Senate Inquiry Submission

Management of the Murray-Darling Basin

December, 2010

This submission addresses the concerns that the Wentworth Shire Council has about the implications for agriculture and food production and the social and economic impacts that are likely to occur as a consequence of the introduction of the water diversions as proposed under the guide to the Murray Darling Basin plan.

FOREWORD

The purpose of this submission is to provide the Senate Standing Committee on Rural Affairs and Transport with information that addresses several of the specific items being considered within the terms of reference for the management of the Murray-Darling Basin, and the development and implementation of the Basin Plan. This submission will focus on the concerns of the Wentworth Shire Council in relation to:

(a) the implications for agriculture and food production and the environment;

(b) the social and economic impacts of changes proposed in the Basin;

(c) the impact on sustainable productivity and on the viability of the Basin;

(d) the opportunities for a national reconfiguration of rural and regional Australia and its agricultural resources against the background of the Basin Plan and the science of the future;

(e) the extent to which options for more efficient water use can be found and the implications of more efficient water use, mining and gas extraction on the aquifer and its contribution to run off and water flow;

(f) the opportunities for producing more food by using less water with smarter farming and plant technology;

(g) the national implications of foreign ownership, including:
(i) corporate and sovereign takeover of agriculture land and water, and
(ii) water speculators;

(h) other related matter, namely the need for upgrading community infrastructure.

EXECUTIVE SUMMARY

There has been considerable speculation about the volume of water required to restore the health of the Murray Darling Basin, and the release of the guide to the proposed Basin Plan finally provides an indication as to the extent of the proposed sustainable diversion limits.

Just as the Murray Darling Basin Authority was tasked with the responsibility to determine the amount of water needed for the environment, the Wentworth Shire Council is tasked with the responsibility to ensure that it can withstand the many challenges that will arise as a consequence of the proposed water reductions.

The key findings from our research into this matter have concluded that Wentworth Shire Council has:

- A slowly ageing population, that is currently stable, but projected to decrease over time.
- Changing household composition, which may result in the existing housing stock becoming unsuitable for the more aged or aging households.
- Relatively high rates of in-migration, but with this largely offset by migration out of the local government area (LGA).
- Lower levels of education compared with the regional New South Wales state average, suggesting challenges in shifting the LGA to higher skilled forms of employment.
- Higher (although generally declining) levels of crime compared with the state average, suggesting social disadvantage in some areas of the community.
- Lower levels of community volunteering than the other cluster group LGAs, with implications for emergency service provision, organised sports and community and social support services and infrastructure.
- Low levels of reported trust in State and Australian governments and politicians, due to perceived communication failures, conflicting goals and lack of understanding of local issues.
- Strongly resilient communities, despite high profile businesses failures and the hardship experienced by those directly or indirectly dependent on the agriculture.
- High economic reliance on agriculture and related food and beverage production and support services.
- An agricultural economy that is almost entirely dependent on production from irrigated perennial horticultural crops. About 80% of the gross value of production is generated by 0.5% of the LGA.
- Considerable uncertainty as to the social and economic impact of the forthcoming Murray-Darling Basin Plan (MDBP).

- A shrinking labour force, reflecting heavy reliance on agriculture and the impact of drought, reduced water allocations and low commodity prices (especially for wine grapes).

- High levels of reported excessive working hours among farming families.

- Dryland farmers with unsustainably low incomes.

- Relatively high levels of socio-economic disadvantage exacerbated by high debt levels resulting from drought and poor commodity prices.

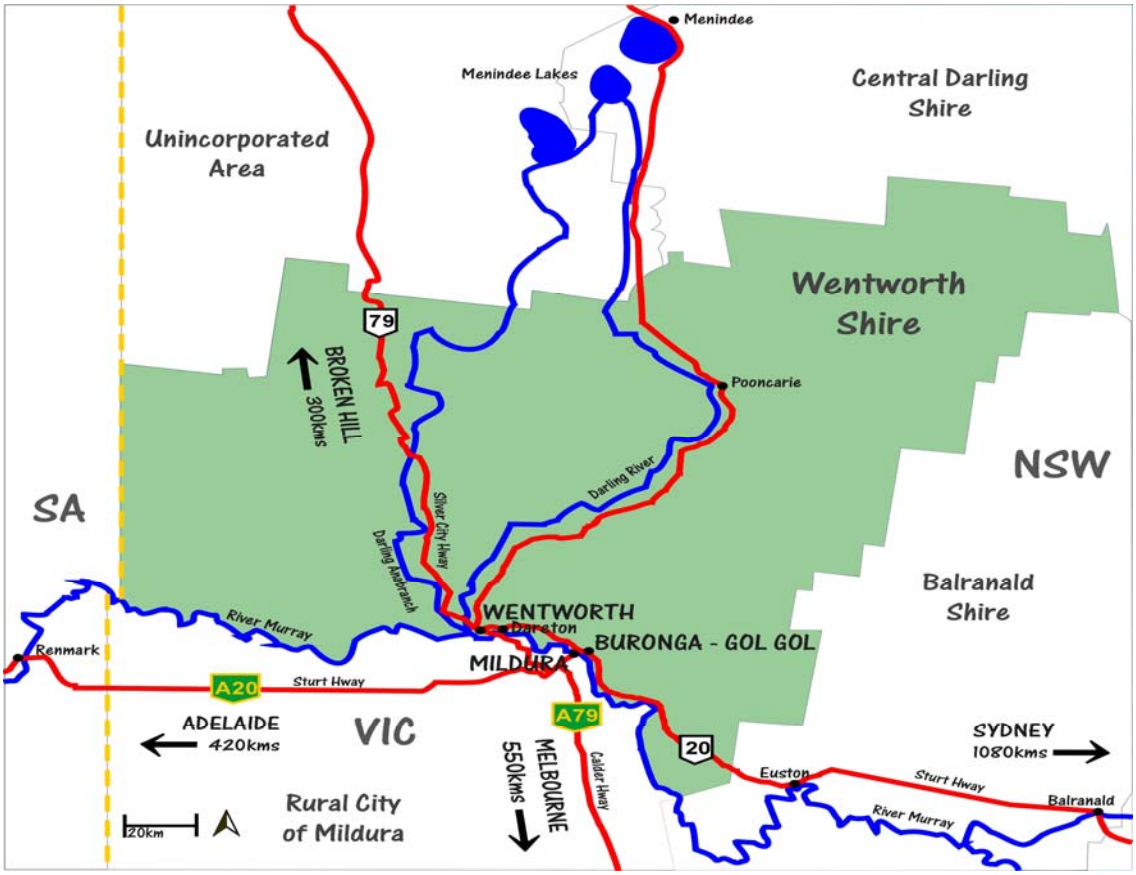
These characteristics mean that the Wentworth Shire will face significant challenges in 'adapting to a future with (even) less water', including:

- Diversifying its economy including building on its strengths in agriculture, food processing and related services and tourism.
- Responding to changes in water policy, particularly those outlined in the guide to the proposed Basin Plan which, if implemented, will see reductions in the range of 26% to 35%.
- Maintaining and developing further the infrastructure to maintain the competitiveness of the Shire's agriculture and support diversification into areas in which it has comparative advantages and growth prospects (e.g. tourism, renewable energy and mineral sands extraction).
- Maintaining access to services that support the Shire's population, including high quality health, education, cultural and recreational services. These services are to some extent dependent on population, but also are critical liveability infrastructure that attracts and retains residents.
- Developing the Shire's workforce to meet the changing requirements of industry.

