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Submission to the: **Senate Legal and Constitutional Affairs References Committee**
Provisions of the Water Act 2007

Due: 18th March 2011

Submission by Peter Murray,

- Profile

I am a retired Real Estate Valuer with over 35 years experience in government valuations in Victoria, firstly with the State Rivers and Water Supply Commission (SRWSC) and later with the Valuer Generals Office.

- Rationale

In summary I am attempting to alert the Committee that the Northern Victoria Irrigation Renewal Project (NVIRP) - experience and plans in irrigation modernization should not be accepted at face value. In their present form, the processes are clearly an inequitable means of recovering water for the environment, not warranting the expenditure of the near $1 billion of Commonwealth funds already allocated.

The Water Act 2007 should reflect the limited sources of equitably recovering water for the environment and be amended to permit widespread irrigator and community input to ensure food security and regional well being.

My concern is that the irrigation modernization process - Northern Victoria Irrigation Renewal Project (NVIRP) – is a highly politicized process that formed with a critical component being "irrigation savings" to be diverted to urban supply; primarily Melbourne via the controversial north-south pipeline and other pipelines serving major regional centres. In the process, the depth of experience that resides in engineers of the former SRWSC; in channel construction and irrigation practices, has been cast aside, to be replaced largely by very costly technical innovation. Further the process has lacked broad agreement being imposed "from the top" with only government approved farmer and business representatives as overseers and drivers.

(Stage 1 of NVIRP aimed to save 225Gl – one third each to Melbourne, irrigators and the environment: the cost - $300 million to be contributed by Melbourne Water, $600milliom by Victorian taxpayers and $100million by irrigators. Stage 2 aimed to save 200Gl – to be shared equally between irrigators and the environment – the cost of approximately $1billion to be largely funded by the Commonwealth Government).

A critical stage in the NVIRP work has now been reached. Recently Murray Smith CEO of NVIRP (an appointee of the previous government) circulated his opinion with some quantification, that Stage 1 of NVIRP was well on track to achieve the goal of 225 gigalitres (gl) of water savings – he went on to say this was being proven by independent audit. **As I have detailed in the following submission, the sources of savings and the audit methodology are highly questionable and there is no acknowledgement that many irrigators particularly those away from the trunk channels face greatly increased costs, <u>leading to the forced sale of their water entitlements.</u>**

Clearly the implementation of NVIRP Stage 2 and gaining water "savings" in this way may well appeal to the Minister[1] and Government, should a goal of 3000 gigalitres (or even) 2000 gigalitres) of current irrigation entitlements be taken for the environment. It is in this context that the recent public statements by Murray Smith are of special significance in that they could provide an undue rationale for Commonwealth funding of Stage 2 of the NVIRP Plan to proceed – a plan that one might say is already "spade ready" with the necessary Commonwealth approvals over funding and the environment in place.

<u>The submission that follows</u> is largely in the form originally submitted to the draft **Public Environment Report (PER) for the " Northern Victoria Irrigation Renewal Project (NVIRP) within the Goulburn Murray Irrigation District, Victoria - Commonwealth EPBC Reference: 2009/5123.** As such it provides a comprehensive cover of the processes associated with NVIRP such as environmental effects, water savings and political ramifications backed by many references**. As such it is a resource to assist in the evaluation of several critical areas including:**

- The validity of claims made by NVIRP management and the former Victorian government of "savings" of 225gl from Stage 1 and projected "savings" of 200gl from stage 2.

- The economics and practicality of expending close to $1billion of Commonwealth funds (already approved for Stage 2 of the project) **compared to alternatives that include on farm assistance to maximize water use efficiency and hence water savings.**

- Inviting further consideration of environmental matters including the effects of NVIRP works on many minor wet lands, water courses and the Ramsar listed Kerang Lakes wetlands.

[1] It should be noted that in a recent speech Minister Burke made reference to the possibility of compulsory acquisition of water to fulfill environmental needs.

1. Public Environment Report (PER) regulating NVIRP works - Scope and Preamble.

The NVIRP Project (or Food Bowl Modernisation project) plans the expenditure in excess of $2 billion of public funds. The Project is to make vast changes to operations[2] with attendant environmental and social disruption. That the NVIRP was conceived on the basis of substantial water savings being made, much of which is said to benefit the environment, makes probity and the quantification of savings paramount.

