WAKOOL SHIRE COUNCIL
naturally

TRIM REF:

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13 DEC 2010

Committee Secretary
Senate Standing Committee on Rural Affairs and Transport
PO Box 6100
Parliament House
CANBERRA ACT 2600

Dear Sir/Madam

SENATE STANDING COMMITTEE ON RURAL AFFAIRS AND TRANSPORT - THE MANAGEMENT OF THE MURRAY DARLING BASIN - WAKOOL SHIRE COUNCIL

In accordance with this inquiry, Wakool Shire Council wishes to submit its views on the future management of the Murray Darling Basin, especially in the context of the Basin Plan that is being developed by the Murray Darling Basin Authority (MDBA).

As you are aware, the Guide to the proposed Basin Plan, as currently suggested, will have far reaching and adverse implications for the future of irrigated food production, employment and the future sustainability of rural communities throughout the Basin.

Wakool Shire

The Wakool Shire covers an area of 7,549 sq kilometres with a population base of 4,362 (2006 census). The main population centres include Barham (1,233 people), Moulamein (465 people), Tooleybuc (250 people) and Wakool (250 people). Other smaller communities include Goodnight, Koraleigh, Kyalite and Murray Downs.

The Shire is predominately rural with 20% of the population and 40% of the workforce involved in agriculture, forestry and fishing sector (2001 data). Agriculture dominates this sector representing over 98% of the employment in the sector.

The importance of agriculture as a major employer of the region is also reflected in the income generated by the sector.

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Agriculture value of output

General	1997	2001
Total area of Holdings (ha) > $5,000 TVAO[1]	638,244	746,778
Number of landowners > $5,000 TVAO	442	429
Total value of agriculture ('000,000)	$128	$191
Average area of holding (ha):	1444	1742
Total value of agriculture per holding ($)	$289,720	$445,899
Total value of agriculture per ha ($/ha)	201	256

[1] TVAO – total value of agricultural output

Projected value 2006 ('000,000)

Enterprise	2001	2006
Beef ('000,000)	$20	$19
Sheep ('000,000)	$16	$15
Cereals ('000,000)	$85	$62
Pigs ('000,000)	$25	$18
Dairy ('000,000)	$14	$15
All Minor Enterprises ('000,000)	$31	$35
Total ('000,000)	$191	$164
Area of Holdings (ha)	750,000	750,000
Total Value per Hectare ($/ha)	256	219

RAMROC's Water4Food Program

As you may be aware, Wakool Shire Council has been actively involved in the Riverina and Murray Regional Organisation of Council's (RAMROC) Water4Food campaign. RAMROC has pursued strong representations to the Federal and NSW State Governments for the past three years, in relation to concerns about the potential impacts on agricultural production in the southern Murray Darling Basin and in turn to the real threats to the long term sustainability of irrigation communities.

These concerns of councils, regional food producers and communities in the region have been brought about by a combination of many years of extreme drought conditions, the projected impacts of climate change, the reduced water diversion limits foreshadowed in a new Murray Darling Basin Plan, and the Federal Government's Water for the Future Program's $3.1 billion buyback program of irrigator water entitlements already well advanced.

In late 2008, RAMROC convened two Leadership Summits, which brought together irrigation industry leaders and stakeholders, to discuss these critical issues. Arising from these Summits, it was decided to develop and undertake a Water4Food advocacy and marketing program, targeting Federal and State Governments, national and regional media, as well as citizens in capital cities and regional areas.

This program is ongoing and has been advocated to Federal and State Government Ministers, presented at a wide range of conferences, seminars and forums and also to stakeholder and community organisations, and within the media. The campaign has been strongly supported and funded through local industry and business contributions, Chambers of Commerce, Service Clubs and individuals.

The program has engaged the support and participation of Councils in northern Victoria and has also attracted significant attention throughout the northern part of the Murray Darling Basin.

The principal objectives of the Water4Food program are to achieve:

- A sensible and pragmatic balance between environmental water needs, maintaining irrigated food production levels and ensuring the long term sustainability of rural towns and communities, i.e. a triple bottom line balance of environmental, economic and social considerations.
- Fair and equitable treatment of Murray, Murrumbidgee, Lower Murray-Darling and Lower Lachlan valleys in relation to Federal and State Governments' water acquisition programs.
- Long term fixed and guaranteed security of water resources, in order to maintain irrigated food production capacities.

- Funding for upgrading of irrigation infrastructure, on-farm efficiency programs and industry re-structuring.
- Funding for structural adaptation of RAMROC communities impacted by reduced water availability.
- Increased scientific R&D initiatives to secure food production at current or greater levels, in an environment of reduced water availability.

The Commonwealth Water Act 2007 – Interpretation of provisions relating to Economic, Social and Environmental Outcomes

The Guide to the proposed Bain Plan has clearly been predicated on the basis of an interpretation of the Water Act that gives virtually total priority and emphasis to environmental watering requirements, with the issues of economic and social considerations very much secondary.

This has resulted in the calculation of proposed Sustainable Diversion Limits (SDLs), being the quantities of water available for consumptive purposes (drinking water, industry, irrigated agriculture etc), being based on the amount of water available, only after all environmental needs have been satisfied.

MDBA's interpretation of the Water Act in formulating the Guide has meant that consideration of the outcomes of socio-economic studies undertaken to date have been a sub-set of the determination of the proposed SDLs. In other words, the socio economic studies are a product of the SDLs process, rather than a key contributor to the up-front calculation of SDLs.

The Commonwealth Water Minister the Hon Tony Burke MP has recently sought legal advice from the Australian Solicitor General in this matter. As a result, the Minister has concluded that the Water Act 2007, passed with bi-partisan support of both the Government and Coalition Opposition parties, does in fact provide for full consideration of economic and social issues.

Minister Burke has indicated on a number of recent occasions that the Government and the Coalition are strongly agree that the Water Act 2007 certainly allows for a triple bottom line approach, to achieve a balance of environmental, economic and social outcomes, and within the current structure of the Act provisions without the necessity of amendments.

It is critically important that the draft MDB Plan from this point onwards is prepared on the basis of equal weighting being given to environmental, economic and social considerations.

This is a critical point also for the Senate Committee.

Broad Social and Economic Consideration

As set out previously, the final Basin Plan must take into account a balanced outcome in terms of social, economic and environmental considerations. In terms of the socio-economic considerations, the following comments are offered:

- In preparing the final draft Murray Darling Basin Plan, MDBA needs to take into account the legal advice of the Australian Solicitor General to the Commonwealth Water Minister Tony Burke MP and to give full and detailed consideration to achieving a triple bottom line balanced outcome between environmental, economic and social considerations.
- Minister Burke's clearly stated objectives are to achieve outcomes that provide for healthy rivers, food production and sustainable communities.
- It is a logical fact that any substantial loss of irrigation water from the Murray Darling Basin system will have significant social, economic and psychological/mental health impacts on farmers, families, communities, towns and businesses.
- Currently, there are huge discrepancies between the ABARE projected socio-economic impacts as set out in the Guide of only 800 job losses and only a $800,000 reduction in gross irrigated agricultural activity (based on 3,000 GL/y additional environmental water), in comparison to other socio-economic studies undertaken which have clearly demonstrated significantly greater adverse impacts.
- Local Government Councils from throughout the Basin are already undertaking extensive community profiling and studying impacts of reduced water availability, under the Commonwealth Government's Strengthening Basin Communities Program. The appointed MDBA Consultants should liaise closely with Councils in this regard, as part of the new economic and social impacts program.
- The new MDBA Study into the Assessment of Local Community Impacts must be undertaken having regard to the ASG legal advice. The Study must be comprehensive and thorough, examining in detail the potential impacts in each of the 19 MDBA regions, based on extensive community consultation and the development of practical case studies. It should also have due regard to the outcomes of other socio-economic studies already undertaken throughout the Basin.
- The Project Brief for the new MDBA Study recently issued is of great concern, in that it appears likely to commence in early December 2010; is required to deliver initial findings and a Discussion Paper within 8 weeks (I.e. by the end of January 2011); then prepare a detailed draft report on the project (time not specified); then a detailed Final Report by 15th March 2011, which is to incorporate feedback from MDBA on the draft report and also for the consultants to participate in "up to" three public workshops to present the results of the project.
- The entire impacts assessment project is required to be completed by 15th March. This appears to be a rushed timetable and process, which gives Wakool Shire Council little confidence that the report will be thorough and comprehensive, or that it provides sufficient opportunity for community and stakeholder input.
- In the new socio-economic study Brief, there appears to be little indication that MDBA is proposing to take full account of the advice given to the Australian Solicitor General to Water Minister Burke, whereby the economic and social considerations are to be given the highest level of importance and weighting, as has already been given to the environmental watering requirements and SDL determinations.

