below and are consistent with prior year, unless otherwise stated:

Asset Class	Depreciation rate
Buildings	2.50%
Plant & Equipment	10% to 40%
Motor Vehicles	20%
Infrastructure assets	2%

### **(f) Cash and Cash Equivalent Assets**

For the purposes of the Cash Flow Statement, cash and cash equivalents include cash on hand, deposits held at call with financial institutions, other short-term, highly liquid investments with original maturities of three months or less that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value, and bank overdrafts. Bank overdrafts are shown within interest bearing liabilities on the balance sheet.

### **(g) Receivables**

Receivables are brought to account at fair value. Receivables due from the government are due within 14 days; other receivables are due within 30 days. Collectability of debtors is reviewed on an ongoing basis. Debts which are known to be uncollectible are written off. A provision for doubtful debts is recorded when some doubt as to collection exists.

### **(h) Trade and Other Payables**

These amounts represent liabilities for goods and services provided to the Authority prior to the end of the financial year, which are unpaid. The amounts are unsecured and are usually paid within 30 days of recognition.

### **(i) Employee Benefits**

#### **(i) Employee Benefits**

Provision is made for benefits accruing to employees in respect of wages and salaries, annual leave and long service leave when it is probable that settlement will be required and they are capable of being measured reliably. No provision is made for sick leave as it is non-vesting.

Provisions made in respect of employee benefits expected to be settled within 12 months are measured at their nominal values, using the remuneration rate expected to apply at the time of settlement.

Provisions made in respect of employee benefits which are not expected to be settled within 12 months are measured at the present value of the estimated future cash outflows to be made by the Authority, in respect of services provided by employees up to the reporting date.

#### **(ii) Superannuation**

The amount charged to the operating statement in respect of superannuation represents the contributions made by the Authority to the superannuation plan in respect to the current services of current entity staff. Superannuation contributions are made to the plans based on the relevant rules of each plan.

#### **(iii) Employee Benefit On-Costs**

Employee benefit on-costs, including payroll tax and workcover costs are recognised and included in employee benefit liabilities and costs when the employee benefits to which they relate are recognised as liabilities.

#### **(iv) Performance Bonus**

Performance payments for the Authority's Executive Officers are based on a percentage of the annual salary package provided under their contracts of employment. A liability is recognised and is measured as the aggregate of the amounts accrued under the terms of the contracts to balance date.

### **(j) Goods and Services Tax**

Revenues, expenses and assets are recognised net of goods and services tax (GST), except where the amount of GST incurred is not recoverable from the Australian Taxation Office (ATO). In these circumstances, the GST is recognised as part of the cost of acquisition of the asset or as part of an item of expense.

Receivables and payables are stated inclusive of GST. The net amount of GST recoverable from, or payable to, the ATO is included as a current asset or liability in the balance sheet.

Cash flows arising from operating activities are disclosed in the Cash Flow Statement on a gross basis – i.e., inclusive of GST. The GST component of cash flows arising from investing and finance activities which is recoverable or payable to the taxation authority is classified as operating cash flows.

### **(k) Contributed Capital**

Grants and contributions received from the Victorian State Government which were originally appropriated by the Parliament as additions to net assets or where the Minister for Finance and the Minister for Environment have indicated are in the nature of owners' contributions, are accounted for as Equity – Contributed Capital.

### **(l) Changes in Accounting Policy**

The accounting policies are consistent with those of the previous year, unless stated otherwise.