Both the Statement of Reasons for a Decision on Controlled Action under the EPBC Act 1999 (Section 75) and the Statement of Reasons for a Decision on Assessment Approach under the EPBC Act 1999 (Section 87) for the NVIRP the Department acknowledge the following

Background 2 -----" NVIRP consists of a systemic program of irrigation modernisation within the Goulburn Murray Irrigation District (GMID), projected to increase irrigation efficiency from – 70 per cent – 85 per cent, realizing up to 425 gigalitres per annum in water savings over two stages (primarily based on two separate funding tranches) and Background 3 "While the allocation of the projected water savings is not subject to the referral (see paragraph 4), the Victorian Government has indicated that they would be divided 1) existing entitlement holders within the GMID (primarily irrigators); 2) the Melbourne metropolitan water grid (to be transferred via the Sugarloaf Pipeline); and 3) environmental uses (with a portion under the control of the Victorian Government and portion under the control of the Australian Government).

It is a major concern that the Department in both Statements *of Reasons (Sections 75 and 87)* has indicated an unquestioning acceptance of the "savings' prediction **(Background - point 2).** At no point has the Department in any of the documentation provided for comment on the PER, displayed any cognizance of the need to evaluate the "savings" independently of the proponent and the then Victorian government driving the NVIRP works.

It is also inexplicable that the Department further distanced itself from the centrality of "savings" by eschewing the opportunity of ensuring savings are equitably distributed **(refer point 3)** despite the controlling provisions being intrinsically tied to the availability of savings.

Moreover, the credibility of this whole exercise has to be questioned when the proponent is permitted to exclude from the current PER, major irrigation/waterways that are a major source of water loss in the NVIRP – areas obviously scheduled for major works in the near future –

Viz - Point 4. *"---- defined as the modified operation of the fully modernized GMID"* ---- specifically excludes the following components:

[2] Plans for over **800 dairy farmers and 350 mixed farmers** to exit from Irrigation Districts were disclosed in the Victorian Government's Food Bowl Modernisation Project Draft Report released for public comments closing October 2007. This virtual social engineering –stemming from the modernization of the main channels and leaving many irrigators located on the spur channels with insurmountable logistical problems to retain water is seen to be carried forward in the Northern Region Sustainable Water Strategy guiding the NVIRP. Page 2 (1.4) of the NVIRP referral pro-forma letter – final 5/10/09, **foreshadows reducing the 6600 kms of channels in public ownership to 2900 kms – an action destined to seriously disadvantage many current irrigators located within the existing GMID that covers 6000 square kilometers.**

- ***all construction works***
- ***reconfiguration works within the Kerang Wetlands Ramsar site.***
- ***Reconfiguration of the Little Murray Weir and modernization of the irrigation system in the vicinity of Swan Hill and***
- ***Administrative decisions on the allocation of resulting water savings***

The Kerang wetlands Ramsar site is an area with very high ecological values - an interconnected series of Lakes that are an integral part of the irrigation infrastructure and natural (waterway) carriers from the local irrigation district of Torrumbarry, that also connects to other irrigation districts. Significant work is already occurring affecting the wetlands and with future works will have very significant environmental impacts.

Moreover, it is illogical that (Sections 20 and 20A - Listed migratory species) were added to the referral controlling provisions by the Commonwealth Minister - if it were intended the effect of the NVIRP works on the whole of the Goulburn-Murray Basin Ramsar and icon sites – were to be excluded from examination.

It should also be noted there are many natural irrigation delivery and drainage components currently connected and used by the irrigation districts. NVIRP reconfigurations plan to remove many of these carriers, but the process is under development and therefore the effects are not adequately seen in the referral. A prime example is the Serpentine Creek which has been a haven for threatened species, part of the irrigation system for more than 100 years and a fine example of a healthy creek habitat.

Narrowing the investigation of the referral down to a few wetlands that are seen to be strategic is inappropriate, particularly given the scale and volume of the water saving extraction claimed from the referral area.

The selective omissions from the PER can only add to the confusion and complexity, the NVIRP are introducing in defining "savings" – a process then wholly in the hands of the Victorian government and its compliant instrumentalities.

It should be noted that despite these deficiencies Minister Garrett subsequently gave approval for Stage 2 of the project to proceed substantially on the basis outlined in the NVIRP's submission.

