

# ECONOMIC OUTLOOK REPORT 2



**RIO** | regional  
investment  
opportunities

A PROJECT OF  
THE MURRAYLANDS REGIONAL DEVELOPMENT BOARD INC

# Murraylands Economic Outlook Report: Headline Analysis (Summary)

A report prepared for



Prepared by



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**The Economic Impact of a Water Industry Growth**

**Manufacturing to Support Water/Irrigation Industries**

Reports from the Water Industry Alliance indicate that the water industry in South Australia has grown at about 30 per cent per year over the last decade. The industry group expects that growth in future years will average around 10 per cent per annum. Based on this expectation, three alternative industry growth scenarios were developed for the Murraylands region:

- Low:** An increase in annual gross sales 50 per cent below the expected level (i.e. annual growth of 5 per cent).
- Expected:** An increase in annual gross sales of 10 per cent.
- High:** An increase in annual gross sales 50 per cent above the expected level (i.e. annual growth of 15 per cent).

Estimates of the economic impact of low growth (5 per cent per annum) in water industry manufacturing is summarised in Table 1.

**Table 1** Estimated net regional economic impact of 5 per cent growth in water industry manufacturing

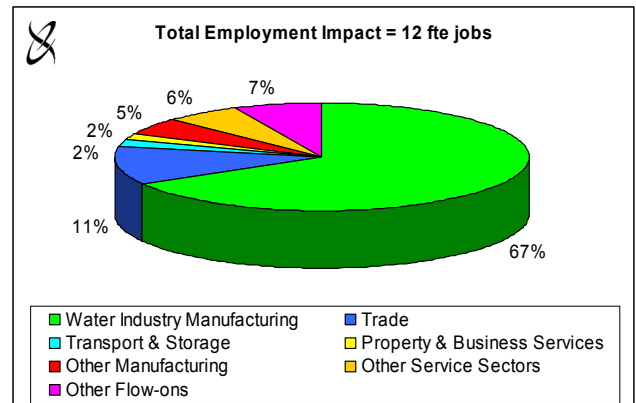
Sector	Output <sup>a</sup>		Employment		Contribution to GRP	
	\$m	fte	\$m	fte	\$m	fte
Water Industry Manufacturing	0.9	8			0.3	
<b>Flow-on impacts</b>						
Trade		1		0.0		
Transport & Storage		0		0.0		
Property & Business Services		0		0.0		
Other Manufacturing		1		0.0		
Other Service Sectors		1		0.0		
Other Flow-ons		1		0.1		
<b>Total Flow-on <sup>b</sup></b>		<b>4</b>		<b>0.3</b>		
<b>Total <sup>b</sup></b>		<b>12</b>		<b>0.6</b>		
<b>Proportion of regional total</b>			<b>0.1%</b>		<b>0.1%</b>	

Source: EconSearch analysis

It was estimated that 12 fte new jobs would be generated in the Murraylands regional economy each year in response to annual growth of 5 per cent in water industry manufacturing. Approximately 8 of these jobs would be generated directly in the manufacturing sector and the remaining 4 in flow-on jobs in other sectors of the regional economy.

Jobs in water industry manufacturing accounted for 67 per cent of the total employment impact (Figure 1). Flow-on employment was concentrated in trade, transport and storage, property and business services, other manufacturing sectors and other service sectors.

**Figure 1** Distribution of employment impacts for an increase in water industry manufacturing

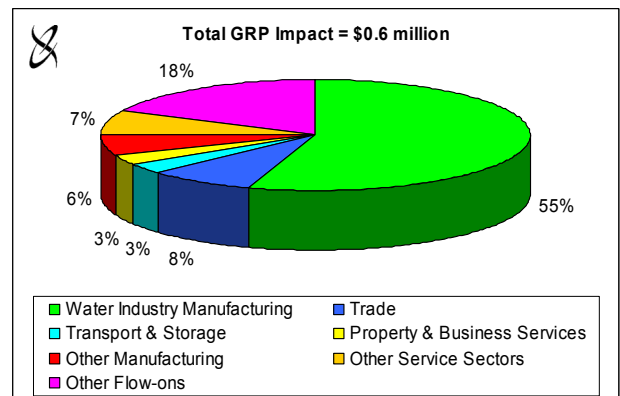


Source: EconSearch analysis

It was estimated that \$0.6m (in 2006 dollars) in additional GRP would be generated in the Murraylands regional economy each year in response to 5 per cent annual growth in water industry manufacturing. Approximately \$0.3m in GRP would be generated directly in the manufacturing sector and \$0.3m in flow-on GRP would be generated in other sectors of the regional economy.

GRP in the water industry manufacturing sector accounted for 55 per cent of the total GRP impact (Figure 2). The remaining GRP was generated in the trade, transport and storage, property and business services, other manufacturing sectors and other service sectors.

**Figure 2** Distribution of GRP impacts for an increase in water industry manufacturing



Source: EconSearch analysis

Estimates of the regional economic impact of expected (10 per cent) and high (15 per cent) growth scenarios in water industry manufacturing are provided in Tables 2 and 3 respectively. The distribution of the employment and GRP impacts are similar to those presented in Figures 1 and 2 for the low growth scenario.