## Notes to the Financial Statements for the year ended 30 June 2007

	Note	2007 \$'000	2006 \$'000
<b>NOTE 2: REVENUES</b>			
Revenues from Operating activities			
— Government Contributions	2a	29,209	23,139
Revenues from Non-Operating Activities			
— Interest		726	559
— Contributions from Third Parties		173	199
— Workcover		62	33
— Rent Received		10	10
— Seedbank Funding		8	47
— Joint activities with CMAs		225	-
— Ecological Monitoring GMW		160	-
— Other		86	72
		1,450	920
Non-operating activities			
— (Loss) Gain on disposal of property, plant and equipment		(5)	11
Other revenues from ordinary activities		1,445	931
Total revenue		30,654	24,070
a. Government Contributions:			
<b>- State Government of Victoria</b>			
- Catchment Planning		985	1,010
- Floodplain administration		240	240
- Environmental Flows monitoring & Assessment		481	132
- Lake Mokoan Study		-	47
- River Health & Water Quality		1,497	2,240
- Salinity Infrastructure		2,860	1,030
- Second Generation Landcare		569	541
- Stressed Rivers / Healthy Rivers Initiative		1,186	1,630
- Sustainable Irrigated Agriculture		1,304	395
- Tariff Replacement Funding		-	132
- Victorian Water Trust & Water Smart Farms Initiative		1,620	800
- White paper – River Health Large Scale River Restoration		1,000	1,184
- Broken Boosey Conservation Management Network		151	145
- Recreational Fish Licence		125	68
- Murray River Regional Flood Study		15	60
- Waterway Guidelines		11	21
- Enterprise Bargaining Wage Supplementation		-	53
- Water Savings		70	-
- Drought Employment Program		3,020	-
- Stock Containment Grants		346	-
- Other		371	298
		15,851	10,026
<b>- Commonwealth Government</b>			
Natural Heritage Trust			
- Facilitators & Coordinators		496	546
- Regional grants		1,273	1,148
- Other AFFA		386	325
National Landcare Program		100	53
		2,255	2,072
<b>- Murray Darling Basin Commission</b>		475	391
<b>- Victorian State &amp; Commonwealth Government</b>			
- National Action Plan		10,628	10,650
		29,209	23,139

## Notes to the Financial Statements for the year ended 30 June 2007

Note	2007 \$'000	2006 \$'000
<b>NOTE 3: EXPENSES</b>		
Net result for the period has been determined after:		
(a) Operating Costs to Works Programs		
- Waterways	5,778	5,769
- Salinity Infrastructure & SIALM	8,121	7,001
- Grants to third parties	3,705	3,155
- Floodplain Administration	199	238
- Floodplain Works	180	394
- Second Generation Landcare	509	310
- Landcare Support	187	194
- Regional Catchment Strategy Review	31	22
- Grants		
- Environmental Management Grants	1,026	1,464
- Community Surface Drains	184	52
- Whole Farm Plans	313	254
- Automatic Irrigation	56	72
- Drainage Reuse	594	726
- Capital Salinity Grants	745	171
- Nutrient Removal	20	36
- Bushcare / Native Vegetation	1,287	1,123
- Water Quality & Environmental Flows	1,376	1,142
- Lake Mokoan study	57	17
- Drought Employment Program	2,545	-
- Stock Containment Grants	396	-
- Other	763	1,165
	28,072	23,305
(b) Depreciation of non-current assets		
— buildings	4	3
— plant & equipment	51	38
— motor vehicles	251	253
Total depreciation	306	294
(c) Amortisation of leased assets	56	86
(d) Administration expenses		
- Implementation Committees	52	52
- Audit fees - Internal Audit – Haines Norton	15	2
- Auditor General for audit of financial statements	9	8
- Board Governance	69	97
- Salaries and on costs	951	915
- Other	175	102
	1,271	1,176
(e) Employee related expenses		
Total employee related expenses	4,026	3,615
These expenses have been allocated to:		
(i) Operating costs to works programs	3,075	2,700
(ii) Administration Expenses	951	915