RMCG Report - Social and Economic Consideration

In particular, Wakool Shire Council would like to highlight to the Senate Committee the outcomes of the RMCG study on the socio-economic impacts on the Wakool Shire community should part, or all, of the irrigation network be permanently decommissioned (adopted June 2009 – copy attached).

As the RMCG report highlights, there will be serious ramifications for our shire through any loss of water for irrigated agriculture.

The farm impacts can be summarised as:

Water sold from the district	Water sold (GL)	Proportion of district water sold (%)	Value of agricultural output lost ($M)	Potential reduction in farm numbers
Scattered scale	68	20	15	24-40
Total Wakool Irrigation District	340	100	75	120-195

Due to the large farm size, the farm numbers might stay as they are but the number of families being supported by each farm would drop, or there might be some restructure to result in lost farm families.

The level of impact is linked to the volume of water that may be removed from the region. Farm businesses that sell the water receive an injection of funds to help adjust to the changed circumstances. However, the flow-on impacts of a significant drop in the rural economy due to the loss of water will be pronounced but there is no adjustment support for those remaining in the region.

It is estimated that for every 1000 ML of water that is lost from the region will result in:

- $300,000 loss of agricultural production within the shire
- up to $900,000 loss from the regional economy
- $3,500 in direct rate revenue loss
- loss of one agricultural job
- loss of one regional job

As demonstrated above, undertaking social and economic assessment at an appropriate scale and using appropriate indicators is crucial.

Summary

Wakool Shire Council acknowledges and welcomes the Senate Committees interest in ensuring the impacts of the proposed Basin Plan are well understood and that a rigorous parliamentary process is put in place prior to the final Basin Plan being presented to federal parliament.

However, the proposals for quantities of water proposed to be removed from productive purposes for additional environmental watering are unacceptable. Those proposals will impact severely on food production capacity and will decimate rural farming communities.

Yours faithfully,

Chris Chapman
General Manager

kb

Wakool Shire

Socio-Economic Impacts: Closure of Wakool Irrigation District (or parts thereof)

Final Report

June 2009

ABN: 35 154 629 943

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Executive Summary

The Wakool Shire engaged RMCG to undertake a desktop evaluation of the socio-economic impacts on the Wakool Shire community should part, or all, of the irrigation network be permanently decommissioned.

It is anticipated that the outcomes from this investigation will enable Council to actively engage the Australian Government into looking at the broader community impacts on any closure of irrigation districts and/or network that results from a targeted buy-back of water for the environment from consumptive users.

Shire at a glance

The Wakool Shire:

- is predominantly rural (20% population and 40% workforce in agriculture);
- has a total workforce around 2,000;
- has a declining workforce and population;
- produces a value of agriculture of around $190 million;
- has a valuable irrigation sector with over 300,000 ML of entitlement; and
- includes a limited number of towns.

Water movement

Permanent water loss from the Wakool shire could occur under three different scenarios including:

- Sale of a complete section of the district – West Moulamein of a total of 50,000 ML (Australian Government buy back)
- Entire Wakool district - 341,000 ML (Australian Government buy back)
- Scattered sale of entitlement throughout the district – 'swiss cheese' affect (Australian Government buy back plus private permanent trades out of the district).

Farm impacts

The farm impacts can be summarised as:

Water sold from the district	Water sold (GL)	Proportion of district water sold (%)	Value of agricultural output lost ($M)	Potential reduction in farm numbers
Scattered scale	68	20	15	24-40
West Moulamein only	50	15	11	0-10 [#]
Total Wakool Irrigation District	340	100	75	120-195

[#] Due to the large farm size, the farm numbers might stay as they are but the number of families being supported by each farm would drop, or there might be some restructure to result in lost farm families.

Regional impacts

The level of impact is linked to the volume of water that may be removed from the region. Farm businesses that sell the water receive an injection of funds to help adjust to the changed circumstances. However, the flow-on impacts of a significant drop in the rural economy due to the loss of water will be pronounced but there is no adjustment support for those remaining in the region.

It is estimated that for every 1000 ML of water that is lost from the region will result in:

- $300,000 loss of agricultural production within the shire;
- up to $900,000 loss from the regional economy;
- $3,500 in direct rate revenue loss;
- loss of one agricultural job; and
- loss of one regional job.

Options for mitigation

Options need to:

- facilitate adaptation;
- support services to the community; and
- promote alternative enterprises (higher value agriculture or industry to replace some of the dollars currently generated by irrigation water).

Recommendations

It is recommended that the shire propose to the government a managed package of investment for the area that includes funds for:

- buy back of water for the environment;
- improvement in system efficiency and productivity; and
- the community to adjust to the rapid change induced by the targeted buy-back of water.

This package could take the form of a negotiation for:

- part of the shire;
- the whole shire (effectively the whole of the Wakool Irrigation District); or
- the whole of MIL.

Part of the package deal would be a sum of dollars to come to the shire/region in return for an agreed quantum of water. Without this agreement the community is unlikely to come on board.

Clearly there are significant implications of going down these different routes in terms of scale, consultation, time to gain agreement and total dollars.

1 Introduction

1.1 Background

RMCG have been engaged by the Wakool Shire to undertake a desktop evaluation of the socio-economic impacts on the Wakool Shire community should part, or all, of the irrigation network be permanently decommissioned.

The expectations of the project are to:

- develop a socio-economic profile of the Wakool Irrigation District by describing and characterizing the demographic characteristics;
- define and document the anticipated economic impacts of any irrigation network decommissioning;
- identify the extent to which these impacts will affect the Wakool Irrigation District and Wakool Shire economy (e.g. an assessment of impacts in terms of incomes, jobs, value added and multiplier impacts of this throughout the community);
- identify a $/megalitre figure on the opportunity cost to the local community of the permanent removal and decommissioning of irrigation infrastructure;
- identify options for mitigation (structural adjustment); and
- make recommendations for how any structural adjustment payments could be reinvested into the community for the benefit of the shire economy.

It is anticipated that the outcomes from this investigation will enable Council to actively engage the Australian Government into looking at the broader community impacts on any closure of irrigation districts and/or network that results from a targeted buy-back of water for the environment from consumptive users.