**Table 2** Estimated net regional economic impact of 10 per cent growth in water industry manufacturing

Sector	Output	Employment	Contribution to GRP
	\$m	fte	\$m
Water Industry Manufacturing	1.8	16	0.6
Flow-on impacts			
Trade		3	0.1
Transport & Storage		1	0.0
Property & Business Services		0	0.0
Other Manufacturing		1	0.1
Other Service Sectors		1	0.1
Other Flow-ons		2	0.2
Total Flow-on <sup>b</sup>		8	0.5
Total <sup>b</sup>		24	1.2
Proportion of regional total		0.1%	0.1%

Source: EconSearch analysis

**Table 3** Estimated net regional economic impact of 15 per cent growth in water industry manufacturing

Sector	Output	Employment	Contribution to GRP
	\$m	fte	\$m
Water Industry Manufacturing	2.7	24	1.0
Flow-on impacts			
Trade		4	0.1
Transport & Storage		1	0.1
Property & Business Services		1	0.0
Other Manufacturing		2	0.1
Other Service Sectors		2	0.1
Other Flow-ons		3	0.3
Total Flow-on <sup>b</sup>		12	0.8
Total <sup>b</sup>		36	1.7
Proportion of regional total		0.2%	0.2%

Source: EconSearch analysis

Interpretation of the results of the impact assessment for the 10 per cent and 15 per cent growth scenarios (Tables 2 and 3) are similar to those for the 5 per cent growth scenario.

### Waste Water Re-use

Significant volumes of contaminated water are currently produced and stored by food production and processing activities in the Murraylands region. A priority identified by the *RIO Regional Investment Prospectus* is to attract investment into water re-use projects that utilise contaminated water.

Two potential re-use projects have been identified

- Pumping of raw wastewater from Dairy Farmers to Big River Pork wastewater treatment plant and re-use wastewater at a new site (Brinkley Precinct).
- Pumping of wastewater from National Foods to a new wastewater treatment plant to be constructed at T&R Pastoral and irrigation of treated wastewater (Northern Precinct).

There are many potential uses for this wastewater resource including irrigation of new horticulture developments on adjacent and nearby land.

Estimates of the economic impact of a horticulture waste water re-use are provided in Table 4.

**Table 4** Estimated net regional economic impact of waste water re-use for horticulture

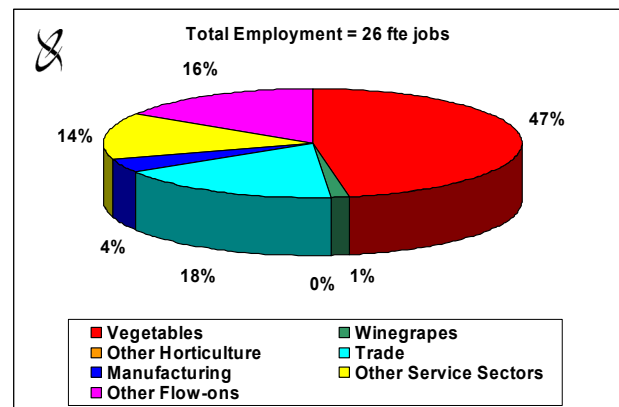
Sector	Output <sup>a</sup>	Employment	Contribution to GRP
	\$m	fte	\$m
Direct effects			
Vegetables	3.3	12	1.9
Winegrapes	0.0	0	0.0
Other horticulture	0.0	0	0.0
Total Direct <sup>b</sup>	3.3	13	1.9
Flow-on effects			
Trade		5	0.2
Transport		1	0.1
Other service sectors		4	0.2
Other flow-ons		4	0.3
Total Flow-on <sup>b</sup>		13	0.8
Total <sup>b</sup>		26	2.7
Proportion of regional total		0.2%	0.3%

Source: EconSearch analysis

It was estimated that 26 fte new jobs would be generated in the Murraylands regional economy in response to the increase in wastewater irrigated horticulture production, 12 jobs directly in horticulture sectors and 13 flow-on jobs in other sectors of the regional economy. The total employment impact represents approximately 0.2 per cent of the regional total in 2005/06.

Jobs generated in horticulture sectors would account for almost 50 per cent of the total employment impact (Figure 3). Flow-on jobs would be concentrated in the trade, manufacturing and other service sectors.

**Figure 3** Distribution of employment impacts for an increase in horticulture production

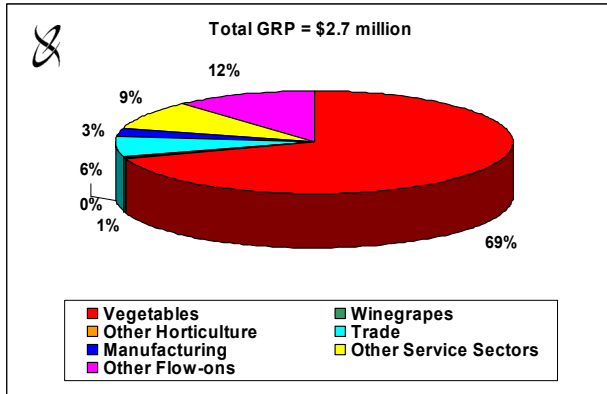


Source: EconSearch analysis

It was estimated that almost \$2.7m (in 2006 dollars) in GRP would be generated in the Murraylands regional economy in response to an increase in horticulture production, \$1.9m directly in horticulture sectors and approximately \$0.8m in flow-on GRP in other sectors of the regional economy. The total GRP impact represents almost 0.3 per cent of the regional total in 2005/06.

GRP generated in horticulture sectors would account for approximately 70 per cent of the total impact (Figure 4). Flow-on impacts would occur mainly in the trade, manufacturing and other service sectors.

Figure 4 Distribution of GRP impacts for an increase in horticulture production



Source: EconSearch analysis

The regional economic impacts of the additional horticulture production have the potential to be greater if processing of products occurs locally. The estimated net regional economic impacts of an increase in local food processing are provided in Table 5.