2. <u>Availability of water savings from NVIRP works.</u>

All controlling provisions for the PER are highly dependent on water availability, much sourced from current irrigation works: viz: outfalls to rivers together with lakes and wetlands carrying irrigation supplies; that have been in place for more than 100 years. Any diminution in supply as

a consequence of NVIRP works emphasizes the absolute critical nature of water savings and the need for the Federal Minister to verify their availability

Indeed the (Victorian) Minister in his reasons for his decision not to require an EES for the NVIRP referral under the Environment Effects Act 1978 places heavy emphasis on substantial water savings being available to mitigate environmental damage from NVIRP works.: *(Ministerial Decision Under the Environmental Effects Act 1978 (NVIRP) dated 14 April 2009 - referral number 2009-0 – Attachment 4).*

There is no evidence from DEHWA (refer Section 75 and Section 87 Statements of Reasons) of a realization that acceptance of the concept (as defined by NVIRP) of a **long-term cap equivalent (LTCE)** on which to plan water availability for all users is akin to "building a house on shifting sands", with a collapse inevitable.

Nevertheless this concept is advanced by SKM - refer - *Assessment of hydrological changes from the operation of the NVIRP modernised GMID*[3] *(Pages 23 & 24)* - **displaying charts that neatly fit the 425 GL of "savings" proffered as being achievable by the government and its Food Bowl Alliance supporters** as far back as 2007 when the Food Bowl Modernisation project was instigated.

Reams of attachments including the *NVIRP's* ***Water Change Management Framework (WCMF)*** – *Attachment* 5 are ostensibly exercises to assuage widely held concerns, that the very extensive NVIRP works and irrigation management changes, are ill informed and economically unsound – destined also to be environmentally damaging.

The release of the NVIRP Stage 1 Business plan on 3 February 2009 and the Water Savings Protocol (Audit) on 12 February 2009 are a continuation of this and add to the complexities that deny the average citizen and farmer their right to understand and where necessary combat, the massive changes besetting their industries and communities.

DEWHA should have been obliged, not to be overwhelmed by this plethora of technical reports and to have looked to other checks outside that supplied by the proponent to ensure the veracity of savings.

Alternatives assessments of savings are available - Unless the work of GM Water and its predecessor the State Rivers and Water Supply Commission are cast aside, there are records of annual measurements of water delivered (measured out of storages in ML) and water sold/paid for by measure in ML - leaving a balance in ML that is the water "lost", of which a substantial part is not physically[4] and more significantly not economically recoverable. This simple, but

[3] http://www.nvirp.com.au/downloads/Planning/PER/App_18._Surface_Water_Hydrology_Report.pdf

[4] For example the Kerang wetlands an icon site has an estimated long term loss that varies between 70Gl and 100Gl per annum, with losses reducing to accord with lower allocations to irrigators.

telling calculation provides **overwhelming evidence that the predicted average annual savings are not credible:**

The NVIRP referral forecasts long-term annual average water savings of up to 425 gigalitres over the NVIRP area which includes the Kerang Lakes Wetlands and the Swan Hill area. (SKF)

With the total losses from the entire Goulburn Murray Irrigation District (GMID) system in 2007-8: 379 GL and in 2008-9: 343 GL (i.e. water released less water used on farm), it is mathematically impossible to achieve the predicted savings over the NVIRP works area – a lesser area than the GMID.

(Note CG Channels 1,2,3,4; Shepparton Modernisation and GM-W Reconfiguration, parts of the GMID predict a further 94.6 Gl of savings making a total of 519.6GL over the whole of the GMID "Food Bowl" – making the 425 GL from NVIRP works totally unrealistic).

It is widely understood the original calculations for the food bowl savings plans were based on a 115 year average loss of water of 900 GL per year. The last time the system lost that much water was in the early 1990's when the system provided irrigators with 100% of their Water Right and a significant share of lower security, or sales water.

On the other hand the 2007-8 season saw only a delivery of 578 GL to irrigators – a record low – with losses of only 379 GL.

Subsequent changes affecting many aspects of GMID/NVIRP's operations ensure that the conditions that brought about the losses on which NVIRP predictions are based can never re-occur. No amount of spin can deny the long term trend of declining water lost from the irrigation areas represents a direct reduction in potential water savings. Irrigation losses and the potential for water savings are set to decline even further through out-of-District Water trading, Government Buy-Backs and climate change - all have the effect of reducing the potential for water savings. Thus the adoption of "*long term annual average water savings*" is unscientific and unsupportable; rendered particularly so by the relatively recent threshold of de-coupling water entitlements from land.

- With **regard to climate change** - a recent study by the Victorian Government (Northern Water Sustainability Study) predicted that under the effects of a medium climate change scenario the inflows of water to the Goulburn System will be 1000 GL less – adding to the rapid decline in water availability occurring over the past 20 years.