Contents

1. THE IMPORTANCE OF IRRIGATION TO OUR COMMUNITY

The Wentworth Shire Council area is one of the largest in NSW, covering an area of 26,000 km², which is approximately 3% of the state. Our Shire is sparsely populated with less than 4 persons per km², and is classified as semi-desert, with an annual rainfall of between 10 and 11 inches. However, our shire is an area that has been totally transformed by irrigation. In fact the Government established the first NSW Irrigation scheme in Curlwaa back in 1888, and it is irrigation that drives our economic prosperity with 80% of the gross value of output being generated from just 5% of agricultural land.



1.1.Shire Land Use

While irrigation is confined to just 0.5% of the Shire's area, it contributes 70-80% of the gross value of production. Irrigated land uses are concentrated in the south of the Shire, along the Murray Darling River corridors.

Whilst the vast majority of land use within the Shire area is classified as rangelands grazing areas, with some scattered areas of dryland cropping, irrigated agriculture that is confined to a limited area is what produces the vast majority of the Shires economic wealth.

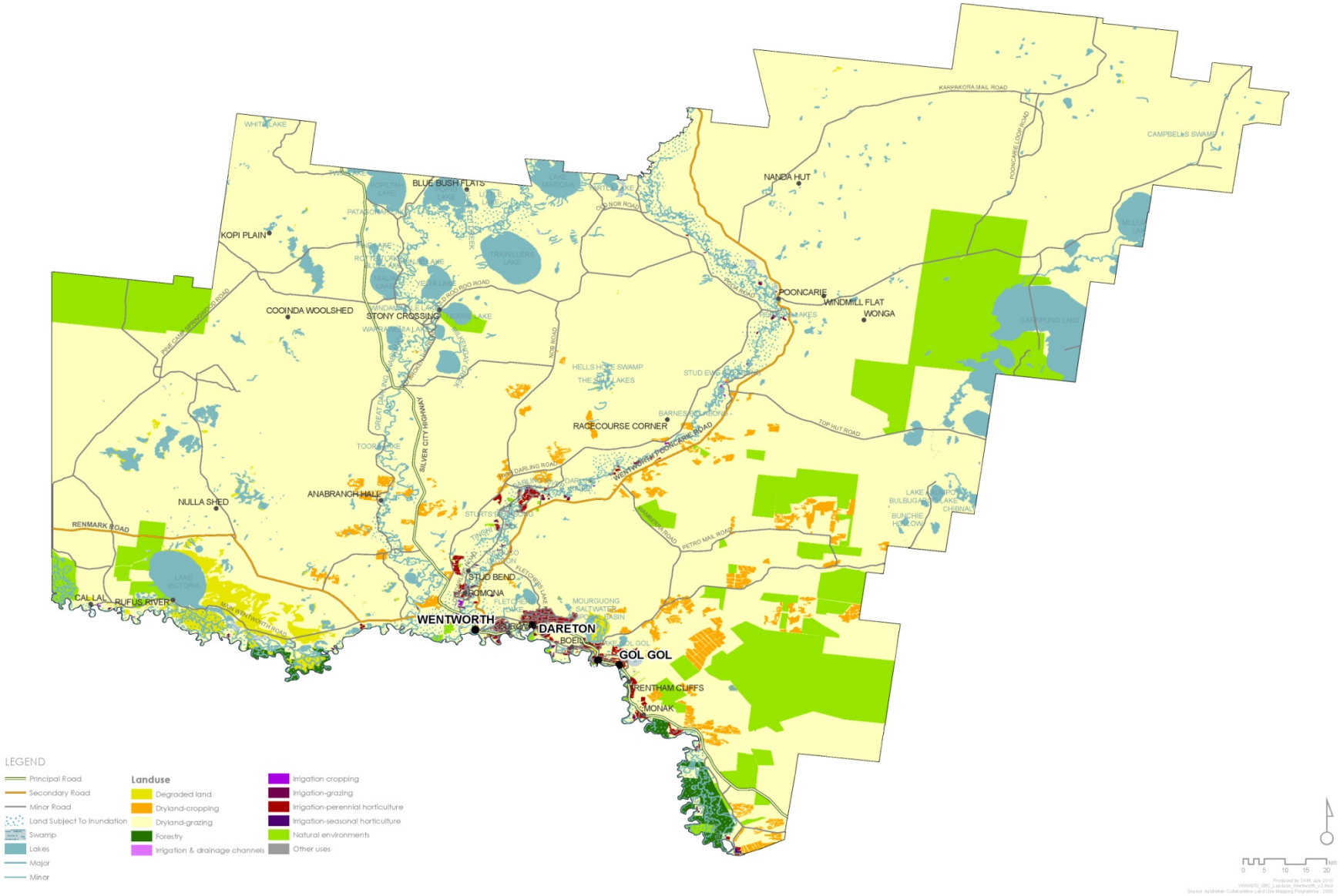


Figure 1 Wentworth Shire land use
Source: Derived from NSW Government data

2. IMPLICATIONS FOR AGRICULTURE AND FOOD PRODUCTION

2.1.Scale and Value of agricultural production

Despite the very limited geographic extent of irrigation in the Wentworth Shire, it is the major driver of the agricultural economy. Irrigated agriculture accounted for about 80% of the gross value of agricultural production in Wentworth Shire in 2005-06. While irrigation allocations have declined in recent years, irrigation remains critical to the farming industry.