Table 5 Estimated net regional economic impact of waste water re-use for horticulture

Sector	Output <sup>a</sup> \$m	Employment fte	Contribution to GRP \$m
<b>Direct effects</b>			
Vegetables	0.0	0	0.0
Winegrapes	0.0	0	0.0
Other horticulture	0.0	0	0.0
Food processing	6.1	23	1.5
<b>Total Direct<sup>b</sup></b>	<b>6.1</b>	<b>23</b>	<b>1.5</b>
<b>Flow-on effects</b>			
Trade		7	0.2
Transport		2	0.2
Other service sectors		4	0.3
Other flow-ons		6	0.6
<b>Total Flow-on<sup>b</sup></b>		<b>20</b>	<b>1.3</b>
<b>Total<sup>b</sup></b>		<b>43</b>	<b>2.8</b>
<b>Proportion of regional total</b>		<b>0.3%</b>	<b>0.3%</b>

Source: EconSearch analysis

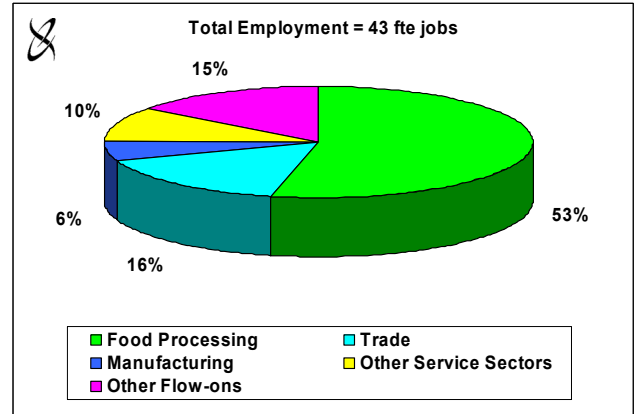
It was estimated that 43 fte new jobs would be generated in the Murraylands regional economy in response to the increase in food manufacturing and processing, 23 jobs directly in food processing and manufacturing and 20 flow-on jobs in other sectors of the regional economy.

Jobs generated in food processing would account for 53 per cent of the total employment impact (Figure 5). Flow-on jobs would be concentrated in the trade, transport and other service sectors.

It was estimated that almost \$2.8m (in 2006 dollars) in GRP would be generated in the Murraylands regional economy in response to an increase in food processing and manufacturing in 2005/06, \$1.5m directly in food processing and manufacturing and approximately \$0.6m in flow-on GRP in other sectors of the regional economy.

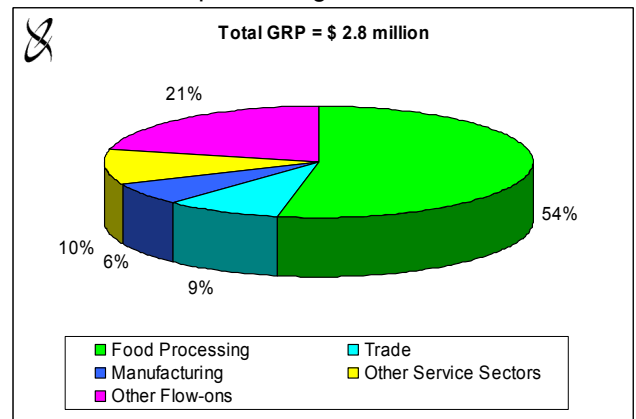
GRP generated in food processing and manufacturing would account for approximately 54 per cent of the total impact (Figure 6). Flow-on impacts would occur mainly in the trade, manufacturing and other service sectors.

Figure 5 Distribution of employment impacts of additional food processing



Source: EconSearch analysis

Figure 6 Distribution of GRP impacts of additional food processing



Source: EconSearch analysis

**The Bedford Project**

Flinders University has signed a memorandum of understanding with the Murraylands Regional Development Board Inc. via the Flinders Research Centre for Coastal and Catchment Environments.

Likely projects that will results from this partnership will be relating to wastewater treatment and reuse, and application of saline groundwater, such as for inland aquaculture. Potential outcomes of the projects may result in significant economic benefits to the Murraylands region.



## The Regional Economic Impact of Energy Industry Growth

### Ethanol Production

Ethanol can be produced from the fermentation of biomass feedstocks typically obtained from agricultural sources. Suitable feedstocks include:

- waste starch;
- molasses;
- corn;
- sorghum; and
- low quality wheat.

Estimates of the economic impact of ethanol production in the Murraylands region were based on two hypothetical scenarios:

- Development of a plant with 100 ML annual production capacity; and
- Development of a plant with 200ML annual production capacity.

The key price, production, cost and employment assumptions are provided in Table 6.

Table 6 Assumptions for economic analysis of ethanol production scenarios

	Plant Capacity 100ML per annum	Plant Capacity 200ML per annum
Ethanol Sale Price (\$/l)	0.9	0.9
Annual Gross Sales (\$m)	90.0	180.0
Feedstock Use (kt/annum)	245	490
Feedstock Cost (\$m)	55.9	111.7
Other Operating Cost (\$m)	23.9	47.7
Number of Employees (fte)	55	100

Source: ABARE (2007) and EconSearch analysis

Estimates of the economic impact of each ethanol production scenario are detailed in Table 7.

