2006 Drought - Irrigated Canola from Victoria's Foodbowl Irrigation Districts of Northern Victoria.
FOOD PRODUCTION IS ALL ABOUT ACCESS TO WATER

Plug the Pipe's Submission to the Senate Inquiry into Food Production in Australia

The consequences to District Irrigation Efficiency due to declining water resource in Victoria's Foodbowl Gravity Irrigation Districts.

The impact of climate change, the North South Pipeline urban water extraction and the $3.1 billion Federal Governments Water Buyback Scheme threatens the viability of irrigation in the Foodbowl by decreasing district irrigation efficiency. Remedial buyback policy changes such as 'Targeted Buyback' are unlikely to be an effective counter due to the geographically uniform nature of the resource removal drivers.

www.plugthepipe.com
NO NORTH SOUTH PIPELINE TO MELBOURNE

Committee Secretary
Senate Select Committee on Agricultural and Related Industries
Department of the Senate
PO Box 6100
Parliament House
Canberra ACT 2600
Australia
20 June 2009

Dear Ms Radcliffe

RE: Plug the Pipe's Submission to the Inquiry into Food Production in Australia

We thank you for the opportunity to provide comment on the Inquiry into Food Production in Australia.

Plug the Pipe describes itself as an agri-environmental group whose membership includes significant numbers of irrigator food producers. Our main objective is to stop the construction of the North South Pipeline which we believe will introduce negative environmental and agricultural impacts to the Southern part of the Murray Darling Basin.

Our submission focuses on the effects that the Federal $3.1 billion water buyback scheme and the removal of water for the North South Pipeline will have on the Victorian Foodbowl Districts using known gravity irrigation characteristics. Extensively the removal of a discrete amount of water from an irrigation district has a twofold effect in reducing the available water for food production, namely core resource reduction and secondly, and more significantly, reduction in irrigation district efficiency.

The failure of the Foodbowl water savings targets places substantial risk to food production in Victoria's Foodbowl districts as Melbourne will expect its water after making a billion dollar investment.

Although our submission focuses on the Foodbowl districts of Victoria, the principles which we outline can be equally applied to all gravity irrigation districts of the Murray Darling Basin.

Should you require any further information regarding our submission, please do not hesitate to contact me.

Yours sincerely

Ken Pattison,

Irrigation Spokesman, Former Director of GMW

Food Production in the Goulburn-Murray Irrigation District, Australia's Foodbowl

Victoria is well recognised as the food bowl of Australia, particularly Victoria's northern irrigation region known as the Foodbowl[1] Irrigation Districts or more simply Foodbowl. Irrigated agriculture generates Australia $9 billion in production annually and $1.5 billion in exports. However, Victoria is now experiencing the effects of ongoing drought and climate change which has resulted in Victoria becoming a net importer of food for a single month last year[2].

The introduction of the Federal Government's $3.1 billion Water Buyback Scheme and the Victorian Government's increasing reliance on Murray Darling Basin for urban water supply such as the North South Pipeline extraction, will further erode food production in the Foodbowl.

The Flawed Foodbowl Modernisation Plan and the North South Pipeline

The Victorian Government intends to spend $1.8 billion to augment Melbourne's water supply (through the North South Pipeline and Foodbowl Modernisation Projects), consequentially failure to deliver 75 GL of water annually to Melbourne is politically untenable and can only be addressed by breaking project core promises.

The Foodbowl Modernisation Project was designed to generate water savings, 'New Water', by stopping leaks and evaporation from the Foodbowl Irrigation Districts. This "New Water' was to be shared equally between Melbourne, Irrigators and the Environment. However the basic assumptions used to predict the amount of water to be delivered to Melbourne from the north-south pipeline have "now proven to be wrong"[3]. The expected shortfall in water saving projects is so severe that irrigation entitlements, environmental reserves or entry into the water market[4] will be required to allow the Victorian Government to honor its promise that 75 GL will be delivered to Melbourne in 2010[5].

The sourcing of this water will have either direct or indirect consequences for agricultural production. The delivery of 75 GL of 'unsaved water' to Melbourne in 2010 represents irrigation under full water entitlement (100%) of an area half the size of the Shepparton Irrigation District or about **14% of the water used to produce food in the whole Foodbowl this year.**

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[1] The Foodbowl refers to the Gravity irrigation districts of Central Goulburn, Murray Valley, Pyramid-Boort, Rochester, Torrumbarry and Shepparton Irrigation Districts.

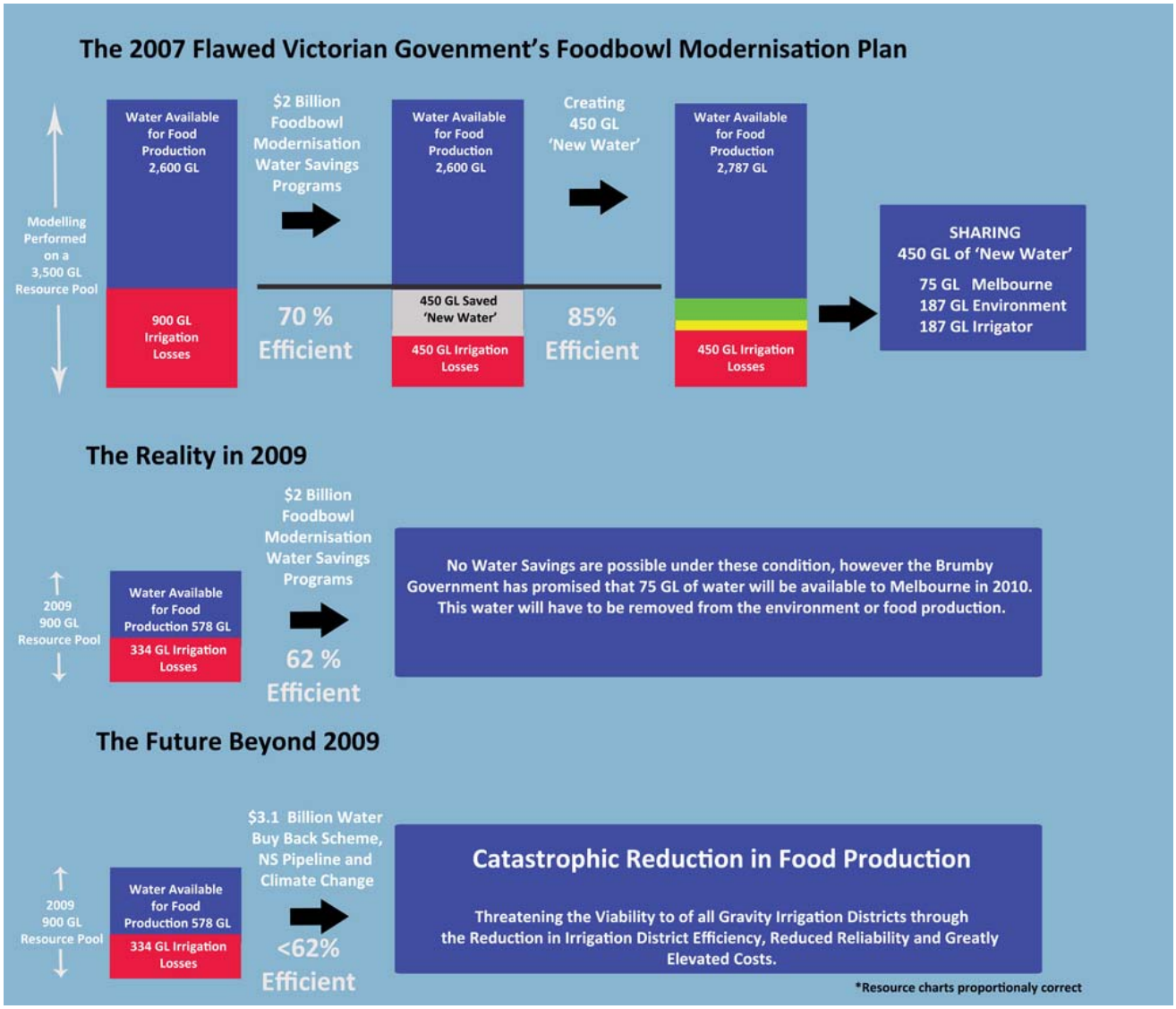
[2] Eric deCarbonnel, http://www.globalresearch.ca/index.php?context=va&aid=12252