- **More significantly - Out of District Water trading** has seen the Food Bowl Districts - largely coincident with the NVIRP area – lose 300 GL (or 18%) out of an original 1600 GL of high security water entitlement since the introduction of water trade in 1991. Most of this water has been taken up by horticultural planting in the lower Murray Basin.

The impact of transferring water from Food Bowl Districts is acknowledged by the NVIRP see Document 5 of the NVIRP referral (Water change Management Frameworks) page 24 ***"The Commonwealth water purchase program will also reduce the outfall volumes that may have previously been entering wetlands and waterways. It has the potential to add to the effects of the existing trade out of the GMID area. ---- and the same document*** - page 19 – bypasses concerns with the environmental effects of water trade/transfer Viz: ***"Mitigating any impacts of the transfer of water through trade is outside NVIRP's scope"***

- **The Colleambally Irrigation District (NSW)** is cited as a model for the NVIRP to emulate (see attachment 7 *DSE water savings framework for NVIRP Project page 2 - 2.2 The NVIRP Objectives)***.** However, in predicting future average losses, it is a key fact that even in a modernized system; **a season of low allocations does not result in a similarly proportionate decrease in water loss.** For example the remodelled Coleambally Irrigation District had an efficiency of just 54% in the 2007-8 season, dropping nearly 36%; coincident with low water availability. Subsequently efficiency has fallen further coincident with lower water availability – a clear message **NVIRP's predicted efficiency is not sustainable on a year by year basis, signifying a greatly reduced potential for "savings".**

  <u>The correlation, existing between Water used by the Food-Bowl Districts and the Food-Bowl Districts' Efficiency is graphically depicted – See Appendix 1.</u>

- Without breaking down losses to the various components – consider this - if the 6600 km of open earth channels were to be replaced by a **full piped system** operating at an efficiency of 85% then the last time the Governments target savings would have been achieved is five years ago . **However, only 320 km (approx. 5%) of channels are proposed to be lined (not piped)** as a part of the modernisation process – *refer page 7 of Referral of the (NVIRP) Project*[5] *for a decision on the need for assessment under the Environmental Effects Act 1978.*

NVIRP is not seen to adequately compensate for the ongoing lessened deliveries, or acknowledge that fast diminishing water deliveries are in tandem with a diminishing potential for water savings. As a consequence the icon sites of the Murray-Darling Basin and many listed threatened species and communities that reside throughout the irrigation network are placed at greater risk as NVIRP works facilitate diversion of water from the MDB to Melbourne.

In evaluating the PER it cannot be ignored that the validity of water savings is central to the assessment. **It is clear that water savings have not previously been verified, with DEWHA** [6]

[5] http://www.nvirp.com.au/downloads/Planning/EES_attachments/090216_NVIRP_EES_Referral_Form_Amendment.pdf

[6] **See C08/15098 Sugarloaf Pipeline – reasons for a decision – controlled action (13th February 2008) – DEWHA first assistant secretary (Peter Burnett) states "I found that the water to be allocated for the proposed action is proposed to be sourced from savings identified by the Victorian Government. There was no information before me, for the purposes of deciding whether the proposed action was a controlled action, not to accept the availability of those savings).**

clearly reliant on no more than assertions by the Victorian Government and its agencies. **This omission is no longer sustainable or tolerable and certainly is not in accordance with the community's long held understanding that savings must be material and subject to <u>independent</u> auditing.**

<u>Summary:</u> There is overwhelming evidence that the predicted long-term annual average water savings of up to 425 gigalitres per annum is not achievable and consequently the environmental and other components of the savings will not being met. The flow on means savings are insufficient to offset water lost to the environment from NVIRP works – e.g. substantially reduced outfalls and channel shutdowns. In evaluating this aspect of the PER, DEWHA should have accepted that the information provided comprises largely unsupported technicalities. It has always been understood that the PER has to ensure a transparent and independent auditing of water savings claims, <u>that clearly eschews any retagging of water currently in productive use, or in beneficial environmental use.</u>

3. <u>Water savings from NVIRP works – defining savings.</u>

The quantum of losses attributed to the specific components of the system where savings are predicted to be achieved are highly questionable with the contribution of a number of the components to water "losses" widely disputed.