Table 7 Estimated regional economic impact of growth in ethanol production

Sector	Annual Production - 100ML			Annual Production 200ML		
	Output \$m	Employment fte	Contribution to GRP \$m	Output \$m	Employment fte	Contribution to GRP \$m
Ethanol Production	90	55	20.8	180	100	41.8
Flow-on impacts						
Trade		26	0.8		51	1.6
Transport & Storage		4	0.3		9	0.6
Other Service Sectors		16	1.0		32	2.0
Manufacturing		5	0.3		10	0.6
Other Flow-on		15	2.1		30	4.2
Total Flow-on		66	4.5		132	9.1
Total	121	121	25.4	232	232	50.8
% of regional total		0.7%	2.6%		1.4%	5.3%

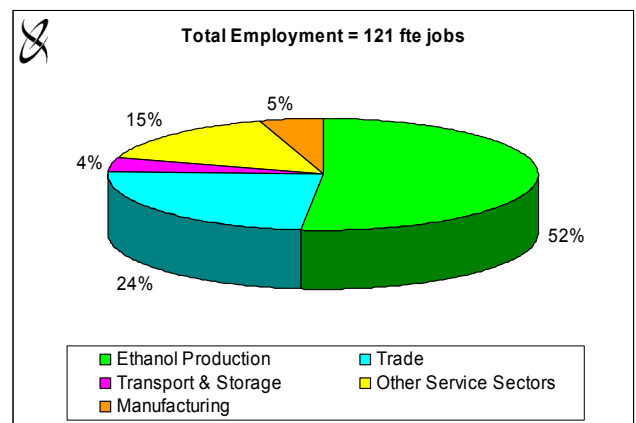
Source: EconSearch analysis

Estimates were based on the assumption that the increase in demand for feedstock for ethanol production would lead to an increase in feedstock prices of 10 per cent.

It was estimated that over 120 fte new jobs would be generated in the Murraylands regional economy in response to ethanol production of 100ML. Approximately 55 of these jobs would be generated directly in ethanol production and almost 70 flow-on jobs would be generated in other sectors of the regional economy.

Jobs generated in ethanol production would account for approximately 52 per cent of the total employment impact (Figure 7). Flow-on jobs would account for the balance of the total employment impact and would be concentrated in the trade, manufacturing, transport and storage and other service sectors.

Figure 7 Distribution of employment impacts of growth in ethanol production (100ML)

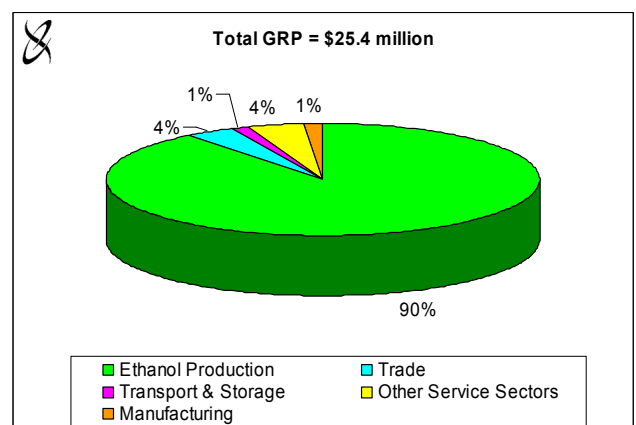


Source: EconSearch analysis

It was estimated that just over \$25m (in 2006 dollars) in additional GRP would be generated in the Murraylands regional economy in response to production of 100ML of ethanol. Almost \$21m in GRP would be generated directly in ethanol production and approximately \$5m in flow-on GRP would be generated in other sectors of the regional economy.

GRP generated in ethanol production would account for approximately 90 per cent of the total impact, with the balance being attributable to flow-ons in other sectors of the regional economy (Figure 8).

Figure 7 Distribution of GRP impacts of growth in ethanol production (100ML)



Source: EconSearch analysis

Interpretation of the results of the impact assessment for the 200ML annual production scenario (Table 7) are similar to those for the 100ML annual production scenario.

### Bio-diesel Production

Bio-diesel is produced from a reaction of vegetable oil or animal fat with an alcohol such as ethanol or methanol. Feedstocks in current or planned use in bio-diesel production include:

- tallow;
- used cooking oil;
- canola oil;
- soy bean oil;
- palm oil; and
- vegetable oils.

Estimates of the economic impact have been based on two hypothetical scenarios:

- development of a plant with 15ML annual production capacity; and
- development of a plant with 110ML annual production capacity.

The key price, production, cost and employment assumptions are provided in Table 8.

Table 8 Assumptions for economic analysis of bio-diesel production scenarios

	Plant Capacity 15ML per annum	Plant Capacity 110ML per annum
Bio diesel Sale Price (\$/l)	0.9	0.9
Annual Gross Sales (\$m)	13.5	99.0
Feedstock Use (kt/annum)	14	100
Feedstock Cost (\$m)	6.3	44.7
Other Operating Cost (\$m)	2.7	19.0
Number of Employees (fte)	4	24

Source: ABARE (2007) and EconSearch analysis

Estimates of the economic impact of each bio-diesel production scenarios are detailed in Table 9.

Table 9 Estimated regional economic impact of growth in bio-diesel production

Sector	Annual Production - 15ML			Annual Production 110ML		
	Output <sup>a</sup>	Employment	Contribution to GRP	Output <sup>a</sup>	Employment	Contribution to GRP
	\$m	fte	\$m	\$m	fte	\$m
Biodiesel production	14	4	5.8	99	24	43.8
Flow-on impacts						
Trade		3	0.1		20	0.7
Transport & Storage		0	0.0		4	0.3
Other Service Sectors		2	0.1		13	0.8
Manufacturing		1	0.0		4	0.2
Other Flow-on		2	0.2		12	1.7
Total Flow-on <sup>b</sup>		7	0.5		53	3.6
Total <sup>b</sup>		11	6.3		77	47.4
% of regional total		0.1%	0.6%		0.5%	4.9%