[3] See Appendix Four, Age Article Pipeline Figures All At Sea, DSE David Downie's comments.

[4] See Appendix One, Victorian Government core commitment that Melbourne Water would not be allowed to enter the water market.

[5] Victorian Government response to the Food Bowl Modernisation Steering Committee Final Report, page 4, see Appendix One

The effect of extracting 75 GL of water from the foodbowl for Melbourne's water augmentation will have a major and continuing effect on Victorian food production under the failed Foodbowl water savings investments.



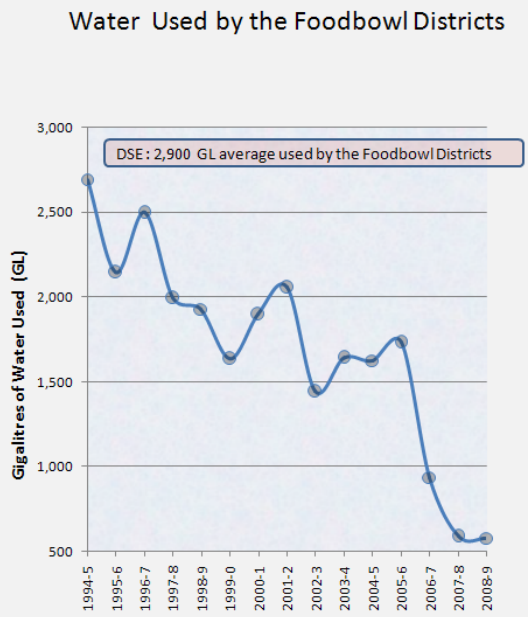
Graphic One: The Flawed and Failed Foodbowl Modernisation Project. (Also see Appendix Three and Five)

The Effect of Lower Water Availability on Irrigation Efficiency in the Foodbowl

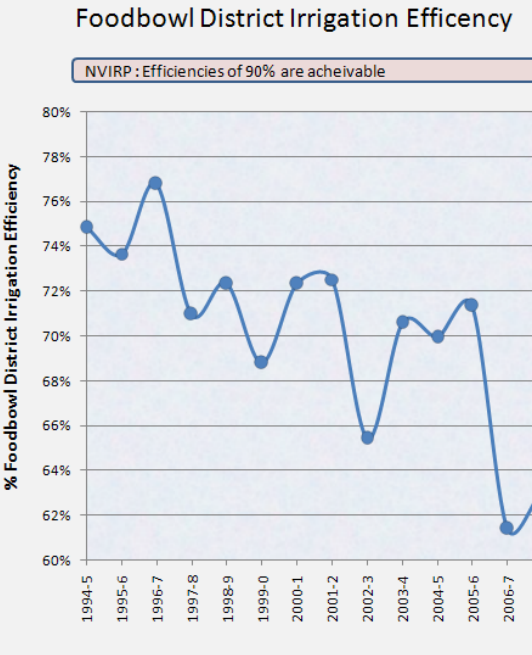
The Foodbowl Modernisation Plan intends to take average district efficiency from 70% to 85%. Historically efficiencies' of around 80% where readily achieved in the wetter climate of 15-30 years ago with some individual districts achieving efficiencies as high as 90%[6].

However over the last 15 year period efficiencies have declined markedly. The drop in district irrigation efficiency is caused by a known gravity irrigation district characteristic i.e.

District Irrigation Efficiency is Proportional to the amount of water supplied to that district.



Graph One: Water use in the Foodbowl Gravity Irrigation Districts



Graph Two: Declining Foodbowl Gravity Irrigation Districts Efficiency

Comparing graphs one and two we can see an excellent correlation between available water and efficiency. The greater the amount of water used, the greater the efficiency.

The 15 year decline in water availability is illustrated in graph one and is a result of lower resource because of climate change and the exodus from irrigated food production. In the last 9 years farmers have sold over >20% of their high reliability entitlements in the longest hottest drought of the last 150 years.

In 2008-09 the Foodbowl district irrigation efficiency was 62%, a record low when adjusted for an irrigation season that had been truncated by several months. This

[6] Rochester in 1994-95 achieved a district efficiency of 90%.

efficiency also corresponds to the lowest amount of water ever used in the Foodbowl Districts[7].

This characteristic is by no means unique to Victoria's Foodbowl Districts. Murray Irrigation Limited (NSW) has a working district efficiency of 85% under full allocation but in the 2007-2008 year that efficiency fell to 69% when allocations were low.

Modernisation has been touted by the Victorian Government as a way of permanently raising efficiency. Indeed the water savings needed for Melbourne can only be generated by increasing efficiency, however this assumption has now proven to be false. Take the fully modernised Coleambally Irrigation District (NSW) for instance. Coleambally have been identified as the model for which the current Foodbowl Modernisation Project is to be implemented and boasting efficiencies of close to 90% after modernisation[8].