## Notes to the Financial Statements for the year ended 30 June 2007

	Note	2007 \$'000	2006 \$'000
<b>NOTE 4: CASH AND CASH EQUIVALENTS</b>			
Cash at bank and on hand		6,882	8,102
		<u>6,882</u>	<u>8,102</u>
All of these funds are restricted in that they are held to be spent on a range of programs which the Authority currently has underway. (Note 14e)			
<b>NOTE 5: RECEIVABLES</b>			
Government Grants Receivable		134	626
Net GST amount due from Australian Tax Office		40	311
Trade Debtors		279	209
Accrued Interest		145	118
Tariffs and Charges		10	12
Provision for doubtful debts		(68)	(15)
		<u>540</u>	<u>1,261</u>
<b>NOTE 6: PROPERTY PLANT AND EQUIPMENT</b>			
Buildings at:			
— Cost		43	43
Less accumulated depreciation		(36)	(32)
Total Buildings		<u>7</u>	<u>11</u>
Plant and equipment at cost		755	674
Less accumulated depreciation		(377)	(336)
		<u>378</u>	<u>338</u>
Motor Vehicles at cost		1,297	1,294
Less accumulated depreciation		(422)	(440)
		<u>875</u>	<u>854</u>
Office and Computer Equipment acquired under finance lease		269	223
Accumulated amortisation		(162)	(104)
		<u>107</u>	<u>119</u>
Total Plant and equipment		<u>1,367</u>	<u>1,322</u>
Dowdle Swamp Floodway at cost		170	170
Less accumulated depreciation		(24)	(21)
Total infrastructure assets		<u>146</u>	<u>149</u>
Total Property, Plant and Equipment		<u>1,513</u>	<u>1,471</u>

## Notes to the Financial Statements for the year ended 30 June 2007

**a. Movements in Carrying Amounts:**

Movement in the carrying amounts for each class of property, plant and equipment between the beginning and the end of the current financial year

<b>2006/2007</b>	Dowdle Swamp	Buildings	Plant and Equipment	Motor Vehicles	Equipment under Finance Lease	Total
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Balance at the beginning of the year	149	11	338	854	119	1,471
Additions	-	-	88	525	44	657
Disposals	-	-	-	(253)		(253)
Depreciation expense	(3)	(4)	(48)	(251)	-	(306)
Amortisation	-	-	-	-	(56)	(56)
Carrying amount at the end of the year	146	7	378	875	107	1,513
<b>2005/2006</b>						
Balance at the beginning of the year	149	14	90	961	115	1,329
Additions	-	-	285	188	96	569
Disposals	-	-	-	(41)	(6)	(47)
Depreciation expense	-	(3)	(37)	(254)	-	(294)
Amortisation	-	-	-	-	(86)	(86)
Carrying amount at the end of the year	149	11	338	854	119	1,471

## Notes to the Financial Statements for the year ended 30 June 2007

	Note	2007 \$'000	2006 \$'000
<b>NOTE 7: PAYABLES</b>			
Trade creditors		1,220	2,582
Accruals		1,639	3,012
		2,859	5,594
<b>NOTE 8: INTEREST BEARING LIABILITIES</b>			
CURRENT			
Finance Lease Liability	14c	74	77
NON-CURRENT			
Finance Lease Liability	14c	70	103
		144	180
<b>NOTE 9: EMPLOYEE BENEFITS</b>			
CURRENT			
Annual leave and unconditional long service leave entitlements representing 7 years of continuous service:			
- Short term employee benefits fall due within 12 months after the end of the period measured at nominal value		228	179
- Other long-term employee benefits that do not fall due within 12 months after the end of the period, measured at present value.		330	269
TOTAL CURRENT		558	448
NON-CURRENT			
Conditional long service leave:			
- Other long term employee benefits that do not fall due within 12 months after the end of the period, measured at present value		55	56
Total employee benefits		613	504
Number of employees at year end		51	57

(i) All annual leave is treated as a current liability. Long Service leave entitlement representing 7 years plus continuous service is also treated as a current liability. Long service Leave entitlement representing less than 7 years continuous service is treated as a non-current liability.

The following assumptions were adopted in measuring the present value of long service leave entitlements

- weighted average increase in employee costs 3.00%
- weighted average discount rates 6.28%
- weighted average settlement period 10 years

## Notes to the Financial Statements for the year ended 30 June 2007

**NOTE 10: SUPERANNUATION**

GBCMA makes employer superannuation contributions in respect of its employees to the Local Authorities Superannuation Fund (the Fund). Obligations for contributions are recognised as an expense in profit or loss when they are due. The Fund has two categories of membership, each of which is funded differently.