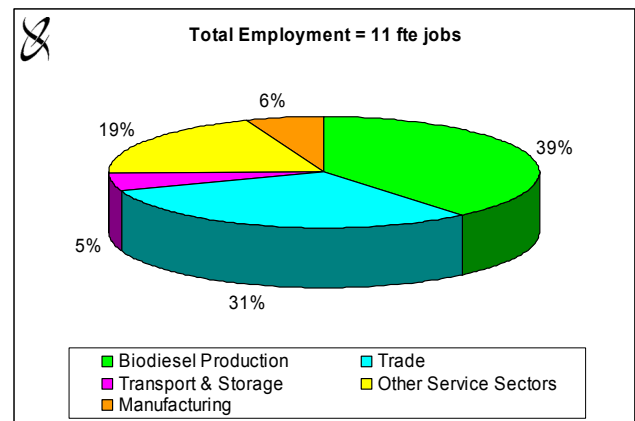
Source: EconSearch analysis

Estimates were based on the assumption that the increase in demand for feedstock for bio-diesel production would increase feedstock prices by 10 per cent.

It was estimated that over 10 fte new jobs would be generated in the Murraylands regional economy in response to bio-diesel production of 15ML per annum. Approximately 4 of these jobs would be generated directly in bio-diesel production and 7 flow-on jobs would be generated in other sectors of the regional economy.

Jobs generated in bio-diesel production would account for almost 40 per cent of the total employment impact (Figure 8). Flow-on jobs would account for the balance of the total employment impact and would be concentrated in the trade, manufacturing, transport and storage and other service sectors.

Figure 8 Distribution of employment impacts of growth in bio-diesel production (15ML)

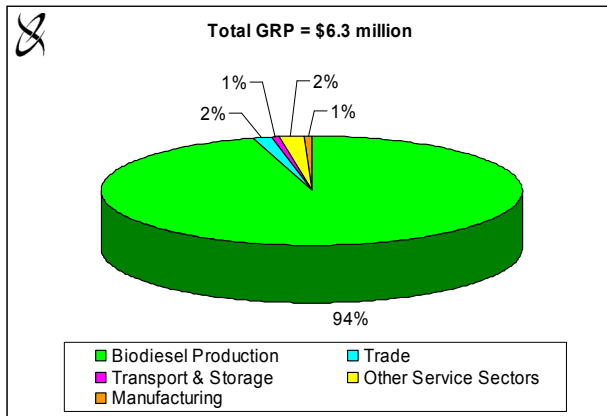


Source: EconSearch analysis

It was estimated that almost \$6.5m (in 2006 dollars) in additional GRP would be generated in the Murraylands regional economy in response to bio-diesel production of 15ML per annum. Almost \$6.0m in GRP would be generated directly in bio-diesel production and approximately \$0.5m in flow-on GRP would be generated in other sectors of the regional economy.

GRP generated in bio-diesel production would account for approximately 94 per cent of the total impact, with the balance being attributable to flow-ons in other sectors of the regional economy (Figure 9).

Figure 9 Distribution of GRP impacts of growth in bio-diesel production (15ML)



Source: EconSearch analysis

Interpretation of the results of the impact assessment for the 110ML annual production scenario (Table 9) is similar to those for the 15ML annual production scenario.

**The Regional Economic Impact of a Zero Allocation for River Murray Irrigators**

Estimates of the farm-level and, by implication, regional-level yield response to the 0 per cent allocation are summarised in Table 10 for horticulture and viticulture sectors. In response to the 0 per cent allocation scenario it was assumed that a proportion of dairy farmers would resort to full feedlot production (20 per cent), some would reduce feed inputs (with a consequent reduction in milk yield) (40 per cent) and the balance would cease production (40 per cent).

Table 10 Imputed yield response to a 0 per cent allocation scenario

	Average On-Farm and Regional Yield reduction <sup>a</sup>
Winegrapes	-76%
Citrus	-100%
Stone and pome fruit	-100%
Almonds and other tree crops	-100%
Vegetables	-100%

Source: EconSearch analysis

Estimates of regional economic impact of a 0 per cent water allocation scenario for irrigated agriculture in the Murraylands region are provided in Table 11. The estimates represent a change from current levels of irrigated agriculture in the region.

Table 11 Estimated net economic impact of a 0 per cent allocation scenario

Sector	Output <sup>a</sup> \$m	Employment fte	Contribution to GRP \$m
Irrigated agriculture <sup>b</sup>	-92.4	-347	-74.8
Flow-on impacts			
Trade		-162	-5.2
Other service sectors		-135	-7.8
Transport		-20	-1.5
Other flow-ons		-81	-12.7
Total flow-on impacts <sup>c</sup>		-398	-27.1
Total <sup>c</sup>		-745	-101.9
Proportion of regional total		-5%	-11%

Source: EconSearch analysis

A 0 per cent water allocation would reduce direct irrigated agriculture output by approximately \$92m (in 2006 dollars).

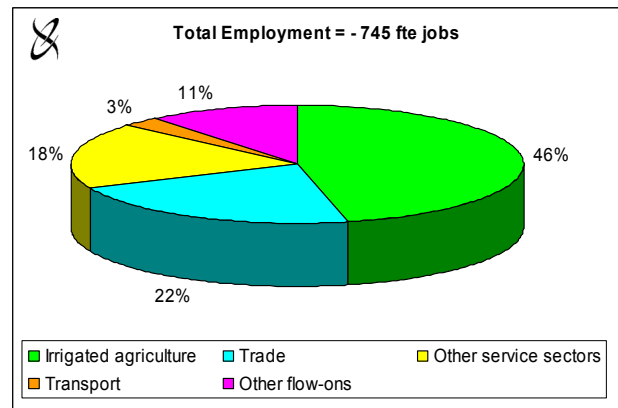
It was estimated that 745 fte jobs would be lost from the Murraylands regional economy in response to a 0 per cent water allocation, almost 350 jobs directly and almost 400 flow-on job losses in other sectors of the regional economy.