2.1.1. Agricultural production

Wentworth Shire has a diverse and productive agricultural economy. Production of various types of commodities for 2000-01 and 2005-06 (based on the Australian Bureau of Statistic's [ABS] agricultural census) is given in table 1. The Shire is one of the main citrus, grape and nut producing areas in New South Wales and accounts for about 18%, 23% and 5% of the state's production, respectively. While the Shire has a very large area of grazing land, it accounts for only about 1% of the livestock raised in the State.

Table 1: Agricultural production in 2000-01 and 2005-06 in Wentworth Shire expressed in tonnes of output or numbers of livestock.

	2000-01	% NSW	2005-06	% NSW	Change
Crops (t)					
Cereals	115,912	0.9%	78,301	0.6%	-37,611
Oilseeds	1,463	0.2%	9	0.0%	-1,454
Legumes	177	0.1%	215	0.1%	38
Hay	15,854	1.4%	4,972	0.3%	-10,882
Vegetables (t)	3,950	0.7%	4,431	0.9%	481
Fruit (t)					
Citrus	49,953	18.0%	48,867	18.5%	-1,086
Grapes	81,906	23.5%	116,906	22.9%	35,000
Stone fruit	544	1.5%	50	0.1%	-494
Nuts	12	4.3%	50	7.2%	37
Livestock (#)					
Sheep	422,274	1.0%	338,992	1.1%	-83,282
Cattle	11,474	0.2%	7,926	0.1%	-3,548

Source: Based on ABS Agricultural Census data

2.1.2. Value of production

Fruit production, particularly citrus and grapes, are the most valuable forms of production in the Shire. Total value of fruit production in 2005-06 exceeded $100 million and accounted for about 13% of the NSW total. The Shire accounted for about one quarter of the total value of production of citrus and grapes in NSW. Its contribution in most other categories reported was less than 1%.

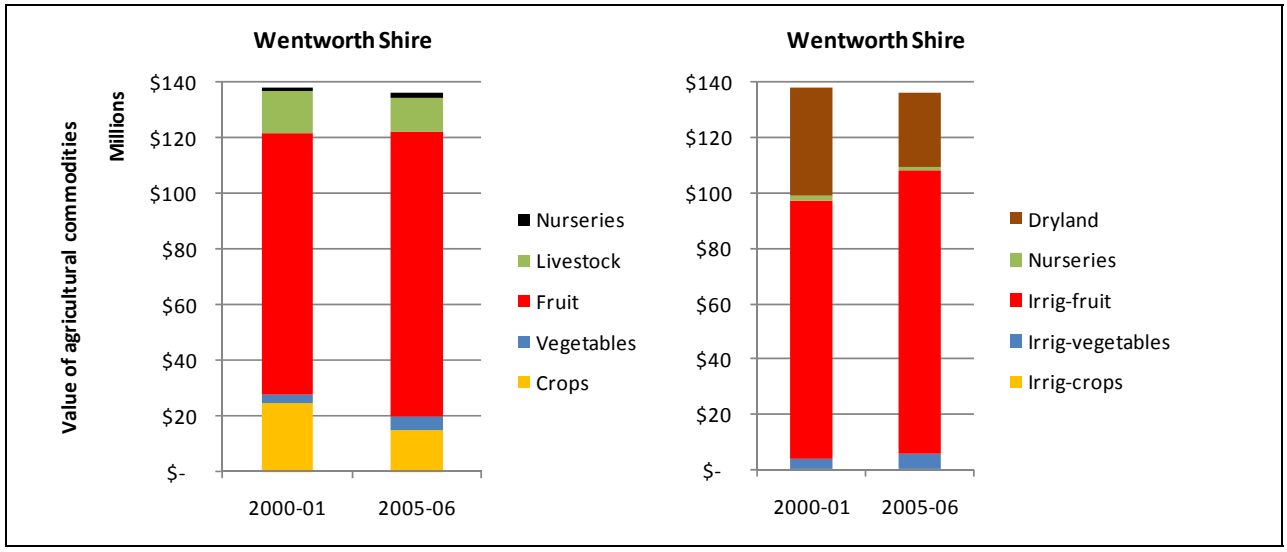
Table 2 Gross value of agricultural production in 2000-01 and 2005-06 in Wentworth Shire.

	2000-01	% NSW	2005-06	% NSW	Change
Crops	$24,551,293	0.7%	$14,711,775	0.4%	-$9,839,518
Cereals	$22,020,457	1.0%	$13,644,970	0.6%	-$8,375,487
Oilseeds	$454,225	0.2%	$3,156	0.0%	-$451,069
Legumes	$81,860	0.1%	$79,287	0.1%	-$2,573
Hay	$1,902,989	1.3%	$984,362	0.3%	-$918,627
Vegetables	$3,396,801	1.2%	$5,351,696	1.5%	$1,954,895
Fruit	$93,560,159	14.5%	$102,331,216	12.9%	$8,771,057
Citrus	$28,832,725	22.4%	$34,281,941	25.1%	$5,449,216
Grapes	$62,690,333	24.7%	$66,415,612	24.2%	$3,725,279
Stone fruit	$1,321,098	1.6%	$123,775	0.1%	-$1,197,323
Nuts	$54,740	0.1%	$455,566	0.5%	$400,826
Livestock	$15,075,369	0.4%	$11,974,319	0.3%	-$3,101,050
Sheep-meat	$2,302,075	0.7%	$3,234,716	0.7%	$932,641
Sheep-wool	$10,424,967	1.0%	$7,617,708	1.1%	-$2,807,259
Cattle	$1,992,940	0.1%	$1,094,388	0.1%	-$898,552
Nurseries	$1,516,857	0.9%	$1,592,662	0.5%	$75,805
Total	**$138,100,479**		**$135,961,668**		**-$2,138,811**

Source: Based on ABS Agricultural census data.

Figure 2 highlights the value of irrigation to Wentworth Shire. Over 70% of the value of production in 2000-01 and over 80% in 2005-06 can be attributed to irrigation. All of this was from just 12,300 of the Shire's 2.3 million ha of agricultural land (or just 0.5% of the Shire).The majority of irrigation production was from fruit (grapes and citrus).

Figure 2 Value of agricultural production by major categories of commodity and breakdown between irrigated and dryland land uses



Source: Based on ABS Agricultural census data.
Irrigation taken to include all forms of fruit and vegetable production, nursery production and production of summer crops.