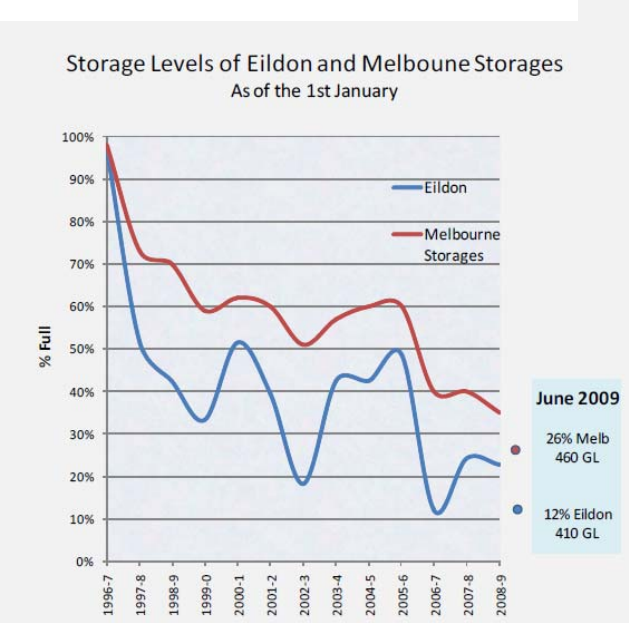
In 2007-08 Coleambally's District Efficiency fell to just 54%, a drop of 36%. This may be a snap shot of the future for the Foodbowl.

The future pressure on district irrigation efficiency will be severe and cannot be responsive to the Foodbowl Modernisation Investments under the combined effects of climate change, $3.1 billion Water Buyback Scheme and urban encroachment into rural water sources via the North South Pipeline and other urban pipelines.

The consequence of reduced efficiencies in the MDB gravity irrigation districts is caused by reduced water availability, and will continue to be profound. The effects to food production are twofold:-

1. Namely core resource reduction through net water trade out,

2. and secondly, but more significantly a reduction in irrigation district efficiency. A district drop in efficiency results in more water being removed from agriculture because a greater proportion of that water must be used to deliver it to the food growers (irrigation district losses).

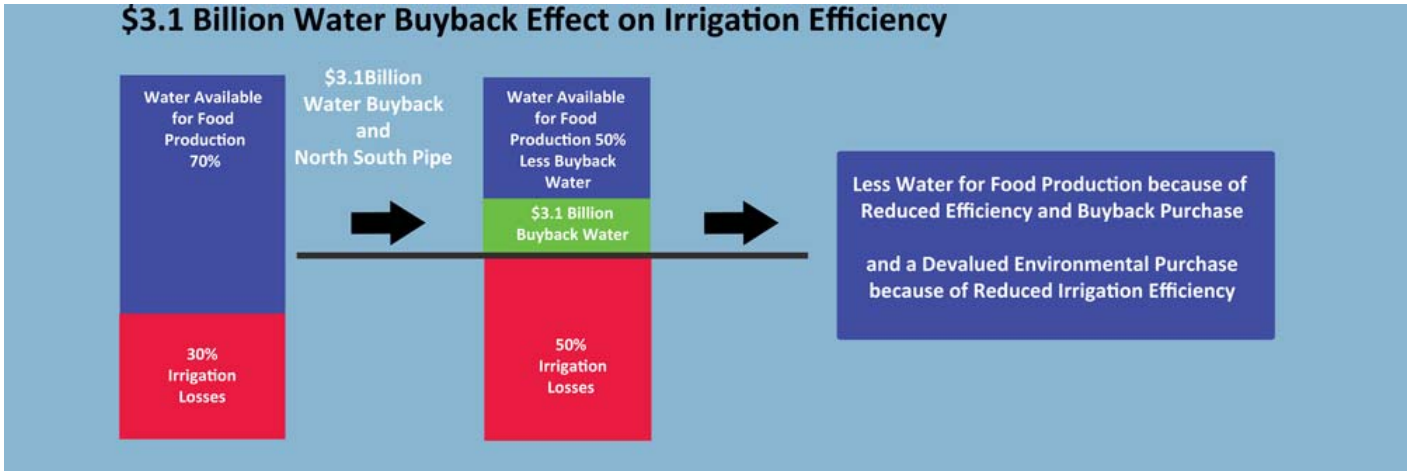


Graph Three: Eildon and Melbourne Storages.

[7] Foodbowl water deliveries were 578 GL in 2008-09 irrigation season, a record low.
[8] See Modernising Victoria's Food Bowl, Victorian Government, page 14-15

It is for this reason that the Victorian Government's attempt to augment Melbourne's water supply from irrigation savings is a high risk strategy. As irrigation availability drops, net water savings disappear due to decreases in irrigation efficiency. The likelihood of Melbourne not requiring augmentation in a dry period is remote as its own catchment dams lie side by side to that of the Foodbowl's (see Graph Three). Options for Melbourne would then include entry into the water market or qualification of rights by the Victorian Water Minister placing enormous pressure on water used for food production. The 2006-07 entry of Adelaide into the water market is blamed for temporary water prices reaching $1200 per ML, few agricultural enterprises were able to compete at that time. Melbourne has a bigger pipe, deeper pockets and greater political influence – they are the biggest elephant in the room.

A drop in district irrigation efficiency will also affect the volumes of water available to the yearly allocated buyback purchased entitlements. Buyback water is tagged to the original irrigation district where it was sourced and therefore exhibits the same general characteristics i.e. the same allocation of water would exist for both irrigation water and purchased Buyback water. The lowering of district Irrigation efficiencies therefore reduces the resource allocation (in the irrigation district and the purchased water) because more water is required to deliver the resource to farms. The $3.1 billion water buyback will decrease district irrigation efficiency and will reduce the amount of water available to agriculture (through a district irrigation efficiency drop) and the amount of available water to the purchased environmental allocations (also through a district irrigation efficiency drop). See graphs one and two as proof; less water available to irrigation districts = lower irrigation district efficiency = less usable water for the environment and agriculture