Job losses in irrigated agriculture would account for 46 per cent of the total employment impact (Figure 10).

It was estimated that almost \$102m (in 2006 dollars) in GRP would be lost from the Murraylands regional economy in response to a 0 per cent water allocation scenario, almost \$75m directly and \$27m in flow-on GRP in other sectors of the regional economy.

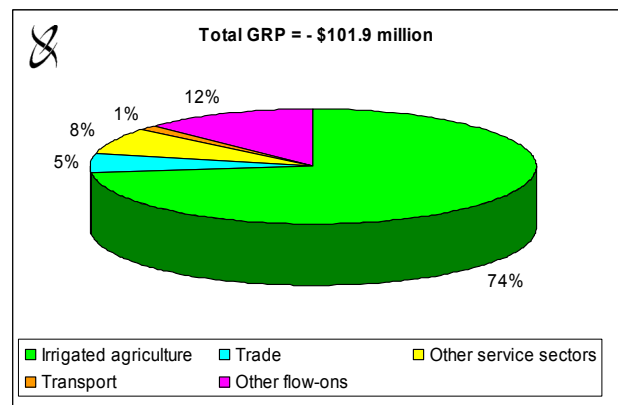
Reduced GRP in irrigated agriculture would account for 74 per cent of the total GRP impact (Figure 11).

Figure 10 Distribution of employment impacts for a 0 per cent allocation scenario



Source: EconSearch analysis

Figure 11 Distribution of GRP impacts for a 0 per cent allocation scenario



Source: EconSearch analysis

**Regional Economic Impact of Drought on Food Manufacturing and Processing**

To highlight the potential effect of drought on food processing sectors, three hypothetical scenarios were developed:

- 10 per cent decrease in food processing;
- 25 per cent decrease in food processing; and
- 50 per cent decrease in food processing.

For the purpose of this analysis, it has been assumed that the effects of the drought are widespread. Consequently, primary products for processing cannot be sourced from outside the region to replace local production.

**Economic Impact of a 10 per cent Decline**

Estimates of regional economic impact of a 10 per cent decline in food processing in response to widespread drought conditions are provided in Table 12.

A 10 per cent decline in food processing would reduce direct output by approximately \$59m (in 2006 dollars).

Table 12 Estimated net impact of a 10 per cent decline in food processing

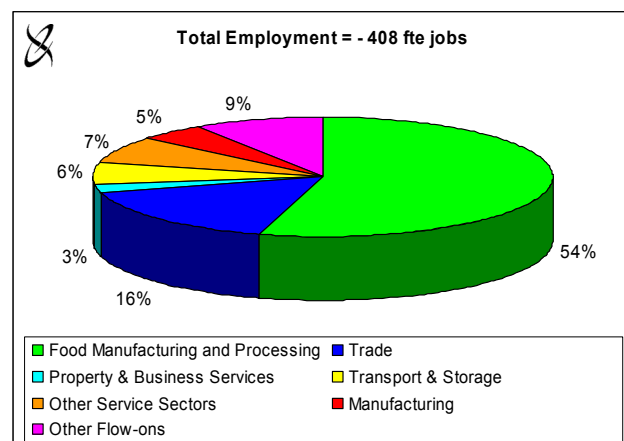
Sector	Output <sup>a</sup>	Employment	Contribution to GRP
	\$m	fte	\$m
Food Manufacturing and Processing	-59	-223	-14.3
Flow-on impacts			
Trade		-65	-2.4
Property & Business Services		-11	-0.8
Transport & Storage		-24	-1.7
Other Service Sectors		-30	-1.9
Manufacturing		-19	-1.1
Other Flow-ons		-38	-4.2
Total Flow-on <sup>b</sup>		-186	-12.1
Total <sup>b</sup>		-408	-26.4
Proportion of regional total		-2.5%	-2.7%

Source: EconSearch analysis

It is expected that almost 410 fte jobs would be lost from the Murraylands economy in response to a 10 per cent decline in food processing, over 220 jobs directly and almost 190 flow-on job losses in other sectors of the regional economy.

Job losses in food processing would account for 54 per cent of the total employment impact (Figure 12). Flow-on job losses would account for the balance of the total employment impact.

Figure 12 Distribution of employment impacts for a 10 per cent decline in food processing

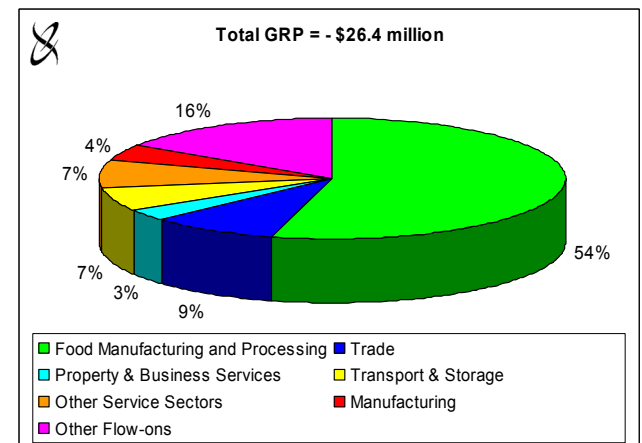


Source: EconSearch analysis

It was estimated that over \$26m (in 2006 dollars) in GRP would be lost from the Murraylands regional economy in response to a 10 per cent decline in food manufacturing and processing, over \$14m directly and \$5m in flow-on GRP in other sectors of the regional economy.