1.2 Purpose

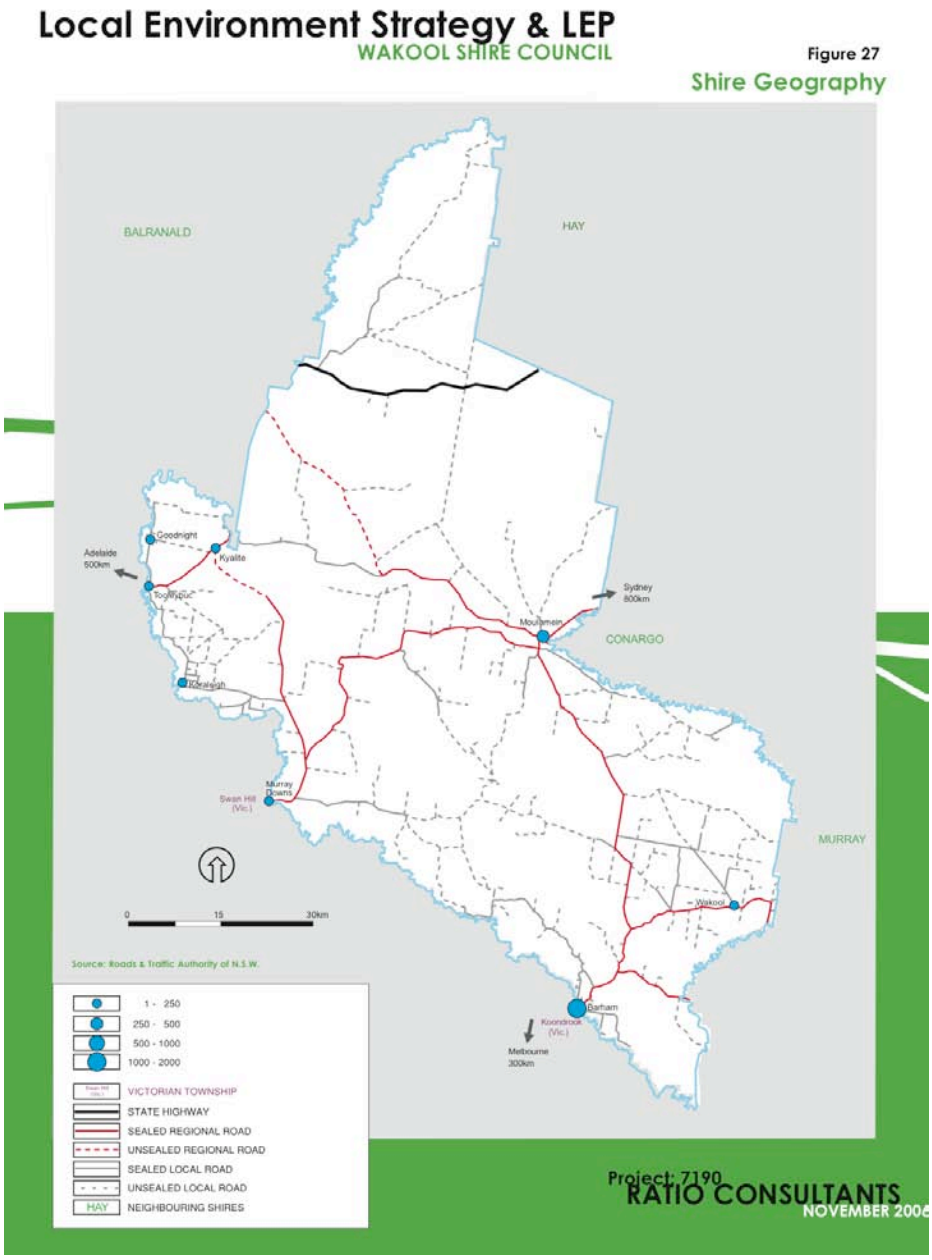
Develop a case that describes the full socio-economic impacts of a potential loss of water from the district and recommendations that would enable the shire to mitigate the impacts and to adapt to a changed operating environment.

2 Key Shire Statistics

2.1 Location

The Wakool Shire covers an area of 7,549 sq kilometres with a population base of 4,362 (2006 census). The main population centres include Barham (1,233 people), Moulamein (465 people), Tooleybuc (250 people) and Wakool (250 people). Other smaller communities include Goodnight, Koraleigh, Kyalite and Murray Downs.

Figure 2-1 Wakool Shire



Source: Local Profile Wakool Shire Council November 2006

2.2 Economy

The shire is predominately rural with 20% of the population and 40% of the workforce involved in agriculture, forestry and fishing sector (2001 data). Agriculture dominates this sector representing over 98% of the employment in the sector.

Table 2-1 Employment distribution

	Number of persons		
	1996	2001	2006
Agriculture, Forestry and Fishing	948	911	752
Mining	3	0	0
Manufacturing	52	108	89
Electricity, Gas, Water and Waste Services	48	34	23
Construction	67	82	94
WholesaleTrade	62	72	56
Retail Trade	97	126	136
Accommodation and Food Services	200	165	162
Transport, Postal and Warehousing	57	55	55
Information Media and Telecommunications	10	8	8
Financial and Insurance Services	31	25	30
Rental, Hiring and Real Estate Services	7	11	13
Professional, Scientific and Technical Services	24	37	35
Administrative and Support Services	23	27	32
Public Administration and Safety	82	70	103
Education and Training	122	129	124
Health Care and Social Assistance	78	107	127
Arts and Recreation Services	6	13	21
Other Services	47	29	44
Inadequately Described / Not Stated	67	54	69
Total	2,031	2,063	1,973

Source: Wakool Shire LEP Review October 2008

Any substantial change in the agricultural base within the shire will have significant flow on impacts to the shire's economy.

The ongoing drought has had impacts on the agricultural workforce as illustrated in Table 2-2.

Table 2-2 Relative changes to the workforce from 1991 -2006

	Change in Number of Jobs by Sector (per cent)		
	1996 to 2001	2001 to 2006	1996 to 2006
Agriculture Sector	-3.9	-17.5	-20.7
Overall Workforce	1.6	-4.4	-2.9
Shire Population	-2.6	-9.0	-11.4

Source: ABS Catalogue 2068.0 – Wakool Shire

The agriculture sector workforce dropped by 17.5% from 2001-2006 that represents approximately a four-fold increase in the drop from the previous 5-year period of 3.9%.

The importance of agriculture as a major employer of the region is also reflected in the income generated by the sector.

Table 2-3 Agriculture value of output

General	**1997**	**2001**
Total area of Holdings (ha) > $5,000 TVAO[1]	638,244	746,778
Number of landowners > $5,000 TVAO	442	429
Total value of agriculture ('000,000)	$128	$191
Average area of holding (ha):	1444	1742
Total value of agriculture per holding ($)	$289,720	$445,899
Total value of agriculture per ha ($/ha)	201	256

[1] TVAO – total value of agricultural output

See appendix 1 for detail of agriculture value by enterprise type.

Table 2-4 Projected value 2006 ('000,000)

Enterprise	**2001**	**2006**
Beef ('000,000)	$20	$19
Sheep ('000,000)	$16	$15
Cereals ('000,000)	$85	$62
Pigs ('000,000)	$25	$18
Dairy ('000,000)	$14	$15
All Minor Enterprises ('000,000)	$31	$35
Total ('000,000)	$191	$164
Area of Holdings (ha)	750,000	750,000
Total Value per Hectare ($/ha)	256	219

Source: Local Profile Wakool Shire Council November 2006

Note: Agricultural statistics were not available for 2006 so figures presented are calculated values based on updated commodity price information and trends of the physical parameters.

Drought pressure has seen a decline of $30 million (16%) in the value of agricultural production in the shire between 2001-06. However, this projection does not include more recent impacts that have seen two consecutive years of 0% allocation of general security water in 2006-07 and 2007-08 and 9% allocation as of the 15th of March 2009.

Other rural activities of significance include:

- feedlot up to 45,000 sheep and 25,000 cattle;
- salt works;
- potato processing plant, walnut processing plant and rice storage; and
- redgum logging several forests including Koondrook and Perricoota forests.