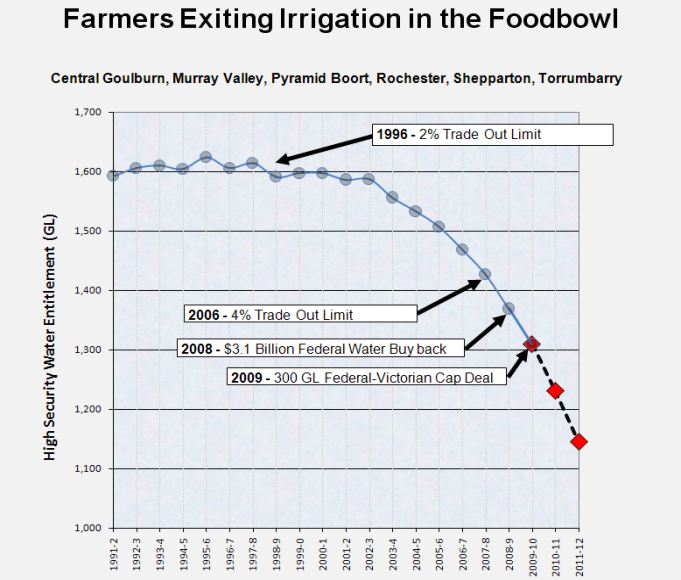


Graphic Two: The effect of Buyback on District Irrigation Efficiency, devaluing environmental purchases and agricultural entitlements

The $3.1 Billion Water Buyback and Gravity Irrigation Districts

It is estimated that the $3.1 billion water buyback scheme will remove a further 300-400 GL of water from the foodbowl area which will continue to drive the efficiency down further than the record lows of the last two years (61%).

While adjustment to environmental water share should be recognized, an uncontrolled and un-analysed implementation of this policy will have generally unacknowledged effects on gravity irrigation districts such as efficiency decline.



Graph Four: Foodbowl farmers selling their water (Also see Appendix Six)

A significant drop in irrigation efficiency may see many gravity irrigation districts become unviable as efficiency relates directly to the cost of water. Also, any irrigation district whose efficiency drops to around 50% may become politically untenable; that is requiring a 1 for 1 allocation of water for delivery.

The viability of gravity irrigation is important because it can be a tool to help reduce Australia's Food Production carbon footprint. Gravity irrigation is the cleanest and greenest form of irrigation generating carbon negative emissions. For example, last year 578,000,000,000 kg[9] of carbonless water was delivered to Foodbowl farms over a distribution network of 7,000 km in length. This water also generated significant quantities of clean hydro-electricity after its release from storage. Gravity irrigation should be promoted as a low carbon solution for food production in a world undergoing climate change.

TARGETED Water Buyback and Gravity Irrigation Districts

The concept of targeted water buyback has been flagged as a tool to prevent the increase in stranded irrigation assets (and hence efficiency decline) as a result of the $3.1 billion buyback scheme. While the details of such a proposal are not known it is unlikely to have a significant effect because of the geographically uniform net permanent trade of water out of the Foodbowl irrigation area. Anecdotal evidence suggests that there is no current bias of permanent trade based on access to modernised or non-modernised parts of the irrigation system. This is also true for land productivity. Katandra[10] for example was once cited as the last place a dairy cow would

[9] Equates to 578 GL of water.

[10] Katandra is a farming area located in the Murray Valley Irrigation District.

stand in Australia because of its highly fertile pastures but it is now largely dewatered because of permanent water trade. Indeed the main drivers determining whether a farmer will sell his water permanently are largely financially based and include dept levels, commodity pricings, commodity outlook and normal farm succession.

Traditional irrigated farm succession (from family farm to family farm ownership) has been totally interrupted by the high capital cost of water ($2,400 per ML). Under the combined conditions of low water availability and low commodity returns, the investment in water by succeeding farmers is generally considered unviable. Intra-Foodbowl water trade and the selling of water with farm land were not uncommon when the capital cost of permanent water was below $800 per ML but virtually ceased above that figure.

Farm succession is usually initiated by operator age, financial viability and, not uncommonly, business and martial breakdowns. Farm succession has no bearing on geographic location from where water is sold, making the proliferation of stranded assets inevitable.

The Future of Victoria's Foodbowl

Recent water allocations in the Foodbowl have been around 30% of full entitlement and have driven the current exodus of irrigation farmers from Northern Victoria. Initially most of the water was purchased by Managed Investment Schemes in the Lower Murray however the bulk of the trade is now occurring to the Federal Buy Back Scheme and US interests. In 1991, the year permanent water trade was first introduced, the Foodbowl had a combined high security entitlement of 1,663 GL, this year entitlement has dropped to below 1300 GL which represents a >20% contraction of water resource, most of which has occurred within the last six years. The promotion of water trade is in opposition to Victoria's Foodbowl water savings plan and will be the reason why Victoria's water saving targets cannot be achieved even if average rainfall returns. Simplistically, if there is less water used in irrigation, there is less water that can be saved from it.

Within a period of five years we may see the original foodbowl high security entitlement fall to around 900 GL or roughly half of its original volume under current trends. This figure well and truly debunks the Victoria Government's assertion that 900 GL in leaks and evaporation is lost on average from the Foodbowl. At this level of entitlement Melbourne will be using 8% of the Foodbowl Water (75 GL) in wetter times. In dry times like this year when allocations were just 30%, 75 GL would amount to 25% of the water available to irrigators.

The North South Pipeline will become like an unjust tax that our food producers will have to pay forever into the future.

Appendices

One: Victorian Government response to the Food Bowl Modernisation Steering Committee Final Report, page 4

Two: Premier Bracks Media Release - MORE WATER FOR FARMERS, STRESSED RIVERS AND MELBOURNE

Three: Foodbowl Alliance Shepparton Country News Paid Advertisement

Four: News Article, The AGE, North-south pipeline figures all at sea, Melissa Fyfe

Five: PTP Publication, Where the Government Got It Wrong

Six: GMW Media Release, G-MW expects applications to double for 2009/10 water trading ballot, highlighting the exodus from irrigation

Appendix One

Victorian Government response to the Food Bowl Modernisation Steering Committee Final Report