This view is re-inforced by the December 2009 Productivity Commission Draft Research Report "Market Mechanisms for Recovering Water in the Murray-Darling Basin – see "*Para 6.3 - <u>issues in assessing water savings</u>"*- **<u>Refer Appendix 2.</u>** .

This paragraph discusses a number of the common water savings measures - on farm improvements, outfalls, metering etc and concludes many of these actions *"brings about a reallocation of water rather than water savings."* Referring to accuracy of water metering the report concludes. *"While there can be good reasons for introducing more accurate water metering, achieving water savings is not among them".*

References to specific heads of losses claimed.

- **Water Savings and Connections Program** – SKF -Chapter 3 Page 14
  "*The precise extent and location of altered connections are unknown as they are dependent on individual landholder uptake. Physical works that are the landholder's responsibility are not included in the action being assessed in this report. However, for the purposes of assessing the impact of modernised operation of the GMID, long term annual average water savings from the connections program have been included, on the assumption that landholders will take up the opportunity to obtain NVIRP incentives to reconfigure their 'on-farm' delivery channels in the course of altering their service points."*

NVIRP are aware that the take-up rate of landholders to re-configure their farms is unknown, but then proceed to make the unwarranted assumption all connections will be

made and add in the "savings", introducing significant error into the LTCE assessment. The inclusion of such savings is false and unverifiable in the absence of comprehensive economic and social analysis on which a credible assessment should be based.

- **Page 99 of the Food-Bowl Modernisation Business Case[7] includes a chart referring to:**

  Works Component – Connections: Works - (including relinquishment of entitlement) 48GL

  It would seem that NVIRP are claiming 48 GL under this head as savings following connection work that results in irrigators relinquishing entitlements. If so, this must be challenged as a re-badging of HSWR (High Security Water Right) that has never been seen as an area where "savings" can be claimed under Stages 1 and 2 of the NVIRP program. **It is reprehensible if NVIRP contribute to irrigators relinquishing entitlement, whilst claiming same as savings.**

- **The Proponent NVIRP is claiming Metering losses far in excess of an Australian National Commission for Irrigation and Drainage Study (ANCID) – that shows a loss of only 2%.** Consequently, there is a widely held view that a proportion of the savings attributed to meter loss is being taken from the irrigators entitlements without compensation.

- **The argument that significant return flows (outfalls) *contribute to the downstream environment also has strong support from CSIRO Research*** - the publication *Water for a Healthy Country*[8] *"----A study looking at changes to return flows from irrigation management changes in NSW and Victoria since 1993/94, estimated a reduction of 90 GL/year*[9]*----. (Page 24) "*

- **Dr Richard Evan**s, the principal hydrogeologist from Sinclair Knight Merz; a keynote speaker at a 2010 Goulburn Broken Catchment Management Authority, convened Water Forum, **asserted groundwater and surface water in a catchment were interconnected –** referring to the process as the hydrological cycle. **He indicated removal of water from one source has an impact elsewhere e.g. channel leakage and seepage eventually add to major stream flows facilitating environmental benefits.**

- **The interaction between aquifer systems connecting irrigation areas and river systems is a part of unexplored science, but thought to be significant** as postulated by Professor Mike Young of the much referenced Wentworth Group of Scientists **(Ref: Droplet No. 13 of 28th September 2008)**

[7] NVIRP.com.au

[8] http://www.csiro.au/files/files/p7ga.pdf

[9] Meyer, W. (2005) Irrigation in perspective. Technical Report, CRC Irrigation Futures, Murrumbidgee Irrigation Area & Districts Land and Water Management Plan Working Group (1998), MIA and Districts Community Land and Water Management Plan.

- **Environment Victoria [10]refer to the CSIRO study** in their response to the "Our Water-Our Future Study of 19 June 2007, acknowledging ***that conservatively 10% of irrigation water will be lost to the environment from channel modernization*** and go on to say ----- ***"The Government must ensure that the modernisation project increases the Environmental Water Reserves for the northern rivers rather than undermining them".***

Accordingly, the proponent (NVIRP) by dismissing the effect on river flows from lessened outfall flows and seepage as relatively minor and able to be mitigated, is not acting with the diligence that is required to ensure that waterways and endangered species receive adequate protection.

- **In combating seepage it is noteworthy that the method adopted is lining with a thick black plastic which is not readily biodegradable.** The plastic raises significant environmental issues with a number of reports of both domestic and wild animals becoming trapped in the lined channels, unable to climb the slippery sides.