The Fund's accumulation category, Vision Super Saver, receives both employer and employee contributions on a progressive basis. Employer contributions are normally based on a fixed percentage of employee earnings (9% required under Superannuation Guarantee Legislation). No further liability accrues to the employer as the superannuation benefits accruing to employees are represented by their share of the net assets of the Fund.

The Fund's Defined Benefit Plan is a multi-employer sponsored plan. As the Fund's assets and liabilities are pooled and are not allocated by employer, the Actuary is unable to reliably allocate benefit liabilities, assets and costs between employers. As provided under Paragraph 32 (b) of AASB 119, GBCMA does not use defined benefit accounting for these contributions.

GBCMA makes employer contributions to the defined benefit category of the Fund at rates determined by the Trustee on the advice of the Fund's Actuary. On the basis of the results of the most recent full actuarial investigation conducted by the Fund's actuary as at 31 December 2005, the Trustee has determined that the current funding arrangements are adequate for the expected Defined Benefit Plan liabilities. GBCMA makes the following contributions:-

- 9.25% of members' salaries (same as previous year);
- the difference between resignation and retrenchment benefits paid to any retrenched employees, plus contribution tax (same as previous year);

The Fund's liability for accrued benefits was determined in the 30 June 2006 actuarial review pursuant to the requirements of Australian Accounting Standard AAS25 as follows:

	30-Jun-06 \$'000
Net Market Value of Assets	3,443,686
Accrued Benefits (per accounting standards)	3,319,598
Difference between Assets and Accrued Benefits	124,088
Vested Benefits	3,040,443

The financial assumptions used to calculate the Accrued Benefits for the defined benefit category of the Fund were:

Net Investment Return	8.0% p.a.
Salary Inflation	5.5% p.a.
Price Inflation	3.0% p.a.

**Contributions**

The Authority contributes in respect of its employees, to the following principal superannuation schemes:

- Vision Super • Government Superannuation office • Colonial

Contribution details are shown in the following table:

Type of Scheme	Rate %	2007 \$'000	2006 \$'000
Colonial	Accumulation	9	12
Government Superannuation Office	Accumulation	Various	33
Vision Super	Defined Benefits	9.25	8
Vision Super	Accumulation	9	189
Other Funds	Accumulation	9	201
<b>Total contributions to all Funds</b>		<b>443</b>	<b>393</b>

As at balance date, there were contributions payable of \$1,478 (2006 \$4,603).

## Notes to the Financial Statements for the year ended 30 June 2007

	Note	2007 \$'000	2006 \$'000
<b>NOTE 11: CONTRIBUTED EQUITY</b>			
Balance at the beginning of the reporting period		4,134	4,134
Contributed capital received		-	2,060
Contributed capital transferred		-	(2,060)
		<hr/>	<hr/>
Balance at the end of the reporting period		4,134	4,134

In accordance with Financial Reporting Direction (FRD) 2 –Contributed Capital, issued by the Department of Treasury and Finance, grants totalling \$Nil : (2006: \$2,060,000) have been accounted for as a contributed capital contribution for capital works undertaken by Goulburn-Murray Water. Both the amount received from the Department and the amount paid to Goulburn-Murray Water has been accounted for through the Authority's contributed equity account. On completion of the works the asset is transferred to Goulburn-Murray Water.

**NOTE 12: ACCUMULTED FUNDS**

Balance at the beginning of the reporting period			-
Net result for the year		706	(978)
Transfer from / (to) reserves		(706)	978
		<hr/>	<hr/>
Balance at the end of the reporting period		-	-

**NOTE 13: RESERVE**

## COMMITTED FUNDS RESERVE

Balance at the beginning of the reporting period		526	1,504
Net transfers (to) / from Accumulated Funds		706	(978)
		<hr/>	<hr/>
Balance at the end of the reporting period		1,232	526

The purpose of the Committed Funds Reserve is to hold funds allocated for expenditure on works programs which have either not yet commenced or have not been completed at balance date. The Committed Funds Reserve is necessary as grant monies are taken to revenue as soon as the Authority has the right to receive those funds and generally there is a time lag between the right to receive the funds and the commencement of the associated works program.