2.3 Shire Revenue

The Shire's revenue stream comes from three main sources:

- rates;
- charges for services; and
- government grants.

These three sources contribute approximately 1/3 each to the total shire revenue base.

Shire rates are an important component of the revenue based and Table 2-5 shows the rating structure for 2008-09.

Table 2-5 Rating Structure Wakool Shire – 2008-09

Category	Number	Rateable Land Value	Rate in the $	Net Yield	Yield %
Farmland - Dry	180	$42,495,050	$0.00750803	$329,353	10.16
Farmland - Irrigable	713	$216,638,400	$0.00925549	$1,986,003	61.28
Farmland - Intensive farming feedlots	3	$2,337,000	$0.01174698	$24,713	0.76
Residential	1015	$40,214,430	$0.00612753	$400,791	12.37
Rural Residential	507	$27,466,330	$0.00790785	$299,735	9.25
Business	165	$6,240,280	$0.00894349	$78,607	2.43
Rural Business	67	$5,256,480	$0.00912633	$64,737	2
Heavy Vehicle Industries	2	$95,500	$0.04985969	$4,762	0.15
Large Grain Storage Depots	5	$78,200	$0.38052430	$29,757	0.92
Small Grain Storage Depots	9	$397,200	$0.04494965	$17,854	0.55
Marina Moorings	9	$511,500	$0.00860179	$4,591	0.14
TOTAL	**2675**	**$341,730,370**		**$3,240,903**	**100**

Source: Management Plan 2008/2009

The revenue derived from the irrigable farmland is approximately $2 million representing 61 % of the shire's rate base and therefore represents a significant income source for the shire.

2.4 Social Infrastructure

Following is a summary of the social infrastructure in the shire.

Table 2-6 Summary of Social infrastructure

Service	Comment
Public Housing	There is no public housing in the shire
Education	7 schools: ▪ 4 primary ▪ 1 secondary ▪ 1 primary/secondary combined.
Health	▪ 1 Hospital – Barham ▪ 2 Community Health Centres
Community Services	▪ Child care centre – Moulamein ▪ Family Day care – Barham ▪ Mobile child care – Wakool ▪ Health and Community Care Program (HACC) – Wakool, Moulamein. Toolebuc (servicing 359 people or 7% of shire population)
Community Safety	▪ 15 fire stations ▪ 2 Police stations – Moulamein, Barham

2.5 Tourism

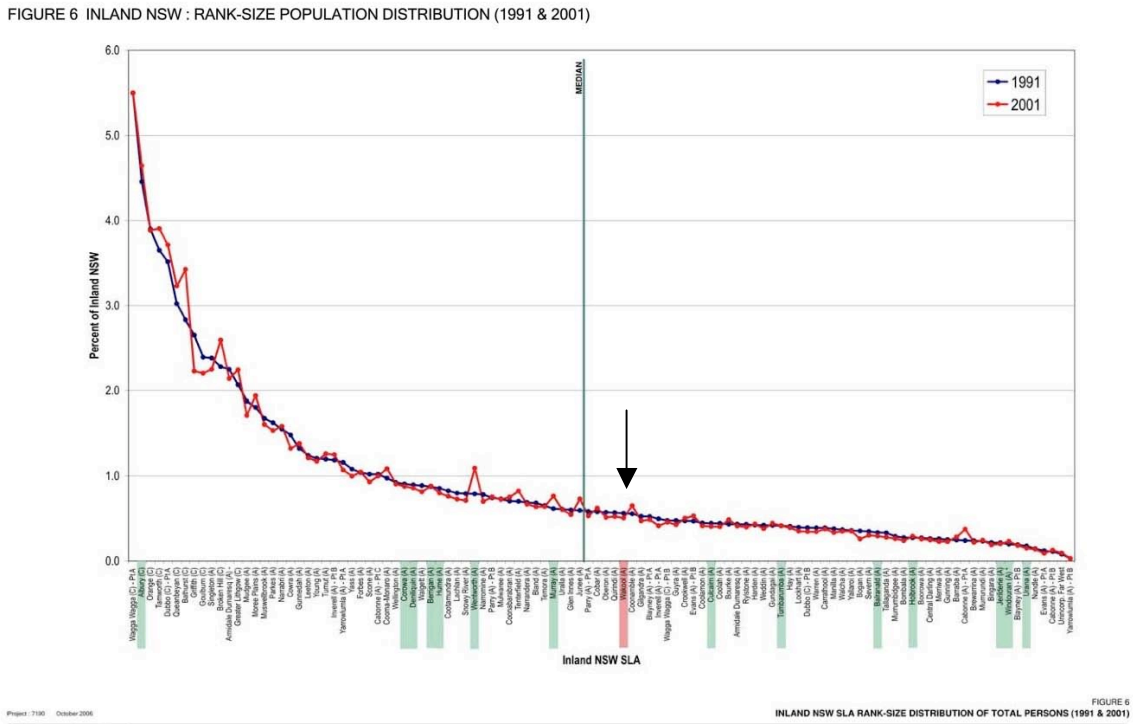
There are 9 accommodation facilities in the shire employing around 60 people. Key attractions include:

- Barham Golf and Country Club;
- Murray and Edward rivers (camping, fishing, water sports);
- State forests - Koondrook and Perricoota;
- Red gum timber outlets;
- Early pioneer courthouse and wharf
- Farm Stay Accommodation;
- Glenbar Station; and
- Murray Downs Golf and Country Club.

2.6 Shire's relativity to other inland NSW shires

It is useful to have some understanding of where the Wakool shire sits relative to other inland shires in NSW in terms of population base and employment trends.

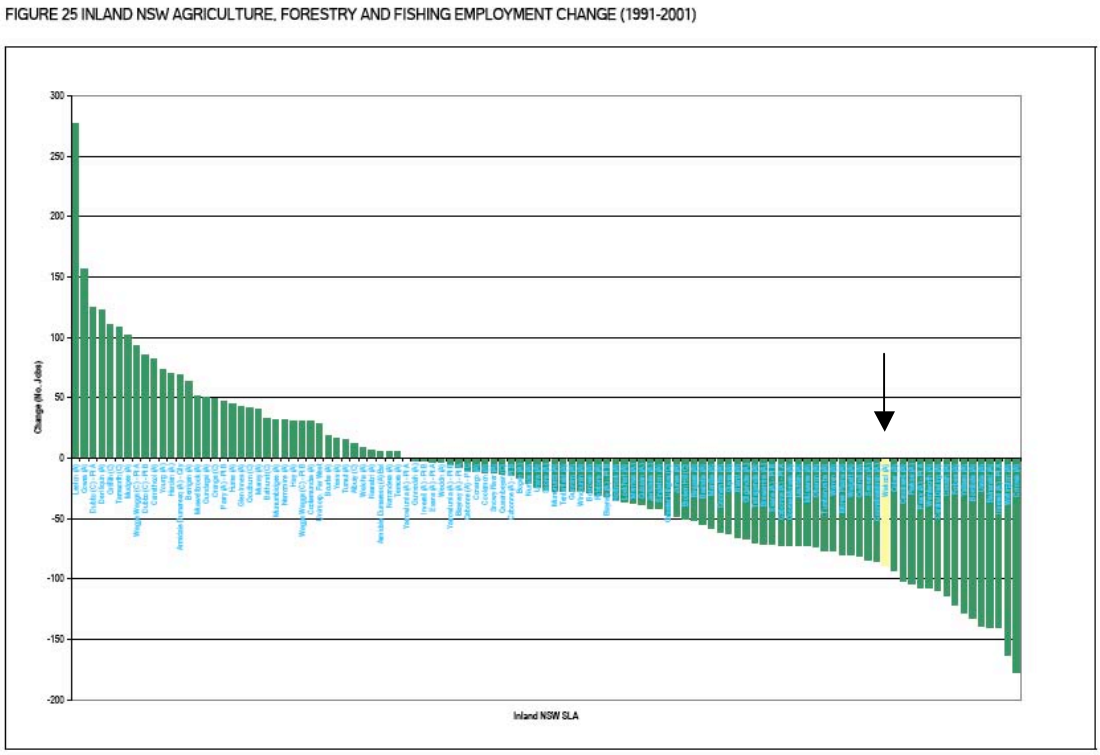
Figure 2-2 Population distribution of inland NSW shires