- **Mr. David Constable, a highly qualified engineer whose experience included serving as a Commissioner of the River Murray Commission** advocates the environmentally neutral clay lining of channels – a long standing and effective remedy for most channel bank leakage. ***Ref: submission by ex Officers of the State Rivers and Water Supply Commission[11] to the Victorian Upper House Inquiry into the Business Case for Water Infrastructure.***

- **A recent well researched and referenced paper[12]** *"THE CHANNEL LINING AND PIPELINE DECEPTION IN VICTORIA'S NORTHERN FOODBOWL PROJECT" By Kevin Long & Chris Poynton,* researchers from the Bendigo area is highly critical of the channel lining and the modernization process from a number of aspects.

To quote "*This paper aims to highlight fundamental flaws in the Victorian Government's Foodbowl Modernisation project, with initial focus on the $270 million Channel Lining component.*

Channel Lining is an expensive and ineffective attempt to create water savings, and is fundamentally insolvent. Its primary purpose has been to help politically justify the taking of water to Melbourne via the North-South Pipeline.

[10] ENVIRONMENT VICTORIA RESPONSE TO:OUR WATER OUR FUTURE: THE NEXT STAGE OF THE GOVERNMENT'S WATER PLAN, RELEASED 19 JUNE 2007 . http://www.envict.org.au/file/EV_position_on_next%20stage_water_plan_July07.pdf Page 2

[11] http://www.parliament.vic.gov.au/council/scfpa/water/submissions/SCFPA%20Water%2023.pdf

[12] http://www.thelongview.com.au/documents/CHANNEL-LINING-AND-PIPELINE-DECEPTION-Long-and-Poynton-v1.0.pdf

The Channel Lining Project proposes capital expenditure of $400,000 per km of channel, in order to re-direct seepage flows that can only generate an extra $891 of revenue per km per year for water authorities. Clearly, this project can never pay for itself.

Channel Lining merely re-directs water away from its current use in the environment and local aquifers. Such water is not "saved" but merely transferred from one use to another.

In effect, Channel Lining is one of the most expensive forms of water trade ever devised. *This paper identifies numerous other problems within the Government's broader $2 billion Foodbowl Modernisation Project", including:*

(1) the death-trap design of plastic Channel Lining;
(2) much of the new infrastructure is at risk of becoming superfluous "stranded assets";
(3) the questionable viability of the North-South Pipeline due to reducing water yields;
(4) the breaching of the principles of the Murray-Darling Basin Cap based on the false definition of "water savings".

Messrs Long and Poynton also advise *"A Royal Commission into the Foodbowl Project and North-South Pipeline is suggested"*. **Such is their concern and a valid consideration in the evaluation of this PER and the critical measure of "savings".**

4. Auditing of NVIRP claims of water savings.

The Water Savings Protocol[13] (AUDIT) can be described as **a highly technical 108 page manual** literally filled with hundreds of variables, utilizing highly technical mathematical analysis. It includes such esoteric concepts as a differentiation between channel bank seepage and channel bank leakage, under varying water flow rates and differing soil types.

Despite the high relevance of the audit to evaluation of the PER, the NVIRP stage 1 water audit[14] report was only released to the public on Friday 12th February, leaving insufficient time for submitters to the PER to provide the critical input this has and will draw.

As the audit was completed in October 2009, one can only conclude the delayed release of the documents was to assist NVIRP by withholding unfavorable information from wide scrutiny and criticism. The delay is reprehensible - the Auditor General called for information of this nature almost 2 years ago (in 2008) and the veracity of water savings and assessment methodology is central to the future of the GMID and the associated environment. The shroud of secrecy belies

[13] http://www.ourwater.vic.gov.au/programs/irrigation-renewal/water-savings-protocol/water-savings-protocol-technical-manual

[14] http://www.ourwater.vic.gov.au/programs/irrigation-renewal/water-savings-protocol/first-independent-audit-of-water-savings

the Minister's clarion call of transparency when announcing the WSP and continues a lack of accountability that besets the North-South pipeline and continues with the NVIRP processes.

The following are a few of the many points of concern, the NVIRP Stage 1 Water Audit Savings Report raises, that indicate a high probability that planned water savings are unrealistic with consequential impacts on MNES and the economic and social stability of GMID affecting food security and export industries.

(This audit was conducted by the Queensland based firm Cardno)

1. New meters and measuring devices being installed by NVIRP have not been validated and verified in accordance with the manufacturer's recommendations and relevant Australian Standards.
The auditor commented on the absence of the necessary documentation during the course of the audit - page 38 Cardno-NVIRP audit report.