## Notes to the Financial Statements for the year ended 30 June 2007

	Note	2007 \$'000	2006 \$'000
<b>NOTE 14: COMMITMENTS</b>			
<i>a. Operating Lease Commitments:</i>			
At balance date the Authority had non-cancellable operating leases contracted for but not capitalised in the financial statements payable as follows:			
- within one year		132	128
- one year to five years		567	699
- over five years		-	37
		699	864
 <i>b. Other Commitments</i>			
At balance date the Authority had commitments for works expenditure payable as follows:			
- within one year		3,596	401
 <i>c. Finance Leases Commitments</i>			
At balance date that Authority had finance lease commitments payable as follows:			
- within one year		80	83
- one year to five years		74	109
		154	192
Less future finance charges		(10)	(12)
		144	180
Represented by:			
Current Liability	8	74	77
Non-current Liability	8	70	103
		144	180
 <i>d. Capital Commitments</i>			
At balance date the Authority had commitments for capital expenditure payable as follows:			
- within one year		180	-

## Notes to the Financial Statements for the year ended 30 June 2007

*e. Contributions subject to restrictions*

The following table reflects major program funding contributions which are subject to restrictions on expenditure profiles which may only be varied with the agreement of the funding body.

Program	Revenue recognised \$'000			Outgoings \$'000	Unexpended Program Contributions	Outstanding Program Commitment	Variance
	Funds c/f 1 July 2006	Funds Current Year	Total	Current Year	Funds c/f 1 July 2007	\$'000	\$'000
Native Vegetation	1,386	1,767	3,153	1,500	1,653	1,653	-
Catchment Planning & Investment	430	3,477	3,907	3,341	566	540	26
Salinity & Soils	247	2,505	2,752	2,339	413	1,237	(824)
Sustainable Irrigation	299	12,297	12,596	11,945	651	960	(309)
River Health	2,298	10,608	12,906	10,823	2,083	3,152	(1,069)
<b>Total</b>	<b>4,660</b>	<b>30,654</b>	<b>35,314</b>	<b>29,948</b>	<b>5,366</b>	<b>7,542</b>	<b>(2,176)</b>

Variances under the salinity & soils, sustainable irrigation and River Health programs are in respect of grants approved in line with a two-year approval cycle which shall be funded from 2007/08 program funding. Indicative 3-year NAP funding allocations are advised to the Authority to enable programs to be accommodated within the 3-year cycle rather than limited only to the funding available for the particular year.

**NOTE 15: CONTINGENT ASSET**

The Authority had funding approved on 11 July 2007 for \$2.83 million for works to be undertaken within the Catchment. This was as the result of the sale of 7GL of environmental water sold prior to June 2007. These funds were not accrued at June 2007 as the Authority did not have the right to receive those funds at that date.

**NOTE 16: EVENTS OCCURRING AFTER BALANCE**

No matters or circumstances have arisen since the end of the reporting period which significantly affected or may significantly affect the operations of the Authority, the results of those operations, or the state of affairs of the Authority in future financial years.

**NOTE 17: RESPONSIBLE PERSONS RELATED DISCLOSURES****(a) Responsible Persons**

The names of persons who were responsible persons at anytime during the financial year were:

Minister for Water, Environment and Climate Change, (formerly the Minister for Environment).

Honourable John Thwaites 1 July 2006 – 30 June 2007

There were numerous transactions between the Authority and the Department of Sustainability and Environment during the year under normal commercial terms and conditions.