Reduced GRP in food processing would account for 54 per cent of the total GRP impact (Figure 13). Flow-on losses of GRP would account for the balance of the total GRP loss and would be concentrated in trade, property and business services, transport and other service sectors.

Figure 13 Distribution of GRP impacts for a 10 per cent decline in food processing



Source: EconSearch analysis

Interpretation of the results of the impact assessment for the 25 per cent decline (Table 13) and 50 per cent decline (Table 14) are similar to those for the 10 per cent decline scenario.

**Economic Impact of a 25 per cent Decline**

Table 13 Estimated net impact of a 25 per cent decline in food processing

Sector	Output <sup>a</sup>	Employment	Contribution to GRP
	\$m	fte	\$m
Food Manufacturing and Processing	-147	-557	-35.7
Flow-on impacts			
Trade		-164	-5.9
Property & Business Services		-26	-2.0
Transport & Storage		-60	-4.3
Other Service Sectors		-74	-4.8
Manufacturing		-47	-2.8
Other Flow-ons		-94	-10.4
Total Flow-on <sup>b</sup>		-465	-30.3
Total <sup>b</sup>		-1,021	-66.0
Proportion of regional total		-6.3%	-6.9%

Source: EconSearch analysis

## Economic Impact of a 50 per cent Decline

Table 14 Estimated net impact of a 50 per cent decline in food processing

Sector	Output <sup>a</sup>	Employment/Contribution to GRP	
	\$m	fte	\$m
Food Manufacturing and Processing	-293	-1,113	-71.4
Flow-on impacts			
Trade		-327	-11.8
Property & Business Services		-53	-4.1
Transport & Storage		-120	-8.6
Other Service Sectors		-148	-9.7
Manufacturing		-93	-5.7
Other Flow-ons		-188	-20.8
Total Flow-on <sup>b</sup>		-929	-60.7
Total <sup>b</sup>		-2,042	-132.1
Proportion of regional total		-12.6%	-13.7%

Source: EconSearch analysis

## The Regional Economic Impact of Projected Housing Growth

Estimates of regional economic impact were based on the assumption that growth in the Murray Bridge council area would be consistent with the Urban Growth Plan forecast estimates while population in other council areas would remain constant.

### Economic Impact of Residential Construction

Estimates of the regional economic impact of residential construction in the Murraylands in 2005/06 are provided in Table 15.

Table 15 Estimated regional economic impact of residential construction

Sector	Employment	Contribution to GRP
	fte	\$m
Residential Building	110	17.2
Flow-on impacts		
Trade	37	1.2
Property & Business Services	10	0.8
Transport & Storage	6	0.4
Other Service Sectors	16	1.1
Other Flow-ons	40	3.8
Total flow-on impacts <sup>a</sup>	109	7.3
Total <sup>a</sup>	218	24.5
Proportion of regional total	1.3%	2.5%

Source: EconSearch analysis

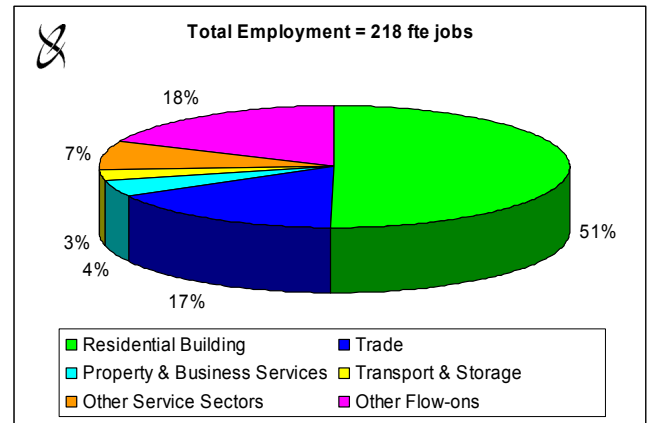
It was estimated that 218 fte jobs were generated in the Murraylands regional economy in 2005/06 by residential construction activity. Approximately 110 of these jobs were generated directly in the residential building sector and 109 flow-on jobs in other sectors of the regional economy.

Jobs in residential building accounted for 51 per cent of the total employment impact (Figure 14)

It was estimated that almost \$25m (in 2006 dollars) in GRP was generated in the Murraylands regional economy in 2005/06 by residential construction activity, \$17m directly and \$7m in flow-on GRP in other sectors of the regional economy.

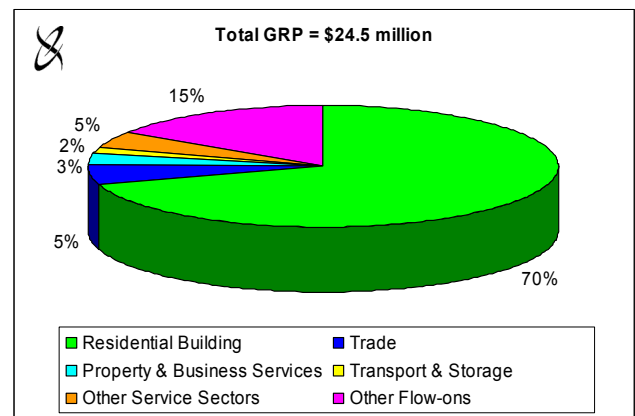
GRP in the residential building sector accounted for 70 per cent of the total GRP impact

Figure 14 Distribution of employment impacts for residential construction



Source: EconSearch analysis

Figure 15 Distribution of GRP impacts for residential construction



Source: EconSearch analysis

## Economic Impact of Annual Growth in Residential Construction

Estimates of the regional economic impact of annual growth in regional construction in the Murraylands are provided in Table 16. The distribution of these impacts is similar to those illustrated in Figures 14 and 15.