5	The Government and / or Melbourne Authorities cannot enter the permanent water market to purchase water.	Endorse
6	Melbourne Water Authorities will be able to sell into the temporary GMID water market from their annual entitlement.	Endorse
7	The pipe size from the Goulburn River to Sugarloaf Reservoir will have a maximum diameter of 1.75 meters.	Endorse
8	Melbourne will receive 75 GL in 2010/2011 prior to completion of Stage 1 of the Modernisation project.	Endorse
9	If sufficient savings are not achieved by modernisation by 2010/2011 the guaranteed 75GL for 2010/2011 can be augmented from savings already achieved from existing projects and 20GL from the water quality reserves. .	Endorse
10	An agreement, such as a MoU, to be entered into by the Melbourne Water Corporation and Goulburn Murray Water detailing the characteristics of Melbourne's BE and the framework within which it will be implemented.	Endorse. To this end, it is proposed that any part of Melbourne's 75GL Bulk Entitlement not used in any year, will be held in a special reserve for allocation for urban use (regional and/or metropolitan) at the discretion of the Minister for Water in consultation with Melbourne Water, Goulburn-Murray Water and DSE.
	IRRIGATORS WATER SHARE	**RESPONSE**
1	Irrigators are to receive a third of all savings achieved up to 225GL.	Endorse – up to 225GL long term average savings. This means in some years savings will exceed 225GL and in some years they will be less.
2	Irrigator's will receive half of any savings achieved above 225GL.	The Government has made no decision on the distribution of savings in excess of 225GL long-term average and will only do so when the level of savings can be verified as exceeding 225GL from Stage 1.
3	Irrigator's share of the savings will have the same level of security as Environment and Melbourne's share.	Endorse
4	Irrigator's share of savings will only be distributed to irrigators in the GMID.	Endorse and to include the Campaspe Irrigation District.

Appendix Two

Media release

From the Premier of Victoria

Tuesday, 19 June, 2007

MORE WATER FOR FARMERS, STRESSED RIVERS AND MELBOURNE

Premier Steve Bracks today announced a landmark project to capture up to 450 billion litres of water currently lost to irrigation inefficiencies in Victoria's Food Bowl region. Revised to 425 GL

The Food Bowl Modernisation Project is part of a $4.9 billion investment in major infrastructure projects announced by the Premier today as the next stage of the Government's *Our Water Our Future* plan.

Up to 900 billion litres of water in the Goulburn and Murray irrigation systems is currently lost through leaks, evaporation and other inefficiencies. 2009 Losses were 343 GL.

The eight-year Food Bowl Modernisation Project to realise annual water savings of 450 billion litres will require total investment of up to $2 billion.

Mr Bracks said $1 billion would be invested in the first stage of the project to capture 225 billion litres following intensive discussions and negotiations with the Food Bowl Alliance – the local farming and business group who originally coined the idea. FBA Supplied the Original Water Saving Calculation to the Government. See Appendix Three

"This historic project will provide much needed water to far households and businesses," Mr Bracks said.

"With climate change impacting on water supplies throughout the state it is vital that we modernise irrigation systems to ensure regional economies and important rivers can continue to thrive into the future."

He said $600 million would come from the State Government with Melbourne Water and Goulburn Murray Water also contributing funds to the $1 billion first stage of the project.

"This historic investment will kickstart the biggest irrigation upgrade ever, with the water saved to be shared evenly between farmers, stressed rivers and Melbourne," Mr Bracks said.

The first 75 billion litres of water saved through the Food Bowl Modernisation Project has been earmarked to boost Melbourne's supply by 2010. This Volume of Water can not be Supplied through Water Savings Projects

The State Government will now work closely with the community to confirm key elements of the project, including:

- Governance arrangements to involve local government and community groups in key issues such as the works program and sharing of water savings;
- Safeguards for Northern Victoria concerning water savings destined for Melbourne;

…2

Media contact: Alison Crosweller 0438 450 564 or Geoff Fraser 0407 360 256 www.vic.gov.au

- How the water savings destined for irrigation and the environment will be delivered and managed.

Mr Bracks said a Steering Committee comprising local councils, the Food Bowl Alliance, interested groups and the broader community would be established as soon as possible to guide the further development of the project.

Water Minister John Thwaites said the project would see more water put back in the Snowy and Murray rivers and provided an opportunity to lead the next stage of the Living Murray Initiative.

"Ensuring our rivers are healthy is a key part of our Government's water plan and this project allows us to look after rivers, regional Victoria and Melbourne all at the same time," Mr Thwaites said.

Mr Thwaites said a new 70 kilometre pipeline connecting Melbourne to the Goulburn River would be built by 2010 to allow Melbourne to access its share of the savings.

Sufficient renewable energy will be purchased to offset the anticipated 10 megawatts of electricity required to pump the water to Melbourne. Now Calculated to be 18 megawatts

Treasurer and Regional Development Minister John Brumby said the Goulburn Murray Food Bowl was a vital part of Victoria's economy.

"We are taking an historic opportunity to ensure the future prosperity of the region through major new investment in modernising ageing infrastructure to create a world class irrigation system," he said.

Mr Brumby said upgrading the Goulburn Murray irrigation system was a project of national significance and provided the opportunity for the State and Commonwealth to work together.

"However the $1 billion upgrade to generate the first 225 billion litres of new water is not subject to Commonwealth funding," he said. This Volume of Water can not be Supplied through Water Savings Projects

He said a feasibility study investigating a new channel connecting the Murray Valley and Goulburn Valley systems would also be finalised as part of the Food Bowl Modernisation Project.

The Food Bowl Modernisation Project builds on existing smaller irrigation modernisation programs in the Shepparton and Goulburn irrigation districts already underway.

Other major projects announced by the Premier today include:

- A 150 billion litre desalination plant to provide water for Melbourne, Geelong, Westernport and Wonthaggi;
- A major expansion of the Victorian Water Grid with pipelines to connect Melbourne's water system with the desalination plant and Northern irrigation upgrades, connect Geelong to Melbourne's supplies, and connect Hamilton to the Grampians Wimmera Mallee System.

Community information sessions on the second stage the *Our Water Our Future* plan will commence shortly. For more details visit www.ourwater.vic.gov.au or call 136 186.

Media contact: Alison Crosweller 0438 450 564 or Geoff Fraser 0407 360 256 www.vic.gov.au

Appendix Three

THE FACTS

Claim: Irrigators will lose water to Melbourne.

Fact: Goulburn and Murray Valley Irrigators will receive more water and a state-of-the-art irrigation system, with someone else paying for it.

The new irrigation system will provide better service and delivery

The Goulburn and Murray Valleys will be delivered investments of up to $2 billion. The Victorian Government is contributing $1 billion to stage one of the project.

The environment will receive an additional 187,500 megalitres to boost flows in the Goulburn and Murray rivers.

Claim: Melbourne will get it's allocated water whether or not it's available.

Fact: Water for Melbourne will only come from savings.

Claim: Things were better off as they were.

Fact: A do-nothing option leaves the region with less water, a broken down irrigation system and no investment in infrastructure.

At present 33 percent of water is lost to the Goulburn-Murray Water irrigation system.

Saving of less than half of this lost water will add an additional 450,000 megalitres to water availability. The water for Melbourne will come from this additional water.