Position		Appointed	Position		Appointed
Board Member	D Cummins	1 July 2003	Chair	S Mills	14 May 2002
Board Member	J Pettigrew (Deputy Chair)	1 July 2003	Board Member	A McCamish	1 July 2006
Board Member	L Gunter	1 July 2003	Board Member	N Roberts	1 July 2006
Board Member	Y Davies	1 July 2000	Board Member	P Fitzgerald	1 July 2006
Board Member	N Barwick	1 July 2006	Board Member	K Ritchie	4 February 2000 Term expired 7 Oct 2006.
			Board Member	B Thompson	19 January 2004 Term expired 7 Oct 2006.
CEO	W J O'Kane	4 October 1997	Acting CEO	S D Gibney	2-15 January 2007
				S D Gibney	25-29 September 2006

## Notes to the Financial Statements for the year ended 30 June 2007

### (b) Remuneration of Responsible Persons

The number of responsible persons whose remuneration from the Authority was within the specified bands are as follows:

Remuneration Bands	2007	2006
	No.	No.
\$1-\$9,999	8	9
\$10,000-\$19,999+	1	1
	9	10

The total remuneration of responsible persons referred to in the above bands was \$95,560 (2006 \$95,920) which includes \$7,890 (2006 \$7,920) paid in Superannuation Contributions.

Brian Thompson and Kevin Ritchie were representatives of the Department of Primary Industries and Department of Sustainability and Environment respectively. They received no remuneration from the Authority. Their Board terms expired on 7 October 2006 as a result of changes to Government policy as a result of amendments to the CaLP Act.

The relevant information of the Chief Executive Officer is reported under the Remuneration of Executives

The relevant Minister's remuneration is reported separately in the financial statements of the Department of Premier and Cabinet.

### (c) Remuneration of Executives

The number of executive officers, other than responsible persons included under "Remuneration of Responsible persons" above, whose total remuneration exceeded \$100,000 during the reporting period are shown below in their relevant income bands:

Remuneration Bands	2007	2006
	No.	No.
\$100,000 - \$109,999	1	3
\$110,000 - \$119,999	5	2
\$120,000 - \$129,999	-	1
\$130,000 - \$139,999	1	-
\$170,000 - \$179,999	-	1
\$180,000 - \$189,999	1	-
	8	7

The total remuneration including superannuation of executives whose remuneration was greater than \$100,000 referred to in the above bands was \$1,000,865 (2006: \$858,522).

Remuneration Bands	TOTAL REMUNERATION		BASE REMUNERATION	
	2007	2006	2007	2006
\$100,000 - \$109,999	\$104,388	\$327,581	\$104,388	\$317,111
\$110,000 - \$119,999	\$573,892	\$231,365	\$544,838	\$213,952
\$120,000 - \$129,999	-	\$126,314	-	\$112,280
\$130,000 - \$139,999	\$134,913	-	\$120,772	-
\$170,000 - \$179,999	-	\$173,262	-	\$154,175
\$180,000 - \$189,999	\$187,672	-	\$170,723	-
TOTAL	\$1,000,865	\$858,522	\$940,721	\$797,518

## Notes to the Financial Statements for the year ended 30 June 2007

**(d) Other Transactions**

**Loans:** There were no loans in existence by the Authority to responsible persons or related parties at the date of this report.

**Shares:** There were no share transactions in existence between the Authority and Responsible Persons and their related parties during the financial year.

**Other:** Yvonne Davies and Lyn Gunter were councillors with the Shire of Moira, Murrindindi respectively. During the year, the Authority from time to time had dealings with those Municipalities on normal commercial terms and conditions.

Don Cummins, John Pettigrew and Peter Fitzgerald are Board Members of Goulburn-Murray Water and, from time to time, the Authority had dealings with Goulburn-Murray Water on normal commercial terms and conditions. Don Cummins is a Board member of Goulburn Valley Water and the Authority had dealings with Goulburn Valley Water on normal commercial terms and conditions.

An environmental management incentive for \$3,300.00 was paid for works carried out on property in which Yvonne Davies has an interest. The incentive was a payment in accordance with the Authority's grant incentive scheme.

Amounts totalling \$15,146.50 in respect of consultant's services were paid to businesses owned by Carole Hamilton, wife of Neville Barwick.