Table 16 Estimated net impact of annual growth in residential construction

Sector	Employment	Contribution to GRP
	fte	\$m
Residential Building	6	0.90
Flow-on impacts		
Trade	2	0.06
Property & Business Services	1	0.04
Transport & Storage	0	0.02
Other Service Sectors	1	0.06
Other Flow-ons	2	0.20
Total flow-on impacts <sup>a</sup>	6	0.38
Total <sup>a</sup>	11	1.28
Proportion of regional total	0.1%	0.1%

Source: EconSearch analysis

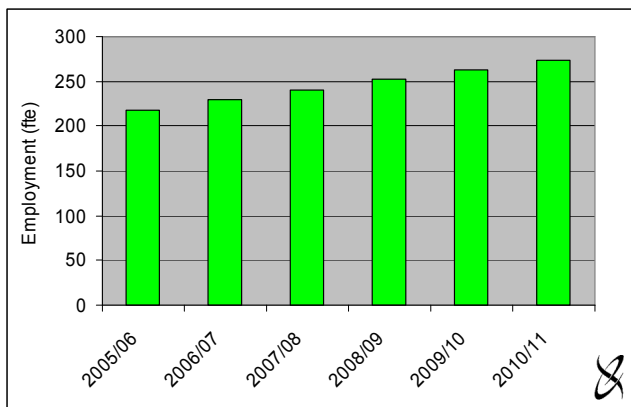
It was estimated that 11 fte new jobs would be generated in the Murraylands regional economy each year in response to annual growth in residential construction of the magnitude outlined above. Approximately 6 of these jobs would be generated directly in the residential building sector and the remaining 6 in flow-on jobs in other sectors of the regional economy.

Over a 5 year planning horizon, the cumulative impact of this growth would be a 0.3 per cent increase in regional employment above 2005/06 levels, i.e. an increase on approximately 55 jobs.

It was estimated that \$1.3m (in 2006 dollars) in additional GRP would be generated in the Murraylands regional economy each year in response to annual growth in residential construction of the magnitude outlined above. Approximately \$0.9m in GRP would be generated directly in the residential building sector and \$0.4m in flow-on GRP would be generated in other sectors of the regional economy.

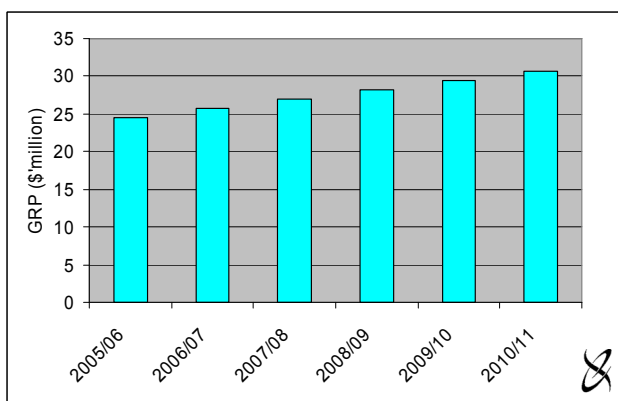
The cumulative effect of this growth on regional employment and GRP is illustrated in Figures 16 and 17, respectively.

Figure 16 Cumulative employment impact of annual growth in residential construction



Source: EconSearch analysis

Figure 17 Cumulative GRP impact of annual growth in residential construction



Source: EconSearch analysis

## References

- Australian Bureau of Agricultural and Resource Economics (ABARE) 2007, *Australian Commodities*, vol. 14, no. 1, March quarter 2007.
- Australian Bureau of Statistics (ABS) 2007 *Regional Population Growth, Australia, 2005/06*, Cat. No. 3218.0, Canberra, February.
- Australian Bureau of Statistics 2006 *Building Approvals, Australia*, Cat. No. 8731.0, Canberra, August.
- Australian Bureau of Statistics 2005, *Manufacturing Industry, South Australia, 2001/02*, Cat. No. 8221.4.55.001, Canberra, November.
- SA Murray Darling Basin NRM Board 2007, *Investigation of Opportunities for Wastewater Re-use within the Murray-Darling Basin, SA*, Draft Report Milestone 2, report prepared by Earth Tech Pty Ltd March.
- Clifford W. 2006, *Murraylands Jobs and Investment Survey 2006*, a report prepared for the Murraylands Regional Development Board, April.
- EconSearch 2005, *Regional Development Board Economic Models*, a series of RISE impact models prepared for the Office of Regional Affairs, Department of Trade and Economic Development.
- EconSearch 2007, *Lower Murray Drought Impact Study: Economic Impact of Low River Flows*, prepared for Primary Industries and Resources South Australia, February.
- EconSearch and SRHS 2004, *The Economic Impact of Drought Conditions and Water Restrictions on River Murray Irrigation Industries and Regions*, prepared for Primary Industries and Resources South Australia, July.
- Jensen, R.C. and West, G.R. 1986, *Input-Output for Practitioners, Vol.1, Theory and Applications*, Office of Local Government, Department of Local Government and Administrative Services, AGPS, Canberra.
- QED Pty Ltd 2007, *Murray Bridge Urban Growth Plan*, report prepared for The Rural city of Murray Bridge, Murraylands Regional Development Board, South Australian Murray-Darling Basin Natural Resources Management Boards and SA Water, April.

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