Source: Local Profile Wakool Shire Council November 2006

Wakool shire (shaded red – just to the right of the median line) is rated around the median level for shires of inland NSW, however when looking at % changes in the workforce in agriculture forestry and fishing, Wakool is in the bottom third of all inland shires (refer to Figure 2-3)

Figure 2-3 Change in number of employees



Note: This change is from 1991 to 2001 and does not include the additional 17.5% drop from 2001 to 2006 as described in Table 2.2 (Wakool is shaded yellow).

2.7 Data

The data used in this report has been accessed from several readily available sources and they do not all correspond in time, nor do they all reconcile completely. However, the general scale of the messages and issues are believed to be sufficiently robust to inform the direction of what the Wakool Shire could do to mitigate the impacts of potential change.

2.8 Summary

Key points from the shire description include that:

- it is a small municipality;
- there is a high reliance of the workforce on agriculture (particularly the irrigated sector);
- it has an economy that is heavily reliant on agriculture; and
- the decline in the workforce in the agricultural sector is relatively high compared to other NSW inland shires (the shire already experiencing the impact of low water availability).

3 Agricultural Profile – Current

3.1 Climate

The Wakool area is in a semi-arid climate with hot dry summers and cool mild winters. Average rainfall is 375 mm but highly variable. Mean temperatures range from 24°C in January to 10°C in July.

3.2 Land

Soils in the district are variable and are classified into six major groups as follows:

- red brown earths;
- grey soils subject to inundation;
- grey and brown soils of the treeless plains;
- Mallee soils;
- the Cockran-Yarrein Creek soil complex; and
- soils of the brown sandhills.

It is considered that a large percentage of land currently irrigated would only be suitable for large scale grazing in the absence of irrigation water with some smaller areas suitable for cropping.

3.3 Irrigation Water

3.3.1 Water entitlements

The total general security water entitlements in the Wakool irrigation district held in 2004-05 is 341,484 ML (Source MIL- 2004-05). Details of water entitlements are shown in Table 3-1.

Table 3-1 Water Entitlements – Wakool District

Total Water entitlements (ML)	341,484
Number of land holders	240
Average entitlement (ML)	1,423
Median entitlement (ML)	999
Largest Holding (ML)	6,915
Smallest Holding (ML)	54
% water entitlements held by largest 10% of holdings	26%
% water entitlements held by the largest 50% of holdings	73%

Note there has been water sold within and outside the district over the past few years that will change the current water entitlements, but not to the extent of changing the messages that come from the analysis, i.e. the message is still relevant.

3.3.2 Water use

Rice has dominated the agricultural water use in the district with approximately 90% (307,819 ML) of the entitlements held used for rice production. Dairy is the next major industry but only represents 3% (9,590 ML) of the entitlements held in the district.

Water entitlement is not necessarily a good indication of water use as different industries will either trade water in or out depending on market conditions and seasonal allocations. Long-term average allocations for the MIL district are approximately 74% however during the 3-year period between 2003 to 2005, average water allocations were only 32%. Over this period dairy operations used on average 72% of their allocations (i.e. they traded in over double the volume they had available to them via the allocation) and rice operations used on average 42% of their entitlement (i.e. they traded in an additional 1/3 of the volume they had available to them via the seasonal allocation).

Inflows to the major water storages over the past three years have been at record lows and water allocations have been severely affected. The Wakool district has experienced two consecutive years of 0% allocations (2007, 2008) and currently (as of 11th March 2009) water allocations for the 2008-09 season is at 9%. Irrigated agricultural production in the district has been extremely limited as a result.

3.4 Situation and trends

As described in section 3.3 of this report, the Wakool district has been exposed to record low water allocations which has impacted on the agricultural output from the region. In addition, as with other rural shires in Australia, the population base has been declining as farming businesses consolidate to achieve economies of scale in response to declining terms of trade.

The Wakool shire sits in the bottom third of all NSW inland shires when looking at the decline in employment in agriculture, forestry and fishing sector in the ten year period from 1991 to 2001. In addition as described in section 2.2 of this report, there has been a further 17.5 % decline in this sector from 2001 to 2006 which demonstrates that the shire is already experiencing the impacts to reduced water availability.

Long-term average water allocations for the Wakool district are 74% of entitlements however, in the last ten-year period the average allocation has been 42%. The loss of agricultural production due to the drought has been estimated at $30 million per annum or 16% of the total agricultural production. (Note: this does not include the impact of the last two consecutive years of 0% allocation).

It is considered that when seasonal conditions improve and water allocations increase then rice production will recommence and that agricultural output will recover. Comparing the permanent loss of water against the current agriculture output that has been drought affected will not provide the real impact of loss to the district if water access is permanently removed. Comparison needs to be made against a base case which is the potential output from the region under more average conditions.

4 Water Loss

4.1 Scenarios

Permanent water loss from the Wakool shire could occur under three different scenarios including:

- Sale of a complete section of the district – West Moulamein of a total of 50,000 ML (Australian Government buy back)
- Entire Wakool district - 341,000 ML (Australian Government buy back)
- Scattered sale of entitlement through out the district – 'swiss cheese' affect (Australian Government buy back plus private permanent trades out of the district).

The impact on the Wakool region will vary with the volume of water that may be lost, how that water will be lost (i.e. in parcels or scattered through out the region) and the speed in which the loss will occur. There will also be differing impacts with the different scenarios on:

- The individual farming businesses selling water;
- The remaining individual irrigated farming businesses;
- Other agribusiness in the region;
- Non agribusinesses in the region;
- The council and the services it provides; and
- The community as a whole.

If only part of the irrigation system is closed then remaining irrigators could still operate and trade water in or out depending on market conditions and seasonal allocations.

If the entire irrigation system is closed down then there will be no opportunity for any irrigation driven agriculture with the exception of small volumes used by river diverters and groundwater users.

If water loss is scattered throughout the irrigation area then remaining irrigators could continue to operate however there is a risk of increasing water prices as the cost burden to maintain the irrigation system will be borne on fewer entitlement holders.

Irrespective of how the water is lost, there will be regional impacts through the loss of agricultural production and flow on losses to the regional economy.

4.2 Climate change implications

It is acknowledged that the region has been impacted upon due to reduced water availability over the past decade. The long-term average allocation for the region is 74% of entitlement and no one can be certain what implications climate change will have on future water availability.

Modelling potential future water allocation impacts for a range of climate change scenarios has not been done in NSW. However, it has in Victoria as part of the Northern Region Sustainable Water Strategy and it is assumed that this modelling will be relevant for Wakool

as it is looking at the impact on the same water catchment area (i.e. the same storage that supplies Wakool).

Table 4-1 provides potential impacts on water allocations based on a range of different climate change scenarios over 50 years for the Murray River.

Table 4-1 Climate change impacts on water allocations compared to the long term average for the Murray River[1]

Climate change Scenario	Water availability scenario at 2055
Low Climate change	8%
Medium Climate change	-21%
High Climate change	-40%
Continuation of recent inflow (1997/98 - 2006/07	-43%

[1] Adapted from the Draft for Community Comment Sustainable Water Strategy Northern Region - October 2008.