Other than travel reimbursements there were no other transactions between the Authority and Responsible Persons and their related parties during the financial year.

**(e) Board Members Attendance Record at Meetings**

Board member	Board Meetings 10 Meetings Held	Compliance Committee 1 Meeting Held	Audit Committee 4 Meetings Held	Remuneration Committee 4 Meetings Held
Neville Barwick	10	-	4	4
Don Cummins	7	1	-	-
Yvonne Davies	9	0	3	-
Peter Fitzgerald	10	-	4	-
Lyn Gunter	8	-	-	4
Anne McCamish	9	-	-	4
Stephen Mills *	8	1	3	2
John Pettigrew	10	-	4	4
Nick Roberts	10	1	-	-
Kevin Ritchie	1 (1 OF 3)	-	-	-
Brian Thompson	3 (3 OF 3)	-	-	-

The Chairman, Stephen Mills\* is ex-officio of all Board Committees and is able to attend all meetings.

**NOTE 18: ECONOMIC DEPENDENCE**

To attain its goals as detailed in its Regional Catchment Strategy, the Authority continues to be dependent upon future funding commitments from both the State and Federal Governments.

## Notes to the Financial Statements for the year ended 30 June 2007

	2007	2006
	\$	\$

**NOTE 19: CASH FLOW INFORMATION****a. Reconciliation of Cash**

Cash at the end of the financial year as shown in the cash flow statement is reconciled to the related items in the balance sheet as follows:

Cash at bank and on hand (Note 4)	6,882	8,102
	6,882	8,102

**b. Reconciliation of cash flow from operations with net result for the year.**

Net result for the period	706	(978)
Non-cash flows in net result		
Depreciation	306	294
Amortisation	56	86
Net loss (gain) on disposal of non-current assets	5	(11)
Changes in assets and liabilities		
(Increase) / decrease in receivables	721	(723)
(Increase) / decrease in prepayments	57	52
Increase / (decrease) in provisions	108	44
Increase/(decrease) in payables	(2,734)	1,452
Cash flows from operating activities	(775)	216

**c. Property plant and equipment:**

During the financial year, the Authority acquired computer equipment with an aggregate fair value of \$44,459 (2006 \$96,048) by means of finance leases. These acquisitions are not reflected in the cash flow statement.

**NOTE 20: FINANCIAL INSTRUMENTS****a. Interest Rate Risk**

The Authority's exposure to interest rate risk, which is the risk that a financial instrument's value will fluctuate as a result of changes in market interest rates and the effective weighted average interest rates on those financial assets and financial liabilities, is as follows:

	Weighted Average Effective Interest Rate		Floating Interest Rate		Fixed Interest bearing		Non-Interest bearing		Total	
	2007 %	2006 %	2007 \$ '000	2006 \$ '000	2007 \$ '000	2006 \$ '000	2007 \$ '000	2006 \$ '000	2007 \$ '000	2006 \$ '000
<b>Financial Assets</b>										
Cash at bank	6.09	5.61	6,882	8,102	-	-	-	-	6,882	8,102
Receivables	n/a	n/a	-	-	-	-	540	1,261	540	1,261
Total Financial Assets			6,882	8,102	-	-	540	1,261	7,422	9,363
<b>Financial Liabilities</b>										
Payables	n/a	n/a	-	-	-	-	2,859	5,594	2,859	5,594
Interest Bearing Liabilities	6.17	5.78	-	-	144	180	-	-	144	180
Total Financial Liabilities			-	-	144	180	2,859	5,594	3,003	5,774

## Notes to the Financial Statements for the year ended 30 June 2007

**NOTE 21: FINANCIAL INSTRUMENTS****b. Credit Risk**

The maximum exposure to credit risk, excluding the value of any collateral or other security, at balance date to recognised financial assets is the carrying amount of those assets, net of any provisions for doubtful debts, as disclosed in the balance sheet and notes in the financial statements.

The Authority does not have any material credit risk exposure to any single debtor or group of debtors under financial instruments entered into by the Authority.