3. THE SOCIAL AND ECONOMIC IMPACTS

3.1 A decade of experience to learn from

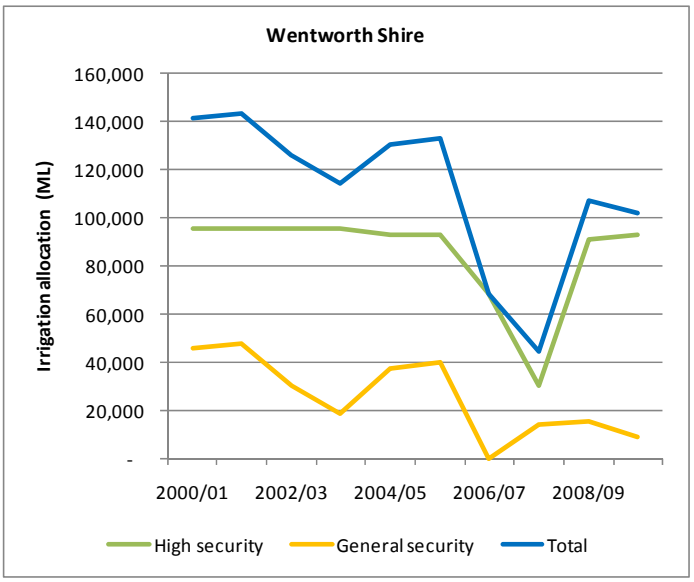
In order to predict the long term impacts of the proposed sustainable diversion limits, the experience of how the Wentworth community has responded to the last decade of change might produce some valuable learning. The prolonged drought, reduced water allocations, environmental water purchased and falling commodity prices have all impacted greatly on the Wentworth Shire. Yet despite irrigation allocations declining in recent years, irrigation remains critical to the farming community, and continues to be the main economic driver within the Shire.

3.1.1 Irrigation entitlement

Irrigation entitlement currently held in the Wentworth Shire equates to over 143 GL (estimated from data obtained from NSW Office of Water), comprising about 96 GL of high security water and about 47 GL of general security water. Entitlement is sourced from the Darling (~37 GL in total, mostly low security) and Murray River (~106 GL in total, mostly high security) systems. Figure 3 shows the annual volumetric allocations for both high and general security water for entitlements held by Wentworth Shire residents.

The volume of water available for irrigation declined steadily during the course of the current decade, particularly for general security water. Allocations of high and general security water from the Darling River have been more reliable than those from the Murray River (average 100% and 66%, compared with 88% and 40%, respectively). Notwithstanding this, the Murray is the major source of irrigation water for Wentworth Shire. Volumetric allocation in Wentworth Shire has declined from over 140 GL in 2000-01 to as little as 44 GL in 2007-08. Irrigation allocations in the two most recent years have recovered from their low points during the drought and amounted to over 100 GL in 2009-10. The agricultural census years of 2000-01 and 2005-06 were both years of relatively high water allocation, indicating that the census data does not show the impacts of recent experiences of low water allocations on the agricultural economy.

Figure 3 Estimated annual irrigation allocation in Wentworth Shire



Source: Derived from data provided by NSW Office of Water.

Note: High security water license were assumed to only be those where only high security water was listed in the licence. This may mean that the volume of high security water is underestimated. Data do not account for carry over or trade in allocation. It was assumed that current entitlements applied throughout the reporting period. For this reason, estimates of allocation early in the decade may be overestimates.

3.1.2 The effects of drought , water availability, water buy back and falling commodity prices

The intrinsic link between community as a whole and irrigation allocations cannot be underestimated. Our existence as a community was borne out of the Government establishing the first NSW irrigation scheme in Curlwaa back in 1888. Irrigation has enabled the total transformation of land, from desolate, barren and unforgiving land to a land that offers opportunity, hope and prosperity.

But the last decade of experience has impacted significantly on the community, and in order to understand the impacts of drought, water availability, water trade and falling commodity prices, the Wentworth Shire Council commissioned a study into the socio economic status of its shire. The results of our socio and economic study[i] found that the Wentworth Shire has:

- A slowly aging population, that is currently stable, but projected to decrease over time.
- Changing household composition, which may result in the existing housing stock becoming unsuitable for the more aged or aging households.
- Relatively high rates of in-migration, but with this largely offset by migration out of the local government area (LGA).
- Lower levels of education compared with the regional New South Wales state average, suggesting challenges in shifting the LGA to higher skilled forms of employment.
- Higher (although generally declining) levels of crime compared with the state average, suggesting social disadvantage in some areas of the community.
- Lower levels of community volunteering than the other cluster group LGAs, with implications for emergency service provision, organised sports and community and social support services and infrastructure.
- Low levels of reported trust in State and Australian governments and politicians, due to perceived communication failures, conflicting goals and lack of understanding of local issues.
- Strongly resilient communities, despite high profile businesses failures and the hardship experienced by those directly or indirectly dependent on the agriculture.
- High economic reliance on agriculture and related food and beverage production and support services.
- An agricultural economy that is almost entirely dependent on production from irrigated perennial horticultural crops. About 80% of the gross value of production is generated by 0.5% of the LGA.
- Considerable uncertainty as to the social and economic impact of the forthcoming Murray-Darling Basin Plan (MDBP).

- A shrinking labour force, reflecting heavy reliance on agriculture and the impact of drought, reduced water allocations and low commodity prices (especially for wine grapes).
- High levels of reported excessive working hours among farming families.
- Dryland farmers with unsustainably low incomes.
- Relatively high levels of socio-economic disadvantage exacerbated by high debt levels resulting from drought and poor commodity prices.

The research conducted by SKM concluded that these characteristics mean that the Wentworth Shire will face significant challenges in adapting to a future with (even) less water.

3.1.3 Community profile – Vulnerability and adaptive capacity

The Department of Planning has released future population projections for LGAs throughout NSW (Table 3). Population in Wentworth LGA is projected to fall to about 6,700 persons by 2031, whereas the total NSW population is projected to grow by 33% over the same period.

Table 3 Current and projected future population for Wentworth, Shire

	2006	2011	2016	2021	2026	2031
Wentworth	7,100	7,100	7,000	6,900	6,800	6,700

Source: Department of Planning (NSW) 2010

The Draft Murray Regional Strategy makes the point that primary production, being agriculture, forestry and mining is a key driver of rural and regional economies, however economic growth in these industries in not necessarily reflected in sustained population increases. The creation of jobs in retail, business and financial services, tourism and hospitality and health and community services is much more likely to lead to population growth[ii].

The resilience (capacity to recover from shocks) of communities to changes in climate and water availability has been assessed using indicators of community well-being[iii]. Table 4, as compiled by the RM Consulting Group (RMCG), demonstrates the adaptive capacity of the Wentworth, Balranald and Hay Shire Councils.

The economy of the Wentworth Shire is almost totally dependent on agriculture, which is also the biggest source of employment in the municipality, with irrigated agriculture being particularly important in Wentworth. Climate change and reduced water availability therefore pose significant risks to the economy of the Wentworth Shire.