This has major consequences with claimed savings from metering of 103.8 gl and the failure of NVIRP to provide credible proof that the (expensive) new meters are any more accurate than the Detheridge regulator wheels they replace.

2. The audit revealed that there was a highly questionable reliance on estimating flow rates to ascertain losses at Unmetered Outfall s involving dipping a calibrated stick in the flow and making a "guesstimate" of the likely duration of the flow. Page 18 Cardno NVIRP Audit Report.
It is noted NVIRP claim "savings" from Outfalls of 58.5GL and it must be said that this too reliant on "guesstimates" by bailiffs to ensure any credibility and incompatible with a $2 billion project reliant on savings.

3. In addition the audit found outfall record keeping undocumented, ad hoc and inconsistent, varying from area to area. Staff other than the bailiff provided adjustments to readings (for outfalls) resulting in some figures not being credible – documentation was scant with reasons not documented. Page 18-19 Cardno NVIRP water audit report

4. Automated outfalls have experienced recording problems in calculating outflows. The system has recorded outflows when channel levels are below the outfall level. Although investigated and adjusted, no records of these adjustments are kept on file. Page 19 Cardno NVIRP water audit report.

Given this, there can be little reliance on the veracity of water savings from outfalls.

5. Water savings -Bank Leakage – The Auditor advised that alternative methodologies for calculating bank leakage water savings be investigated and evaluated by the Water Saving Protocol Implementation Review Committee. This arose from the 2008-09 water balance data losses to calculate water savings containing inaccuracies; e.g. negative leakages in one district resulting in perceived excessively high water saving figures. Page 21 Cardno NVIRP Water Audit Report

The Goulburn Murray Water Authority (GMW) responsible for irrigation delivery provided confirmation of the unsuitability of the methodology, advising the auditor of their opinion the water balance would not be suitable for calculating Phase 3 water savings for leakage Page 21

It should be noted that bank leakage savings have been estimated to be 46.2 GL

6. Inaccuracy of input data The auditor observed inaccuracies of input data and calculations ranging from 0.01of a Megalitre to 0.1of a Gigalitre – Page 37 Cardno NVIRP Water Audit Report

7. Misinterpretation of Technical Manual *"As part of our audit, it was discovered that the calculation of the Outfalls water savings had been calculated based on a misinterpretation of the Technical Manual. The water savings were not calculated on an "outfall by outfall basis". The significance of the error is minor however the water savings were recalculated in accordance with the strict interpretation of the Technical Manual. Both GMW and NVIRP senior staff have expressed concern over the interpretation"*

"It was also noted that outfall record keeping was largely manual and was sometimes adjusted (with no audit trail) where the results were known to be inaccurate. A number of improvement opportunities were identified in relation to the collection, verification, management and control of this data." Cardno NVIRP Water Audit Report Page iv

8. Channel Remediation - "*NVIRP & GMW have used different methodologies for calculating water savings from channel remediation works. Further, due to the unresolved issues with the water balance, they have used the Phase 1 theoretical methodology in calculating the Phase 4 estimate and Phase 2 theoretical methodology for the Phase 3 estimate*

Pre and post works pondage tests were not carried out by GMW to establish accuracy". - Cardno NVIRP Water Audit Report Pages 22 & 24.

This sample of issues, errors, inaccuracies, lack of record keeping etc must surely raise serious concerns that the WSP results are not reliable and the question is again raised how can DEHWA give credibility to the head-line savings of 425 GL which NVIRP and the (former) Victorian government have continually proffered.

It is a major concern that the WSP (Audit process) states it is "not relevant to assessing the environmental effects of irrigation modernization projects". How can DEWHA accept this as valid, when it is self-evident that the authenticity of water availability is critical to "environmental effects" and with this also goes the authenticity of the projected shares for irrigators and the Melbourne N-S Pipeline?

Moreover, where is regard shown for the Minister's Guidelines Page 7 Relevant Impacts states: "Where *water savings are anticipated, the methods for calculating these savings, as well as underlying assumptions, sources of error….must be explained."*

The selection by the proponent Government partner (DSE), of a private firm based in Queensland was unexpected. The CSIRO with longstanding experience in irrigation research would have gained much wider public acceptance in the role of auditor. I question whether the bypassing of the CSIRO might result from the CSIRO submission[15] to the Victorian Upper House Inquiry into the Business Case for Water Infrastructure where it was indicated aspects of government water savings might be less than being proffered.