**c. Fair Values**

For all financial assets and financial liabilities fair value approximates their carrying value. No financial assets and financial liabilities are readily traded on organised markets.

The aggregate net fair values and carrying amounts of financial assets and financial liabilities are disclosed in the balance sheet and in the notes to the financial statements.

**d. Terms, Conditions and Accounting Policies**

The Authority's accounting policies including the terms and conditions of each class of financial asset, financial liability and equity instrument, both recognised and unrecognised at balance date, are as follows:

Recognised Financial Instruments	Balance Sheet Notes	Accounting Policies	Terms and Conditions
<b>(i) Financial Assets</b>			
Receivables	5	Debtors are carried at the nominal amounts	Credit is allowed for a 30 day term. Tariff Charges remain a charge on the property.
<b>(ii) Financial Liabilities</b>			
Payables	7	Creditors and accruals are recognised for future amounts to be paid in respect of goods and services received, whether or not billed to the Authority.	Settlement of creditors is normally effected within a 30 day term.
<b>(iii) Interest bearing Liabilities</b>			
Finance Leases	8	Leases meeting the definition of Finance Leases are capitalised, recording an asset and a liability equal to the present value of the minimum lease payments, including any guaranteed residual values.	Lease payments made on a quarterly basis, are allocated between the reduction of the lease liability and the lease interest expense for the period.

**NOTE 22: AUTHORITY DETAILS**

The registered office of the Authority and principal place of business is: 168 Welsford Street, Shepparton 3630, Victoria.

## Acronyms

AIP	Area Infrastructure Plan	MyFOL	My Farm Our Landscape
ANCID	Australian National Committee - International Commission on Irrigation and Drainage Incorporated	NAP	National Action Plan for Salinity and Water Quality
CaLP Act	Catchment and Land Protection Act	NC CMA	North Central Catchment Management Authority
CMN	Conservation Management Network	NE CMA	North East Catchment Management Authority
DEP	Drought Employment Program	NERWA	North East Region Water Authority trading as North East Water
DPI	Department of Primary Industries	NHT	Natural Heritage Trust
DSE	Department of Sustainability and Environment	NRM	Natural Resource Management
DSS	Decision Support System	NWC	National Water Commission
EC	Electrical Conductivity	PICF	Policy Instrument Choice Framework
EOVT	End of Valley Targets	R&I	Research & Innovation
EPA	Environment Protection Authority	RCIP	Regional Catchment Investment Plan
EVC	Ecological Vegetation Class	RCS	Regional Catchment Strategy
EWR	Environmental Water Reserve	RCT	Resource Condition Target
GB CMA	Goulburn Broken Catchment Management Authority	REALM	Resource Allocation Model
GBRRHS	Goulburn Broken Regional River Health Strategy	REP	Rural Extension Program
GIS	Geographic Information System	RMP	Regional Management Plan
GL	Gigalitres	SDE	Salt Disposal Entitlements
G-MW	Goulburn-Murray Water	SFMP	Streamflow Management Plan
GVW	Goulburn Valley Water	SIR	Shepparton Irrigation Region
Ha	Hectares	SIRCIS	Shepparton Irrigation Region Catchment Implementation Strategy
IC	Implementation Committee	SIRIC	Shepparton Irrigation Region Implementation Committee
IDMOU	Memorandum of Understanding for Irrigation Drainage and Water Quality	SIRLWSMP	Shepparton Irrigation Regional Land and Water Salinity Management Plan
iPAWS	Integrated Planning and Waterway System	SOO	Statement of Obligations
IT	Information Technology	SSDP	Sub-surface Drainage Program
MDBC	Murray Darling Basin Commission	TWF	Tailwater Factor
MDBSMS or BSMS	Murray-Darling Basin Salinity Management Strategy or Basin Salinity Management Strategy	UGIC	Upper Goulburn Implementation Committee
MGBIC	Mid Goulburn Broken Implementation Committee	VFF	Victorian Farmers Federation
ML	Megalitre	WUE	Water Use Efficiency
MV	Murray Valley		

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## Contacts and office locations

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