RMCG concluded that the risks posed by climate change and water availability for the Wentworth Shire include:

- Reduced on-farm productivity and yields
- reduced competitiveness with international markets due to rises in on-farm costs
- increased incidence of damage to and/or loss of crops from extremes in temperature (heat and frost)
- economic decline due to the dependence of the local economy on agriculture
- reduced potential to attract new industries

Table 4: Assessment of resilience against key indicators			
Key Indicators	**Shire**	**Likely to be resilient**	**Adaptive Capacity**
Remoteness	Balranald Hay Wentworth	X X X	Wentworth, Balranald and Hay Shires all contain populations located within areas classified by the ABS as 'Outer Regional Australia' and 'Remote Australia'. The populations within these Shires are considered more remote than the majority of the Murray Darling Basin (MDB) population, which resides in 'Inner Regional' areas.
Degree of Urbanisation *Population Size*		50,000 people are considered a critical mass at which the community becomes self-sustaining. None of the Shires has a town centre with a population approaching this level.	
	Balranald	X	The Balranald Shire with an estimated population size of 2,770 persons in 2006, has declined by 7.3% since 2001. This decline is projected to continue to the year 2036 resulting in a net loss of 500 people by this time.
	Hay	X	As of the 2006 census, the population of Hay Shire was 3,574 persons. Population decline in the Hay Shire has accelerated in recent years and is projected to continue for the foreseeable future.
	Wentworth	X	Wentworth Shire with an estimated population size of 6,984 persons in 2006, has increased by 1.3% since 2001, due to some major developments along the River Darling. In 2009 the population declined by 0.9% most likely due to the downturn in the agricultural economy for the region.
Degree of Urbanisation *Proximity to a large urban centre*	Balranald Hay Wentworth	X X ✓	According to the classifications used for the ABS Census, Wentworth, Balranald and hay are all classified as Urban Centres or Small Towns (having a population between 1,000 and 9,999 people). However only Wentworth has the advantage of being close to a large Urban Centre such as Mildura. Wentworth Shire with access to services such as high quality health, education, cultural and recreational services. The majority of Wentworth residents who are employed work in the Wentworth Shire (55%) however, a further 35.3% work in the Rural City of Mildura.
Indigenous Population	Balranald Hay Wentworth	X X X	The Indigenous population of Wentworth (597 persons), Balranald (47 persons) and Hay (140 persons) exceeds the average for the MDB and Australia. Past research has shown that Indigenous Australians experience much higher levels of disadvantage than non-Indigenous Australians. Given the disadvantage evidenced for Indigenous Australian in general, it is very likely that areas with more Indigenous people will also show significant disadvantage relative to other areas of the MDB.
Age	Balranald Hay Wentworth	X X X	The populations of Wentworth, Balranald and Hay Shires are aging, with increases in the proportion of the population aged 55 years or more. An ageing population can place additional demands on communities, where the available work force diminishes over time, and health and aged care service requirements increase.
Proportion of employment by industry compared with NSW average	Wentworth	✓	The Wentworth Shire is highly dependent on agriculture, with the proportion of its workforce employed in this sector 3.5 times greater than non-metropolitan NSW. This dependence means the Shire's economy is highly exposed to seasonal climatic conditions, climate change, global commodity price cycles and changes in water policy. The development of a mineral sands mining sector provides a window of opportunity to develop industries that complement the agricultural sector.

3.2 Measuring the economic impact

Research commissioned by the Wentworth Shire Council[iv] measured the likely impact of the introduction of the Basin Plan to the gross value of agriculture production. Table 5 depicts the following three scenarios:

- ***best-case scenario***:- of the gross value of agricultural production with no climate change and no basin plan.
- ***moderate case***:- medium climate change, 3000GL withdrawn via the Basin Plan, High Price regime for crops
- ***worst case***:- high climate change, 4000 GL withdrawn via Basin Plan, Low price regime for crops

Table 5: Marginal impacts to 2030 on gross value of agricultural production (irrigated and dryland) and employment under two different scenarios compared to Base case of no climate change and no Basin Plan*

Municipality	Scenario	GVAP ($ million)	Employment in agriculture as a percentage of total employment
Wentworth	**Best case**	$136	24%
	Moderate case	-$13	-8%
	Worst case	-$43	-12%

*Note that the outputs of the modelling should be read and used with caution as a number of assumptions have been made in developing the inputs to the model and the model also assumes that 'all other things are equal and unchanged' and does not account for economic, technological or social changes that may occur over the modelling period.

Based on this research, the projected gross value of agricultural output (GVAP) in 2030, under the best case scenario, would provide this region with $136million, and direct employment in agriculture would account for 24% of all employment. Under the moderate climate change scenario, with 3000 GL of water withdrawn via the basin plan, direct employment in agriculutre would fall by 8%, and the GVAP would reduce by $13million. The worst case scenario, with 4000 GL withdrawn would see direct employment in agriculture halved, to just 12% and more than a third, or $43million, wiped from the gross value of agricultural production.