Stage 1 will generate 225,000 megalitres in savings.

Claim: We should be taking the money offered under the Federal Government's Water plan.

Fact: An additional $1.2 billion is being sought from the Federal Government to complete Stage 2.

Claim: Melbourne will get first use of any water and will take more than their share.

Fact: Farmers and the environment will share the water savings from stage 1 equally with Melbourne. The pipeline to Melbourne will be restricted to 100,000 megalitres capacity.

The cost of the pipeline will not be paid from the $1 billion Victorian Government contribution. The cost will be about $600 million.

Melbourne will be restricted from taking more than its quota as another pipeline and an upgrade of treatment facilities at Sugerloaf Reservoir would be needed for this to occur.

Claim: Irrigators' water security will be undermined.

Fact: With all of the savings achieved irrigators will have greater water security.

If the plan was completed this past year, farmers would have had an additional 187,500 megalitres delivered.

IT'S NOT A PIPEDREAM... IT'S A SECURE FUTURE

Promise of prosperity

A $1 billon dollar deal has been secured to improve the irrigation delivery system across the Goulburn and Murray valleys under stage one of the Foodbowl Modernisation Project. This is new funding for the area that will result in unprecedented growth and opportunity and provide a massive boost to the economy.
The works to pipe and remodel irrigation channels will save 450,000 megalitres each year.
This will be extra water that could not be accessed in the past. The "new" water will be divided equally between irrigators in the Goulburn and Murray Valleys, the environment and Melbourne Water.

The $1 billion to complete the water saving works will be provided by the Victorian Government ($600 million), Melbourne Water ($300 million) and Goulburn-Murray Water ($100 million).

If the planned works do not deliver savings quickly enough to meet these time lines, 20,000 megalitres of water in Lake Eildon could be "lent" to the project until water savings grow. This water is the result of water saving initiatives already implemented.

This will ensure no water presently available to farmers will be used to supply Melbourne.
The deal will provide each irrigated property in the Goulburn-Murray Water Irrigation District access to the additional water within the next eight years.
The arrangements have been brokered by Foodbowl Unlimited a community-driven organisation that seeks a sustainable and prosperous future for the Goulburn and Murray valleys.

The alliance comprises farm, community and business leaders.

> "Without the project the Goulburn Valley would not have a future because it would be eclipsed by other areas around the world."
> -Linqage International Director Chris Le Marshall

John Corboy
Orchardist, businessman
"This project protects our future as farmers and our children's and grandchildren's futures. It's a good deal."

Stephen Mills
Dairy farmer
"Everyone wins under this plan – irrigators, the environment and regional development."

Peter Bicknell
Accountant
"The economic multiplier effect of a $1 billion project will give our local economy unprecedented growth opportunities."

Adam Furphy
Businessman
"The flow-on effects of this investment are going to be enormous. The ripple effect out to service industries and the jobs that will be created will be staggering."

Michael Zurcas
Orchardist, businessman
"I am backing this project 100 per cent. It is our best chance of securing the long term future of our industry."

Stuart Rea
Dairy farmer
"This deal has secured dairy farmers better infrastructure and a more profitable future."

Russell Pell
Dairy farmer
"These works will ensure the future of dairying for the next generation."

Alistar Purbrick
Tahbilk Wines
"The Goulburn-Murray infrastructure needs to be replaced before it becomes unworkable. The big win is that the upgrade will free up 450,000 megalitres."

Jim Andreadis
Businessman
"I ask all readers to carefully consider the facts before they make up their minds. I think when they are aware of the facts they will agree with the plan."

Dudley Bryant
Dairy farmer
"This plan will allow farmers to invest and grow their businesses with confidence and will draw water back to the region."

Rocky Varapodio
Orchardist, businessman
"The proposal will upgrade our inefficient irrigation infrastructure and achieve savings that will benefit the primary producer; this is a great outcome."

Ross McPherson
Managing director McPherson Media
"This is our best chance to build future prosperity since Eildon was commissioned. It is the biggest regional renewal project in the entire country."

Nigel Garrard
Chief executive officer SPC Ardmona
"This project will deliver a more reliable delivery system to our growers."

Peter McCamish
Businessman, retired orchardist
"We have a once in a lifetime opportunity to restore the Goulburn-Murray Irrigation District to a world class irrigation system, saving 450 gigalitres."

Paul Quirk
Dairy farmer
"The whole idea is visionary – it not only brings water back through savings, it also provides a huge cash injection into our failing irrigation infrastructure."

David McKenzie
Property valuer
"This is the most significant opportunity for the region since the irrigation network was first established."

Suzanna Sheed
Lawyer
"The project will ensure the agricultural security of this region for years to come."

Ken Muston
Businessman
"The region will receive a huge long term benefit through spending on infrastructure for water savings and productivity gains."

Peter Johnson
Lawyer
"This is primarily a proposal for the benefit of the Goulburn Murray Irrigation District. Don't be distracted by the pipeline to Melbourne. We have to focus on the regional benefits."

Maurice Incerti
Chief executive officer Murray Dairy
"This is a huge investment that will help underpin the dairy industry's and the region's economic future."

Deal based on "new" water

Modernising the Foodbowl will take up to eight years to complete and will involve a total investment of $2 billion.

Up to 900,000Ml of water is currently lost through leaks, evaporation and other inefficiencies.

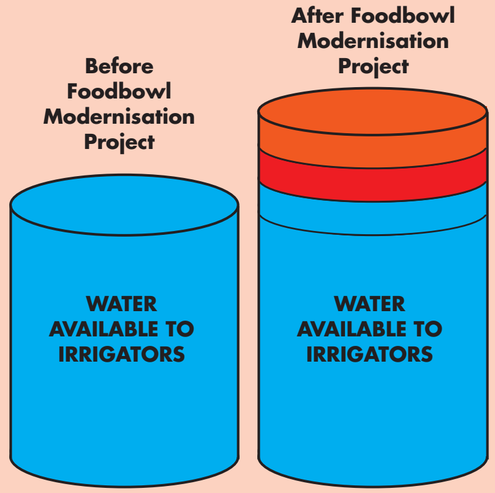
Approximately half of this water will be saved over the life of the eight-year Foodbowl Modernisation Project.

Stage 1 of the project will secure savings of approximately 225,000Ml with the second stage to capture the remaining 225,000Ml.

Melbourne Water will be entitled to one third of the savings from Stage 1. It has agreed it will not enter the market to source additional water from the Goulburn-Murray Irrigation District.

Under the deal, water savings earmarked for farmers will be added to each irrigator's water entitlement.