Future climate change impacts on water allocations is uncertain. The modelling ranges from increases in water availability of 8% under a low climate change scenario to a decrease of 43% if we see a continuation of recent inflow patterns.

The issue facing the Wakool shire is that via the Australian Government buy back of water entitlements, the impacts of climate change become certain (i.e. a definite loss of water from the region) and most notably it happens very quickly. It is akin to imposing climate change onto a community “overnight”.

5 Impacts – Farm Level

5.1 Farm Size

The majority of the soils in the irrigation region would only be able to support broad acre grazing and reflect rangeland conditions that would result in the need for up to 10,000ha per family if they were self sufficient off the land.

Other farms to remain viable would need to be in the order of 3,500 ha where there is some off-farm income and/or some opportunity for cropping (that has the potential for increased income per ha compared to a grazing operation).

However, irrespective of the enterprise type the average land holding will need to increase to support viable dryland operations in the future compared to land holdings with irrigation.

Based on the shire rate notices and number of landholders from the MIL data, a landholder receives three shire rate notices on average. If this is applied to the existing dryland, the average landholding is only about 3,000ha. This means that many of the existing landholders are expected to already have off-farm income.

5.2 Sale of a complete section of the district – West Moulamein

A group of 13 irrigators are currently investigating the option of a complete sale of their water entitlements as part of the Australian Government water buy back scheme. The total volume of water entitlements is 50,000 ML and all 13 irrigators are located along the same section of the irrigation system. There are no down stream users to the 13 irrigators involved and if successful approximately 90 km of MIL channel system and associated infrastructure will be decommissioned.

The individual irrigators will receive a capital injection to their businesses to the value that they are able to negotiate through the permanent sale of their entitlements. The size of the businesses involved and their geographic location potentially means that they could continue to operate viable dryland enterprises in the future. Their agricultural output would be reduced without the access to irrigation water however as individuals they may be able to mitigate that impact by:

- increasing the land holding with some of the capital received through the sale of water;
- diversify income streams through off farm investment; or
- scale down the farming operation and move into semi retirement.

It is not known what the individuals would do if they were successful with their water sale but there will be a loss to region in the order of $11 million through reduced irrigated agricultural output (based on average allocation of 74% and an income potential of $300/ML).

Even though there will be irrigation infrastructure savings via the decommissioning of a section of the irrigation system, there could be a small increase in water charges to other users. There will still be the same level of irrigation infrastructure in place up to the point of the decommissioned area that will be need to be paid for by the remaining irrigators.

5.3 Complete closure of the Wakool irrigation district.

If there is a complete sale of the water entitlement holders in the Wakool irrigation district, then every farm business holding water entitlements will receive a capital injection into their business. However, unlike the West Moulamein group, many of the farms involved will be of insufficient size to operate viable dryland farm businesses in the future without the access to irrigation water (average farm size in the irrigation area is about 18,00ha).

Based on the assumption that a viable dry land farm operation will need to be in order of 3,500-10,000 ha, then the 240 farm families on 444,000 ha of irrigable land would drop by between approximately 50-80% or to between 45-120.

The loss of agricultural production from irrigation will be in the order of $76 million.

Individual farmers who sell entitlements will receive a significant capital injection that potentially will allow them to remain on their current land holdings and move into semi retirement. This will be determined by their own individual circumstances however, even if there is not the drop in farm numbers as described above, this will only be delaying the inevitable as the next generation will not be able to continue the farm business without the need to expand the operations.

5.4 Scattered sale of water entitlements

A scattered sale of water entitlements will not only impact on the level of agricultural production in the region but also raise the water costs to remaining irrigators as there are less people contributing to the cost of maintaining the irrigation infrastructure.

The financial pressure that many farmers are currently experiencing due to the impacts of the drought and the fact that the government is currently providing increased demand for the sale of entitlements, many farmers have or are considering selling their entitlements. The result is a 'swiss cheese' affect as different farm businesses scattered randomly throughout the district sell their entitlements.

The total impact will depend on the volume of entitlements that maybe sold from the district. Table 5-1 shows the level of impact based on three different levels of entitlement being permanently sold from the district (20%, 40% and 60%).

Table 5-1 Impact of a 'swiss cheese' effect (in the absence of termination fees)

Entitlement sold (%)	Volume of water (ML)	Loss of Agricultural Production ('000,000)	Loss of fixed irrigation charges ('000)	Increase fixed cost to remaining irrigators ($/ML)	Increase in fixed costs (%)
20%	68,297	$15	$625	$2	25%
40%	136,594	$30	$1,250	$6	67%
60%	204,890	$45	$1,875	$14	150%

Note: The increase in fixed cost to remaining irrigators is based on the absence of termination fees.

Termination fees have now been introduced to reduce 3rd party impacts when individual irrigators sell their water entitlements. However, there is still a risk to remaining irrigators of increased prices if termination fees are not set at the appropriate level.

5.5 Summary of farm level impacts

The alternative impacts described can be summarised as shown in Table 5-2.

Table 5-2 Alternative farm impacts

Water sold from the district	Water sold (GL)	Proportion of district water sold (%)	Value of agricultural output lost ($M)	Potential reduction in farm numbers
Scattered scale	68	20	15	24-40
West Moulamein only	50	15	11	0-10 #
Total Wakool Irrigation District	340	100	75	120-195

due to the large farm size, the farm numbers might stay as they are but the number of families being supported by each farm would drop, or there might be some restructure to result in lost farm families.

6 Impacts – Regional Level

6.1 Overall Community

The Australian Government's water entitlement purchasing strategy to restore the balance in the Murray-Darling Basin will provide a significant injection of capital into farm businesses that decide and are successful in selling their entitlements. The individual farm businesses can then decide how to best use that capital to secure their future. However, the buy back does not take into consideration the flow on effects that reduced agricultural output will have on a region.

Those flow on effects include:

- higher irrigation costs for remaining irrigators (as described in section 5.2.3);
- reduced turnover for other supporting agribusinesses (i.e. rural produce stores, farm machinery suppliers etc.);
- lower regional economic activity impacts on other non agribusinesses;
- drop in regional employment;
- population decline;
- demographic change in the population base;
- decline in services provided by public and private sectors; and
- viability of local government.

6.2 Local Government

A significant and obvious impact on the shire will be the initial impact that loss of irrigation water will have on the distribution of rate revenue. Currently 61% or just under $2 million of the shire's rate base comes from irrigable land. Table 6-1 shows the impact to the rate base as irrigable land is re-valued as dryland for the water loss scenarios described in section 4.1.

Table 6-1 Impact on rate revenue due to water loss

Water loss Scenario (ML)	Loss of Irrigable land (ha) [1]	Unmitigated loss of Rate Revenue [2]	Unmitigated loss of rate revenue (%) [2]
50,000 (West Moulamein)	65,000	$175,125	5%
341,484 (Entire Irrigation District)	443,926	$1,196,049	37%
68,000 (20% loss - Scattered)	88,399	$238,170	7%
137,000 (40% loss- Scattered)	178,099	$479,843	15%
205,000 (60% loss - Scattered)	266,498	$718,013	22%

[1] Irrigable land loss is based on a ratio of ML of entitlement to land area of 0.8 ML /ha. This is based on the shire irrigable land area of 443,926 ha and a total ML of entitlement of 341,484 ML.

[2] This rate gap would be redistributed to the other ratepayers to some extent if services were to remain as they are.

The decline in shire rate revenue ranges from $175,000 if the West Moulamein water is lost to $1,200,000 if the entire irrigation district goes.