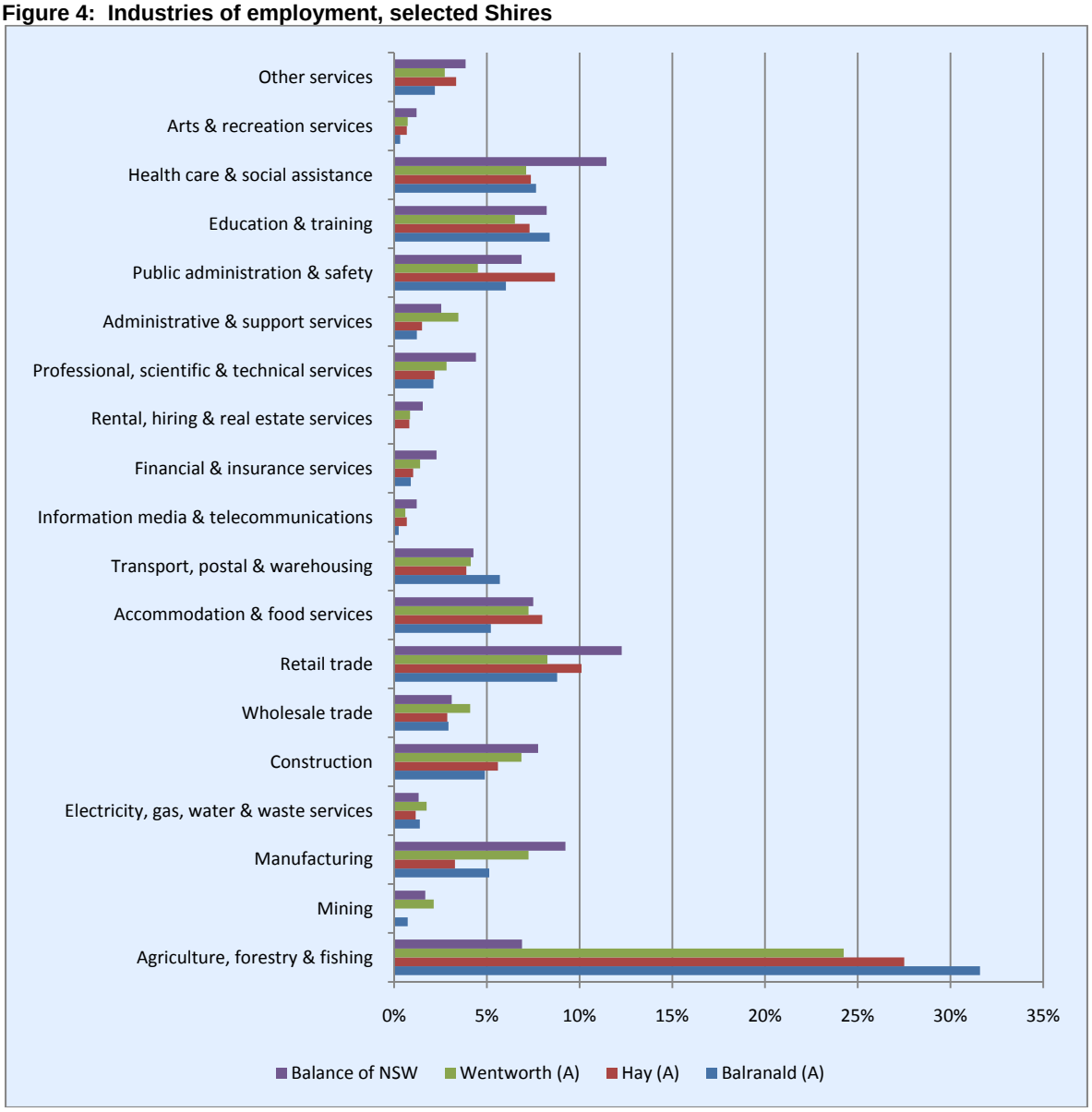
4. THE IMPACT ON SUSTAINABLE PRODUCTIVITY AND VIABILITY

Whilst much of our own research has focused on the direct impact of the basin plan on agriculture, the potential impacts on sustainable productivity, and viability of the wider community cannot be underestimated. In order to ascertain the extent of these secondary impacts we have explored the industries of employment, used the SEIFA index of relative socio-economic status, and explored whether the social capital of our Shire can withstand the impact.

4.1 Industries of employment

Agriculture, forestry and fisheries (almost entirely agriculture) is the biggest industry of employment in Wentworth LGA (figure 4), accounting for over 24% of employment. The other sectors in Wentworth LGA's top five are retail trade (8.3%), accommodation and food services (7.2%), manufacturing (7.2%) and health care and social assistance (7.1%).

Figure 4: Industries of employment, selected Shires



Source: ABS 2006 Census

While individual income is a good indicator of income and financial wellbeing, more precise individual income data is available from the Australian Tax Office (ATO). Table 6 shows that mean individual income, for those with taxable incomes, grew between the 2001/02 tax year and the 2006/07 tax year by almost 29%. Perhaps as a result of the increase in construction and mining in Wentworth Shire, mean individual weekly incomes increased, however, mean weekly income and income growth fell short of the average for New South Wales. This presumably reflects the near absence of very highly paid employment in regional areas.

Table 6 Mean weekly individual incomes of persons with taxable incomes

	2001/02	2005/06		2006/07	
	$	**$**	**% change from 01/02**	**$**	**% change from 01/02**
Wentworth	$599.76	$705.57	17.6%	$771.30	28.6%
NSW	$805.34	$955.75	18.7%	$1,049.98	30.4%

Source: ATO Taxation statistics 2001–02, 2005-06, 2006-07

4.2 SEIFA index of relative socio-economic status

Three measures of socio-economic status are reported for Australian LGAs. Table 7 shows that Wentworth Shire is somewhat disadvantaged relative to other areas in Australia1. Relative socio-economic disadvantage declined between 2001 and 2006, whereas disadvantage status for economic resources and education and occupation improved.

Table 7: SEIFA scores across all four indices for Balranald, Hay and Wentworth Shires (2001 & 2006). Average score for Australian in each index is 1000.

	Relative Socio-economic Advantage & Disadvantage			Relative Socio-economic Disadvantage			Economic Resources			Education & Occupation		
	'01	**'06**	**Change**	**'01**	**'06**	**Change**	**'01**	**'06**	**Change**	**'01**	**'06**	**Change**
Wentworth	932	934	2	982	962	-20	930	975	45	934	942	9

Source: ABS Socio-economic Indexes for Areas (SEIFA), 2033.0.55.001. 2001 & 2006

Our research has found that even if climate change and water allocations returned to historical averages, it is likely that the Wentworth Shire will continue to be disadvantaged, with accumulated debt in the agricultural and small business sectors taking a long time to pay off. The loss of educated persons and slow growth in household incomes will also disadvantage the Shire relative to other areas not as dependent on the agriculture sector.

4.3 Resilience

The region in which Wentworth Shire is located has been in drought for approximately 10 years with exceptional circumstances extended for the region until 2010. It is likely this has significantly affected community resilience. The Wentworth Shire Council's 2009 Social Plan highlighted that drought has had a number of socioeconomic impacts including:

- Economic loss due to crop failure or reduced production;
- Reduced employment levels;
- Reductions in household incomes and discretionary spending in local communities;