Metering of irrigation outlets will be one measure used to achieve the water savings, but under the arrangements new metering will be the last phase of the project following refurbishment of the system.



> "A do-nothing option leaves us with less water, a broken down irrigation system and no investment in our region."
> - John Corboy.

As per Country News Article page 3 Monday, June 25, 2007.

Increased employment opportunities and a higher gross domestic product in the Goulburn Valley are among the anticipated impacts of the construction of the $1 billion upgrade to northern Victoria's irrigation system.

The project, which the Victorian Government agreed to fund last Tuesday, will see a new pipeline built to take water from the Goulburn River to Melbourne.

Greater Shepparton City Council director of corporate and economic development Dean Rochfort said an investment of this kind in northern

The Foodbowl modernisation project will see $250 million invested each year for the 4 years of stage 1 of the project.

This investment will represent the biggest regional renewal project in Australia and the biggest investment in the region since the construction of Lake Eildon. The economic multiplier effect will be massive with jobs and opportunities flowing throughout the region.

The gross domestic product of the region is expected to rise 12 to 15 percent during eight years on top of normal growth.

A STEERING COMMITTEE WITH REGIONAL PARTICIPANTS WILL BE FORMED. ITS ROLE WILL BE TO FINALISE KEY ELEMENTS OF THE PROJECT, INCLUDING:

- *Governance arrangements that involve local government and community input into issues such as the works program and sharing of water savings.*
- *Safeguards for northern Victoria concerning water savings destined for Melbourne.*
- *How the water savings destined for irrigation and the environment will be delivered and managed.*

For more information on 'The Foodbowl Unlimited' plan, phone John Corboy on (03) 5855 2434 or visit the website www.ourwater.gov.au

$1 BILLION IN IRRIGATION UPGRADES

The economy of the Goulburn and Murray valleys has been built on an irrigation delivery system that is more than 80 years old and has become dilapidated and outdated.

Evaporation, leaks and inefficiencies see up to 900,000Ml of water going to waste every 12 months.

With the system in decline and confidence low, irrigation water is being sold out of the region at an alarming rate.

More than 30 of every 100 megalitres released from Lake Eildon for irrigation is now lost through leakage and evaporation. Under the project this figure will be halved.

Under the project, a pipe will be built to send Melbourne's share of the water from the Goulburn River north of Yea to Sugarloaf Reservoir where it will be treated for urban use. The pipe will be transferring an agreed maximum of

Current irrigation channel

Modernised and lined irrigation channel

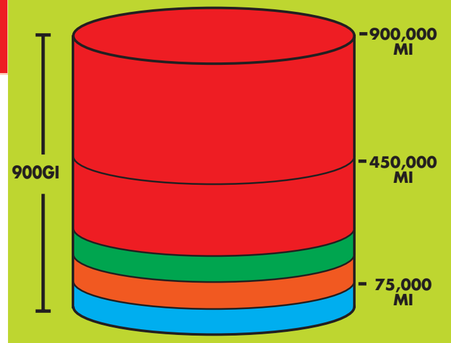
75,000Ml annually. The cost of the pipe is not part of the $1 billion announced by the Victorian Government.

Under the project, 20,000Ml of saved water will be provided to Melbourne via the pipe by the year 2009, increasing to 75,000Ml by 2010.

With less water lost to the system, security of water for irrigators will be improved.

Water will be delivered faster and at greater volumes through the upgraded system.

WATER LOSSES FROM CHANNEL SYSTEM



- 900,000Ml Lost irrigation water every season
- 450,000Ml Target for saving under stages 1 and 2 of Foodbowl Modernisation Project

Distribution of saved water under stage 1:

- 75,000Ml of saved water piped to Melbourne
- 75,000Ml of saved water to environment
- 75,000Ml of saved water to irrigators

Appendix Four

North-south pipeline figures all at sea

Melissa Fyfe
June 21, 2009

THE basic assumptions used to predict the amount of water to be delivered to Melbourne from the north-south pipeline have "now proven to be wrong", Victoria's top water adviser has admitted.

The managing director of the Government's Office of Water, David Downie, said factors such as expected flows, water quality and rainfall predictions for the pipeline and irrigation projects had undergone "substantial changes" since April last year.

Mr Downie made the admission while giving tribunal evidence in a freedom-of-information case last week. His evidence also contradicted the Water Minister's announcements on when the controversial pipe and desalination plant would be finished.

He said Melbourne Water had told the department the pipe would not be completed until at least the middle of next year, while Water Minister Tim Holding told Parliament last month that water would flow down the pipe as "early as February 2010".

Mr Holding refused to answer any questions on the record about Mr Downie's evidence and also refused requests for the correct assumptions the Government is now using to predict the flows from the north-south pipeline.

The Government has been under pressure to show how it will provide a "long-term average" of 75 billion litres of water to Melbourne each year from the $600 million-plus pipeline. The water will deliver to Melbourne a third of water savings from the upgrade of northern Victorian's irrigation infrastructure.

Ongoing drought has drastically cut the amount of water lost in the irrigation system — and therefore the amount that can be saved — from an average of 900 billion litres a year to 343 billion litres in the previous Goulburn-Murray irrigation season.

Mr Downie also told the Victorian Civil and Administrative Tribunal the food bowl modernisation project was unlike other Government projects. "Government policy was made before the business case was done," he said.

The Opposition is seeking documents sent from the Department of Sustainability and Environment to Melbourne Water in April 2008, which show, among other things, how much water is expected to flow down the north-south pipeline.

The Government is refusing to release the documents because they say the figures were only a snapshot, have now changed, were prepared by junior staff and "do not contain sufficient information for an uninformed audience to interpret them correctly and reasonably".

The Government has also refused *The Sunday Age's* requests under freedom of information for the business case for the $2 billion food bowl modernisation project.

In other evidence, Mr Downie said the desalination plant might not be finished until early 2012 — again at odds with Mr Holding.

Under attack from the Opposition, the Government has admitted to *The Sunday Age* that construction for the $3.1 billion desalination plant is running behind schedule. But Mr Holding said water would still be delivered as promised, at the end of 2011.

The Government originally said construction would start mid-year, but this looks set to shift to the second half of 2009, as a private partner is still to be appointed.

"The Brumby Government should stop the spin and take responsibility for delivering water major projects on time and on budget," said Louise Asher, shadow minister for urban water.

But Mr Holding said the plant, which will provide 150 billion litres of water, would start working "exactly when we said it would", at the end of 2011. The delay, which the Government did not explain, would be made up by the work already done in the planning phase.