The shire has 5 main options to respond to a revenue decline;

i. Redistribute rates to maintain services;

ii. Reduce services in response to 'lost' rates;

iii. Increase charges on services provided;

iv. Consider shire restructure; and

v. Seek government support to mitigate the impact of reduced income.

The different scenarios have varying results and the magnitude of the impact will influence the options available to the shire. For example, if water loss was only from the West Moulamein group then it could be possible for the shire to respond by redistributing the shift in rate revenue by increasing rates by 6% to cover the loss and maintain the status quo.

However, it would need to increase rates by 58% to cover the revenue shift if the entire district is lost which may be beyond the capacity of the remaining ratepayers to pay. Under this scenario the shire would need to implement a range of options to maintain the status quo in terms of services it provides to the community.

Under the worst case scenario of losing the entire irrigation district it is unlikely that the shire would be able to continue to provide its current services to the community without government support. It is already a small municipality and that any further cuts to services and its revenue base would potentially render the shire unviable.

6.3 Broader Regional Impacts

The decline in agricultural output that will occur when irrigation water is permanently lost from the district will have flow on effects to the local economy. Assuming an economic multiplier[1] of three means that there would be a potential loss in the order of $225 million to the regional economy if the entire irrigation district were to go. This impact would unlikely to all be in the Wakool Shire as much of it relates to the rice processing and value adding outside of the shire.

The decline in the local economy will have a range of effects including:

- Loss of employment opportunities;
- Change in the population base;
- Decline in house prices due to:
  - Decreased demand as working age people leave the district to find employment;
  - Retiring farmers move to regional centres which have the services; and
  - Increased availability as ageing population die or move into aged care facilities.
- Reduced services able to be offered by both the private and public sector.

[1] ABARE uses a multiplier of 2.5 for dairy but the rice industry (dominant use of water) uses three as quoted by the Riverina Regional Development Board in its submission to the NSW Government inquiry into the Murrumbidgee College of Agriculture (June 2004)

There will be a loss of working age people and their families as they are forced to leave to find employment elsewhere, but lower house prices can attract new people to the region. Therefore the decline in population may not be as pronounced as it could be expected but the result can be a more welfare dependant population base as the new people attracted to the increased house affordability will come from a lower socio economic base.

This has been demonstrated in other areas experiencing rural decline with the Mallee in Victoria a good example. The 2001-06 census data showed of the influx of 30 to 50 year olds (working age) coming into the region, 60% of those were not in the workforce and reliant on welfare. Many were on disability pensions which results in a shift in the demand for support services from the city to the rural areas. This would have longer-term consequences requiring longer-term support mechanisms for rural areas to adjust to the changing circumstances (Ban 2009).

A changing demographic can also present issues around integration between new and old residents with different backgrounds and expectations. This in turn puts pressure on social and sporting clubs that are important to small regional communities.

The impacts of a decline in essential services such as health will also be magnified not only by the increased demand (ageing population and a more dependent based community) but the affordability and accessibility of the services for those who need it. The need to travel the 100 to 200kms to get to a doctor is not only a practical consideration (i.e. do they have access to transport?) but also there is a question of being able to afford to be able to travel that distance.

Access to education is also important and there will be increased pressure on the ability to maintain the number and types of schools in the district. A good early indicator can be the number of enrolments in preschool and the number of preschools available. The ability to attract families to the region if there are limitations to the preschool services will be compromised.

Preschools are also reliant on strong local parent committees. The local leadership that is required to ensure such services are provided is often lacking in poorer communities.

6.4 Summary

The level of impact is linked to the volume of water that may be removed from the region. Farm businesses that sell the water receive an injection of funds to help adjust to the changed circumstances. However, the flow-on impacts of a significant drop in the rural economy due to the loss of water will be pronounced but there is no adjustment support for those remaining in the region.

It is estimated that for every 1000 ML of water that is lost from the region will result in:

- $300,000 loss of agricultural production within the shire;
- up to $900,000 loss from the regional economy;
- $3,500 in direct rate revenue loss;
- Loss of approximately one agricultural job; and
- Loss of approximately one regional job.

A change in socio-economic base of the shire could also result as more welfare dependant families move to fill affordable housing.

It is more difficult to quantify the flow on impacts on services delivered by the shire but that will be a function of both the reduced rate revenue and the volume of water that is lost.

Note: Approximately 1/3 of total shire revenue comes from government grants to provide the services available. If this is linked to shire rate revenue then there will be an even greater impact on shire income than described above, if the rate 'loss' is not recovered through a redistribution of revenue from other remaining ratepayers.

7 Rationale for Government Support for Adaptation

7.1 Reality Check

The rationale for the government support for adaptation is not based on the loss of water from the region, but the rate of change that is being driven by government policy through the buy back of water entitlements to restore the balance in the Murray-Darling Basin.

It is acknowledged that the Australian Government is committed to the policy of purchasing water entitlements to restore the balance in the Murray-Darling Basin. The current financial pressure on all farms due to a long and extended drought will mean that many farm businesses will see an opportunity with the government buy back to sell some or all of their water entitlements. Farming businesses cannot be prevented from taking this opportunity and already water has left the district (market driven) and more will go due to the financial strain currently experienced by farming businesses.

The current government policy is driving a rate of adjustment that will prove difficult for the region to handle. Communities do adapt to change but under normal circumstances that adaptation occurs over an extended period of time. The Wakool shire is potentially facing a significant change over one or two years that would normally occur over a much longer time frame. This speed is driven by government policy that will compromise the ability of the region to adapt to the changes and that support will be required.

7.2 Principles for Support

The region requires support to assist in the structural adjustment that will occur with water permanently leaving the district. It is considered that the following principles be applied:

- The shire is provided with the additional funds equal to the loss in rate revenue that will be experienced with the loss of water;
  - The additional funds to be provided for a number of years (say 3-5) so that services can continue to be provided to the community and provides time for the shire to look at alternative ways to provide services to the community and/or have a more gradual shift of the rate burden across the shire.
- The benefits of any sub system shut down be distributed to:
  - The individual selling water;
  - Remaining irrigators;
  - Shire;
  - Murray Irrigation Limited
- The loss from the regional economy due to the loss of water from the district is the basic argument for support to non-farming businesses. Support provided should be equivalent to support farmers have received through exceptional circumstances (e.g. interest rate subsidies, income support, business planning and advice grants, exit grants).

8 Options for Mitigation

8.1 A package of options

To respond to a significant change in the agriculture sector that is the main driver of the economy in the region there will need to be a range of strategies developed to allow for the region and the community to adjust to the changes that are being imposed upon it. The options need to:

- Facilitate adaptation;
- Support services to the community;
- Promote alternative enterprises (higher value agriculture or industry to replace some of the dollars currently generated by irrigation water).

8.2 Facilitate adaptation

8.2.1 Options to be considered

As previously mentioned, the government buy back of water entitlements provides no support to other businesses and the community to the flow on impacts to the region as a result of a decline in the agricultural output.

A range of adaptation support needs to be considered with some examples provided in Table 8-1.

Table 8-1 Adaptation Support

Support Strategy	Description
Redevelopment	▪ Modify farming system to operate without irrigation.
Exit Grants / Support for continuing businesses	▪ Development of exit grants appropriate for the Wakool region for both agricultural and non-agricultural businesses. A precedent has been set with exit grants for small irrigators of $150,000 and this should be considered for businesses within the shire impacted upon due to the loss of agricultural production via the Australian Government water buy back. ▪ Support provided to non-agricultural businesses that do not wish to exit similar to what farmers have been provided through exceptional circumstances (interest rate subsidy, income support, professional planning and advice grant).
Incentives for selective sale of water (targeted buy back or sub system shut down)[1]	▪ A subsystem shut down will have advantages compared to a 'swiss cheese' effect ▪ A sub system shut down provides an improved outcome via: – More efficient process for the Australian Government to aquire water (large volumes in one deal) – Reduced likelihood of stranded assets – Water savings through reduced delivery system losses – Less irrigation infrastructure to be maintained or improved ▪ The benefits achieved through a sub-system shut down should be directed to: – The individual; – The Shire; – Remaining irrigators; and – Murray Irrigation Limited.