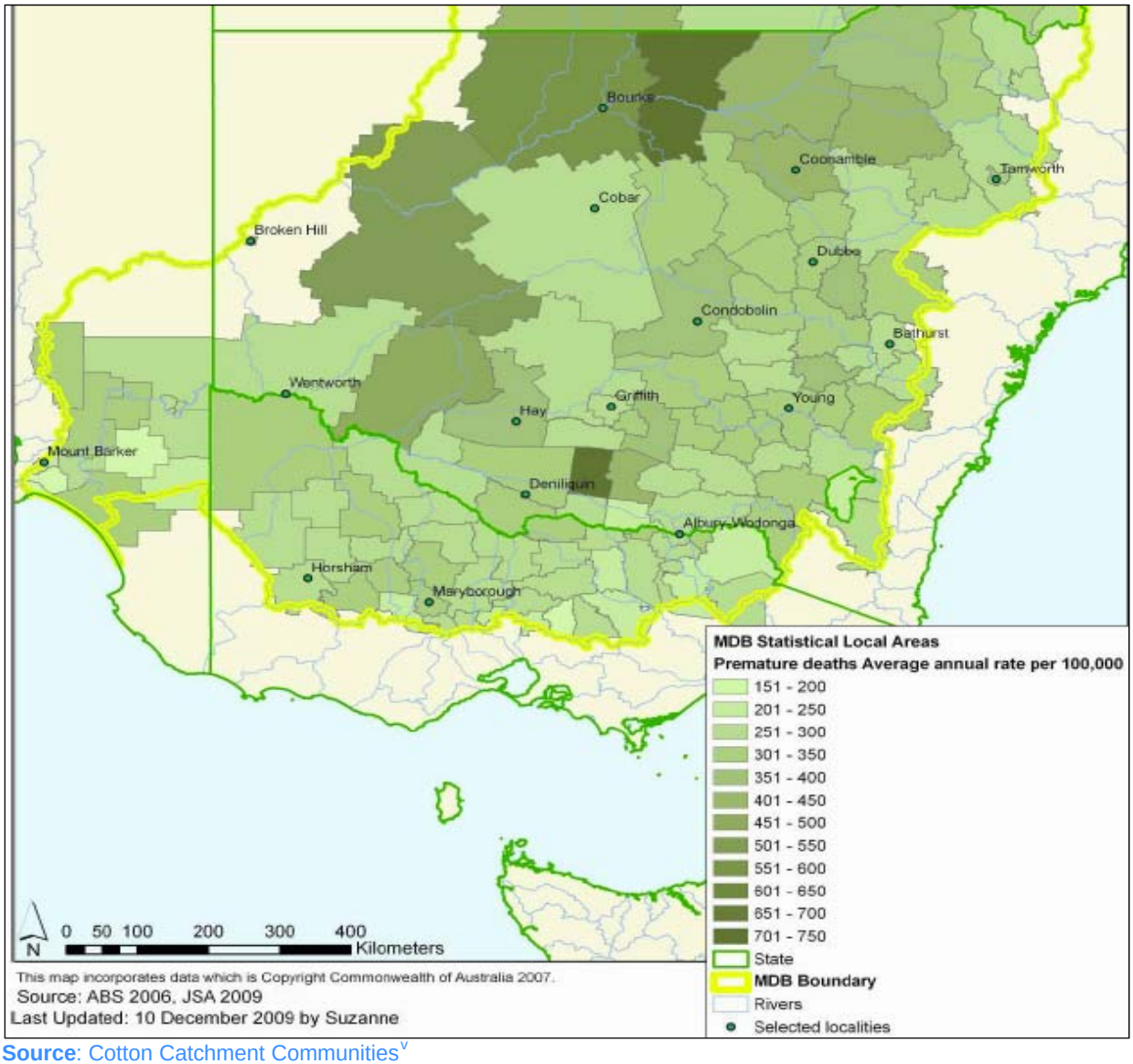
[1] Average value of index for Australia is 1000

- Reduced social wellbeing, with increased levels of social distress, mental health issues and marital breakdown.

It could be reasonably assumed then that the resilience of the Wentworth Shire community has been diminished by the duration and severity of the drought.

There is a perception that some in the community are not as resilient as reported. Stress levels in parts of the community are (anecdotally) high, with a concern that the rate of suicide is also increasing. Notwithstanding this, the premature death rate (Figure) is lower than in adjacent municipalities and is in the lower range found for the NSW Murray-Darling Basin LGAs.

Figure 5 Levels of premature death by LGA in the Murray-Darling Basin



Source: Cotton Catchment Communities[v]

There is currently a high level of uncertainty in the region as to the impact on water allocations of the MDBP and its Sustainable Diversion Limits. Depending on the degree of reduction in allocations, this could trigger additional business failures, hardship and loss of resilience, all of which impacts negatively on the sustainable productivity and viability of our Shire.

5 THE RECONFIGURATION OF RURAL AND REGIONAL AUSTRALIA

The terms of reference for the senate inquiry seek input into the opportunities for a national reconfiguration of rural and regional Australia and its agricultural resources against the background of the Basin Plan and the science of the future.

Upon reflection, it would appear that the Government has already commenced manipulating a reconfiguration of rural and regional Australia. There are two examples that profoundly highlight this. The separation of water from the land and the diversion of water from agricultural land to capital cities via Victoria's North South pipeline.

5.1 The separation of water and land

The historic separation of water and land was deliberately aimed at creating the ability to trade water from low value crops to high value crops, which in theory makes sound economic sense.

Water trading allows for owners of water shares to trade either their permanent share or annual allocation of water on the open market. Temporary water trading (trade in annual allocation) is an important economic tool for businesses with water entitlements as it allows them to sell water on a year to year basis where the return from water may be higher than may be yielded from produce (at least for opportunistic annual crops). It also allows irrigators with permanent horticultural crops to purchase water to offset low allocations.

In previous research[vi] (Frontier Economics *et al.*, 2007), temporary water trading was found to be strongly supported by farming communities. In terms of economic and social impacts, temporary water trading gives farming businesses greater flexibility in managing their business, meaning they can respond to fluctuations in commodity prices and weather patterns. This is particularly important in years where production may not be financially viable. In this case irrigators can temporarily trade their water to reduce their reliance on debt for cash flow.

In contrast, permanent water trading is opposed within irrigation communities (Frontier Economics *et al.*, 2007) as while it has facilitated the development of new enterprises on green field sites, it is perceived to negatively affect the viability of irrigation regions and communities.

5.2 Water trading and the abandonment of irrigated land

Whilst water trading may have facilitated the development of new enterprises (e.g. wine grapes, almonds) on green field sites, it has produced a patchwork of abandoned and dying blocks that are intertwined with viable horticultural properties, and rural residential dwellings. Continued frustrations with State planning laws prevent local communities from working within their communities to produce solutions that allow reconfiguration that suits the scale and amenity at a community level.

Farmers exiting irrigation have also been identified as a source of tension within the community, particularly when land cannot be redeveloped (due to Commonwealth Government small irrigator exit grant conditions) and is left unmanaged and becomes a nuisance (because of pests and dust) to neighbouring properties.