"In the next few months we will be announcing the successful bidder and we expect they will begin construction shortly after," he said.

But Ms Asher said government fact sheets said the plant's construction would take 2¼ years. "Construction will have to commence by the end of September 2009 to meet this deadline," she said.

Appendix Five

WHERE THE GOVERNMENT

GOT IT WRONG!

The Following extract was taken from 'The Next Stage of the Governments Water Plan 2007.pdf', page 8

Food Bowl Modernisation

Together the Goulburn and Victoria's Murray irrigation systems account for over 70% of Victoria's stored water, and provide 3,500 GL of water for irrigation annually. Up to 900 GL of water is lost annually from these systems due to poor measurement, leakage, seepage, evaporation and an outdated irrigation delivery system. Around 30% of water in these systems is lost.

Irrigators and their regional communities want to fix irrigation infrastructure and reform irrigation practices. Irrigation modernisation provides an opportunity to generate new water and share that water between improving reliability of supply for irrigators, environmental flows and urban use. It also provides an opportunity to improve the level of service to irrigators.

Until now, irrigation modernisation projects have been undertaken on a small, localised basis. This plan commits to a comprehensive modernisation strategy across the Goulburn and Murray irrigation areas.

Under this plan, a major irrigation modernisation project will generate new water by addressing system losses.

This Food Bowl Modernisation Project has potential to capture up to 450 GL of lost water annually. The Government and water authorities will invest $1 billion in this project. It is expected that this will deliver up to 225 GL annually to be shared between the irrigation system, the environment and Melbourne.

As part of the Food Bowl Modernisation Project, the Sugarloaf Interconnector linking Melbourne to the Goulburn River will be built. It will deliver up to 75 GL of new water annually to Sugarloaf Reservoir in Melbourne. Melbourne will benefit in 2010 from the first available water saved through irrigation modernisation.

The Government will immediately establish a steering committee to guide the further development of the project.

This year Irrigation used 578 GL of water, a figure not even close to 3,500 GL.

This year the water lost from the system was 343 GL, a figure not even close to 900 GL.

This year around 40% of the water in the irrigation districts was lost. This figure has grown because of climate change and farmers exiting irrigated agriculture

In 2010 all available water generated from water savings programs will be used by Melbourne regardless. There will be no sharing involved. All of these water savings have been paid for by environmental water savings programs.

The Government is claiming it can still save 425 GL, not 450 GL of water as described here. These figures do not include the unfinished water savings projects of 95 GL which when added together massively overstate the potential water savings in the Foodbowl. Just 343 GL was lost from the Foodbowl Districts this year

The Murray Darling Basin is in crisis and because the Victorian Government will take 75 GL of water regardless of the water savings achieved, farmers and the environment will suffer.

DSE and independent analysts state that the Governments water savings targets will not be achievable under current climatic conditions.

Appendix Six

GOULBURN-MURRAY WATER

Media Release

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Release Date: 2 July 2009

The exodus from irrigated agriculture can only be described as a stampede

G-MW expects applications to double for 2009/10 water trading ballot

With the deadline for applications for inclusion in G-MW's 2009/10 water trading ballot closing on 3 July 2009, G-MW has confirmed that applications have increased substantially compared to the past two years. G-MW warns that the higher number of applications will increase the overall time taken to complete all applications.

According to G-MW General Manager Operations Ian Moorhouse, G-MW has conducted a ballot at the start of season for the past two years to ensure all applicants have equitable access to trade opportunities affected by the 4% limit on the volume of water shares traded out of an Irrigation Area and the 10% limit on volume of water in a system that is not associated with land.

"The ballot takes place over one or two days under independent supervision and determines the processing order for applications – every ballot application is given a number in the processing queue. G-MW staff then begin processing applications in the ballot order."

"Last year we took around three weeks to process more than 400 applications, but this year we expect processing will take much longer simply because we expect applications to at least double to more than 800 applications," said Mr Moorhouse.

Individual customers will be advised of the outcome for their application as soon as it is approved, but need to be aware that it may take at least two months to finalise all of the applications. If a ballot application is unsuccessful the application will be returned to the applicant with a refund.

The number of applications received by G-MW has been boosted by applications accepted by the Commonwealth under its *Water for the Future* buyback program. Under the deal between Victoria and the Commonwealth, Victoria has agreed to exempt from the 4% limit 60,000 ML out of the current batch of applications to sell to the Commonwealth.

The Victorian Government has agreed to these exemptions provided the Commonwealth's purchase of water is coordinated with Victoria's irrigation modernisation program.

"All the applications forwarded to G-MW by the Commonwealth are included in the ballot to decide the processing order of applications," Mr Moorhouse said.

"This is done to ensure the Commonwealth is treated the same as all other applicants."

G-MW is working with the Northern Victoria Irrigation Renewal Project (NVIRP) to determine the initial criteria for exemptions. G-MW will apply the criteria to Commonwealth applications to determine whether an exemption is available.

The Victorian Government has announced its intention to remove the 10% non-water user limit in the next few months. However all applications in the 2009/10 ballot will still need to meet the requirements of the 10% limit. If the 10% limit is reached on a system in the 2009/10 ballot, applications will be returned with refunded fees and can be resubmitted at a later date.

G-MW, NVIRP and the Department of Sustainability and Environment will soon start work on how exemptions to the 4% limit will apply in future years.

"This is the first round in the newly-agreed approach to coordinate Commonwealth water purchases with modernisation of the irrigation system," said Mr Moorhouse.

Continues page 2

“We will be refining processes and criteria as we move through the different stages, and we will ask participants for their feedback on improvements for the future.”

In previous seasons G-MW initiated the ballot as a precaution, not in expectation of reaching the trade limits.

“In past years we didn’t reach 4% limits in any Irrigation Areas until well after the ballot processing was completed. The increased interest this year may see the limits reached earlier in the year – but we won’t know for certain until processing gets underway,” said Mr Moorhouse.

Mr Moorhouse said anecdotal feedback from customers suggested some were looking to sell a portion of their water entitlements, but few were looking to exit irrigation.

“The sale of water shares is an incomplete and often misleading indicator of what is happening on the ground. The real measure of whether farmers are leaving irrigation is whether they are giving up their delivery share – not whether they are selling water shares – and we have seen no significant trends in delivery shares to date,” said Mr Moorhouse.

“Until irrigators also give up their delivery share, they retain the right to have water delivered to their property into the future and continue to contribute to the costs of operating and maintaining the irrigation network in their Areas.”

- ENDS -

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