Support Strategy	Description
Shire Restructure	▪ If the loss of water makes the Wakool shire unviable then support needs to be provided to assist with shire restructure ▪ Rate Revenue lost as a direct impact of the loss of water should be provided to the shire to allow it to adjust the rate burden gradually over time. Existing services can be maintained and will give time for the shire to adjust.

[1] Benefits of subsystem or full system shut down and options to assist the region to adapt are further explained in section 8.2.2

As the shire adjusts to the new operating environment monitoring key trends will be important to understand what is happening and help identify the support that will be required and how the shire needs to adapt. Key indicators that will be useful will include:

- gross value of agricultural production;
- population changes;
- housing affordability;
- number of people on welfare support;
- average distance to health services;
- number of enrolments in preschools; and
- number of social/sporting clubs.

8.2.2 Sub-system or full system shut down

If there is a sub-system shut down (as would be the case if the West Moulamein group were successful with their sale) or there is a complete system closure then there are additional benefits to the government compared with buying water entitlements at random across the region (the 'swiss cheese' affect).

The benefits include:

- lower transaction costs due to sale of large parcels of water as opposed to many smaller purchases from individuals;
- reduced likely hood of stranded assets and increased costs to remaining irrigators;
- water savings via the reduction in delivery system losses; and
- decreased need for infrastructure upgrade or on farm investment to achieve improved water use.

The biggest component of the Australian Government's *Water for the Future* plan is the $5.8 billion to be directed at improving the efficiency and productivity of irrigation use and management in order to assist irrigation communities to adjust to a future with less water (Water for the Future, A sustainable future for the Murray-Darling Basin, Department of the Environment, Water, Heritage and the Arts, March 2009). This is investment that the Australian Government will not need to make in areas that are decommissioned. It is argued therefore that the share of this investment that would have been spent as part of the $5.8 billion should be provided back to the region to enable the community to "adjust to a future with NO water".

The $5.8 billion equates to an investment of approximately $500/ML across the Murray Darling Basin (based on the long term diversion cap of 11, 431 GL sourced from The Living Murray A discussion paper on restoring the health of the River Murray July 2002 MDBC). With a sub-system shut down or a complete closure of an irrigation system the government will get additional water savings via reduction in delivery system losses as well as the water that is purchased.

The government will get the water and will no longer need to invest in infrastructure improvements or on farm efficiencies which is part of the *Water for the Future* plan in areas that are closed down. Based on the $500/ML investment, this would mean:

- $25 million saving if the West Moulamein group were to go;
- or $170 million saving if the entire Wakool district was to close down.

These savings do not include the transaction savings that would also be achieved if the government is able to acquire large volumes of water through one deal.

It is proposed that a proportion of the benefits that will be achieve through sub system or entire system shut down be distributed to those who will be impacted due to the loss of irrigation in the region. Those impacted include:

- the individual irrigators on the systems that are closed down;
- the individual irrigators who remain on system that remains operating;
- Murray Irrigation Limited; and
- The Shire.

8.3 Support for Services to the Community

The shire will not be able to afford the level of community services currently delivered to the community if large volumes of water entitlements are removed from the region. To retain services or provide access to services there needs to be support provided. This can be in the form of subsidies for a smaller demand for a service and/or to provide support to individuals due to the greater cost to access services.

There are numerous examples of how other communities faced with similar challenges are responding to these issues that need further investigation. This will provide ideas on different ways to support the continuing needs of the community.

Consideration needs to be made to the potential change of the population base that will have longer-term consequences and require more long-term support strategies (the increasing level of welfare dependency in the community).

8.4 Alternative Enterprises

There are no silver bullet alternative enterprises that will totally negate the impact of the loss of agricultural production via the loss of irrigation water from the district. However there are a number of options that can be encouraged to help reduce the impact and benefit the region. These strategies are summarized in Table 8-2.

Table 8-2 Alternative enterprises

Alternative Enterprises	Description
Agricultural Based	Investigate the potential for higher value agriculture based on a higher security water – utilising the current irrigation infrastructure; Look at alternative supply for productive use – i.e. pipeline from river systems to high value use; Incentives for individual redevelopment that will increase agricultural output with reduced water; Intensive animal industries: Feedlots; Piggeries; Poultry. MIL infrastructure
Other Industries	Infrastructure grants – address blockages that will facilitate investment. Other industries suited to the region – e.g. solar Development of the river townships of Barham and Murray Downs to attract new residents.

9 Strategies to engage the Australian Government

In order to effectively engage with the Australian Government the Shire need to develop sound arguments to why there needs to be support provided and that there needs to be a number of options put forward.

Acknowledge the need for environmental flows

The Shire needs to acknowledge that restoring the balance in the MDB is required, climate change could reduce water availability and that water will move from lower to higher value users. It can therefore be reasonably argued that water will be lost from the region irrespective of what the government does. However, the key argument is not so much about the loss of water from the region but more about the speed to which this will happen directly as a result of the federal government proposal to buy back water for the environment.

Why should the federal government be involved locally?

Large volumes of water moving out of a district in a very short period of time does not provide the community time to adjust to the changed operating environment. The main issue is that the speed of change is too great to adjust to locally and more time is needed to adapt to the inevitable changes. The arguments put forward in this document demonstrate this and as already highlighted it is akin to “climate change overnight”.

Emphasis needs to be on support for adaptation rather than compensation.

There will be positive environmental benefits for the Murray River as a result of the government water buyback however there will also be negative impacts on the communities in irrigation areas.

Government provides incentives to increase uptake of options that are considered in the public good (e.g. speed up change through land and water management grants). This means there are also grounds for the government to provide support when policy decisions result in rapid changes that adversely impacts on the community. Providing resources to adapt is consistent with incentives to speed up change due to policy decisions.

The level of impact and scale of support sought need to be realistic and not inflated. Support packages consistent with the quantum of packages that the government has agreed to in the past will potentially have a higher chance of success.

What is in it for the federal government?

There could be a position of a win:win through the benefits that can be achieved with part of or an entire system shut down. The government could redirect some funds saved through not spending on farm improvements for irrigation efficiency and partitioning a part or an entire system shut down into different support packages. The region will benefit from that investment and the government will potentially acquire more water for environmental needs.

What would a package be used for?

The managed package would develop a suite of programs (see Section 8) that could include support for a range of adaptations for groups including:

- the individual irrigators on the systems that are closed down;
- the individual irrigators who remain on system that remains operating;
- Murray Irrigation Limited;
- the Shire; and
- non-farming businesses.

Recommendation

It is recommended that the shire propose to the government a managed package of investment for the area that includes funds for:

- buy back of water for the environment;
- improvement in system efficiency and productivity; and
- the community to adjust to the rapid change induced by the targeted buy-back of water.

This package could take the form of a negotiation for:

- part of the shire;
- the whole shire (effectively the whole of the Wakool Irrigation District); or
- the whole of MIL.

Part of the package deal would be a sum of dollars to come to the shire/region in return for an agreed quantum of water. Without this agreement the community is unlikely to come on board.

Clearly there are significant implications of going down these different routes in terms of scale, consultation, time to gain agreement and total dollars.