6 PRODUCING MORE FOOD WITH LESS WATER

There appears to be an underlying assumption within the Basin Plan that all water use by agriculture is founded on inefficient irrigation practices, and that the sustainable diversion limits can be obtained through innovation and engineering solutions, so that more food can be grown with less water.

There is no recognition within the guide to the proposed Basin Plan, that some irrigation areas, such as the Western Murray Irrigation district in the Wentworth Shire, are already operating with full pressurised (pipeline) systems. Presumably, where this is the case, these districts should benefit with lower SDL's, but it would seem now that rather than being rewarded for our innovation, our community will be disadvantaged, because they will have the same reductions through the SDL's as irrigation districts that are operating still with open channels, such as the Merbein irrigation district. It is also highly probably that irrigation districts that have not invested previously in upgrading their infrastructure will also be the beneficiaries of large scale infrastructure investment, again at the expense of small districts such as ours.

6.1 Trust

Discussion about wide scale opportunities for a national reconfiguration of rural and regional Australia also leads to growing anxiety and mistrust of the Governments intentions for rural Australia. Currently levels of trust towards Commonwealth and State governments is reported to be low. Government water policies, particularly those relating to environmental flow provision are perceived to be poorly communicated, and of limited benefit to agricultural communities. Further, uncertainty created by the MDBP is increasing the sense that decisions by State and Commonwealth government are disconnected from the needs of people in regional and rural areas.

There also needs to be recognition that there is no return on investment for farmers to become more efficient. Rising power costs, the need to purchase water during times of limited water availability all add to the cost of production. It needs to be remembered that farmers are price takers, not price dictators, and as such they have no way of re-cooping additional input costs.

Anecdotal evidence from irrigators within our region leads us to believe that some irrigators, some 5 or 6 years ago, invested heavily in new plantings on green field sites, fitted with the latest water saving technology. To fund the investment some sold down their water right to the minimum amount they required, in order to re-coup some of their capital investment. Little did they realize that water restrictions would later be imposed which would then place them in a situation of having to purchase back water that they had previously sold, just so they could keep their plantings alive. This has created a situation where farmers are now wanting to hold onto their full entitlement, so in the event that water restrictions are again imposed, they will still have sufficient water to service their absolute minimum needs.

Opportunities for producing more food by using less water can only happen if farmers trust that the amount of entitlement that they have will be delivered, regardless of climatic conditions.

7 SOVEREIGN TAKEOVER & WATER SPECULATORS

The ability for sovereign takeover and water speculators to enter the market has only been made possible through the separation of water from the land.

Speculation in water and agriculture was popularized with the introduction of Managed Investment Schemes. In 2006, the Australian Agri-business group reported that the introduction of MIS into agriculture had seen the biggest cash injection into agri business for at least 5 years, with $3.5billion dollars invested in the preceding five years.[vii] Just as corporate investment flooded into agri business, more recent experience has demonstrated however that they also quickly divest themselves when the return on investment does not meet their expectations. This is in stark contrast to the traditional family farming enterprise which becomes part of the community.

8 RESPONDING TO COMMUNITY NEEDS

8.1 The need to upgrade community infrastructure

Perhaps one of the unintended consequences of diverting water away from rural towns is the potential for stranded assets, with local government and water supply authorities left to try to run systems with fewer customers. More must be done to address the needs of local government and water supply authorities, as they attempt to provide quality services to a diminishing pool of customers.

The risks and implications of climate change means, for example, that sewer systems that have been previously built on the edge of a floodplain, are now at risk of polluting waterways with the sudden inundations that are being experienced on a more frequent scale. Similarly, these same treatment plants become inadequate when too little rain means that they do not operate efficiently.

8.2 Communities need the ability to plan for the future

The exodus of farmers from the industry creates an issue of abandoned blocks, which are interwoven with rural residential dwellings. Restricting the amount of development that is allowed to occur in council areas based on historical trends, should cease, allowing the free market to decide where, when and how it wants to expand. Development in regional areas needs to be actively encouraged, not discouraged by antiquated state planning laws. Local Government needs the ability to be able to adjust their planning schemes to cater for the changing rural landscape. Rural people must be given the flexibility to decide and to be creative about their future.

8.3 Local Government needs certainty of funding

Increased block funding grants (as opposed to a competitive grants process) should be guaranteed to all local government areas over an extended period of time. The difficulty with competitive based infrastructure grants is that large scale infrastructure projects in small regional areas with sparse population bases will never be deemed as being financially viable, which results in competitive grant applications being rejected. By guaranteeing an annual

funding allocation to local governments they are in a better position to plan and undertake infrastructure upgrades in a more strategic and effective manner.

9. CONCLUSION

The Wentworth Shire Council is extremely concerned about the impacts that the proposed Basin Plan will have on its community. It seems hard to imagine that any Government would place the needs of the environment above the needs of communities, yet this is exactly what the Basin Plan is setting out to achieve. Whilst the Murray Darling Basin Authority hides behind the fact that the amendments to the Water Act received bi-partisan support, we believe that it is incumbent on the Government of the day to ensure that this travesty of justice is not allowed to continue.

The Wentworth Shire Council sincerely hopes that by making this submission to the Senate Inquiry, the decision makers will realize that communities like ours matter. The ability to turn barren and unproductive land into valuable farming enterprises was made possible through the introduction of irrigated agriculture. Whilst some larger regional towns have developed to a point where they can withstand the downsizing of agricultural production, for Shires like Wentworth, the gross value of agricultural product is its lifeblood, and to take away any part of the lifeline that feeds it, our water, will be detrimental to our future survival.

[i] Wentworth Shire Council, Socio Economic study, Sinclair Knight Merz, 2010

[ii] Draft Murray Regional Strategy 2009-2036, NSW Government Planning, ISBN 978-1-921546 53 2

[iii] Judith Stubbs and Associates (2010) Exploring the relationship between community resilience and irrigated agriculture in the Murray Darling Basin: Social and economic impacts of reduced irrigation water. Appendix 6: Mildura Case Study.

[iv] Community Planning for Climate & Water Availability Change, Briefing Paper, RMCG, November, 2010.

[v] Cotton Catchment's Communities Cooperative Research Centre (Cotton CRC), 2010, www.cottoncrc.org.au

[vi] Frontier Economics in association with Tim Cummins and Associates, Dr Alistair Watson, and Dr Elaine Barclay and Dr Ian Reeve of the Institute for Rural Futures, University of New England, 2007, The economic and social impacts of water trading, Report for the Rural Industries Research and Development Corporation, National Water Commission and Murray–Darling Basin Commission

[vii] Australian Agribusiness Group, "wounding the only golden goose" media release, September 12, 2006