The integrity of DEWHA processes in assessing the NVIRP under the controlling provisions primarily rests on verifying whether real water savings are being made. **The application of an independent and transparent audit process is absolutely essential for probity and evaluation of the PER should of disclosed major deficiencies in this regard.**

(Unfortunately, DEHWA appears to have taken "the line of least resistance" and accepted the NVIRP documentation with very limited, if any questioning).

5. Economic and Social impacts of NVIRP works:

Whilst the guidelines for the content of the Public Environment Report (PER) highlight a number of issues for evaluation none is more significant than the Economic and Social matters and the many negative impacts the controlled action bring about. This is a further aspect of the NVIRP works that this submission attempts to highlight in the belief that the project is financially and morally flawed.

The NVIRP referral pro-forma letter Page 2 (1.4) – final 5/10/09, foreshadows reducing the 6600 kms of channels in public ownership to 2900 kms – an action destined to seriously disadvantage many current irrigators located within the existing GMID that covers 6000 square kilometers. This stems from the modernization of the main channels leaving many of the irrigators located on the spur channels with insurmountable logistical and financial restraints in accessing an irrigation supply. **Effectively this is to cause over 800 dairy farmers and 350 mixed farmers to exit from Irrigation Districts as disclosed in the Food Bowl Modernisation Draft Report and clearly seen in recently released NVIRP plans showing priority areas.**

By any standards this is massive social dislocation on a scale not seen since the Second World War and its aftermath. However, "consultation" has been absent to the extent this social and economic dislocation warrants. The NVIRP (attachment 6) Consultation Table highlights an attendance of 1300 at various meetings**.** This is hardly a measure of consultation when it is clear that the vast majority of submissions to both the Food Bowl Modernisation Draft Report and its sequel (leading to NVIRP) were opposed to the strategies being proposed and especially the plan

[15] Ref: http://www.parliament.vic.gov.au/council/SCFPA/WI/Sub.html

to assure water savings going to Melbourne. Effectively these submissions were ignored and as seen in the final report no effort was made to refute the many well researched objections raised.

Moreover, there is concern that the NVIRP leadership are not competent quoting *"The district is the pride of Victoria and home to **14,000** irrigators who contribute $1.5 billion to the economy each year"* on the web-site's home page – when it is generally understood the relevant total is nearer **7000** (holdings) – holdings that are of a nature heavily impacted by NVIRP works.

A Deloitte 2007 Economic Assessment of water infrastructure was an economic study not addressing the core of economic and social disruption affecting individual farmers and their communities. **Consultation for the Food Bowl Modernisation Steering Committee Final Report; the predecessor to NVIRP, was driven by DSE on behalf of the former Victorian government and what is widely seen as an unrepresentative group supportive of the aggregated farming that has been planned to evolve from the massive downsizing of supply channels in public ownership.**

There has been a gradual realization by many irrigators that their economic security is under threat from NVIRP plans and this is compounded by the on-going and scatter-gun approach to water buy-backs by the Commonwealth Government. The result has been a malaise over much of the area with a significant number of suicides of irrigation farmers.

Furthermore whilst as recently as 2009 the majority of irrigators were strongly opposed to lifting the 4% cap on permanent water sales out of the District; opposition has now largely abated, such is the dire financial situation of large numbers of irrigators, whose only hope of (clearing debt) is to sell their water. As a consequence opposing the release of the cap is increasingly seen as untenable, as opposition is seen as inevitably resulting in an increase in distressed farmers committing suicide. (Hopefully, recent rains and gains in irrigation storages have provided some amelioration of these irrigators plight.)

A measure of the very serious down-turn in the economy of the area is seen in the fall in milk production from over 3 million litres per annum to around 1.8 million litres that has led to the closure of the most northerly located milk processing plant at Leitchville with the loss of 70 direct jobs.

Drought has been a significant factor driving low water allocations and this major; largely permanent down-turn in production. However, NVIRP plans, which allow no option to the forced closure of many hundreds of kilometers of government owned channels, leaving the affected irrigators to find alternative, highly costly and often impractical means of restoring supply, is without doubt, a major contributor to irrigators' distress.

Combined with these imposts is the government plan, part of the Our Water Our Future program - to introduce a policy of reserving additional water in storage – with the prime purpose widely seen as providing the government's urban pipeline grid with a guaranteed supply and a service that has high marketability. Whilst not a direct NVIRP policy, both bear on the viability of irrigation farming and compound the uncertainty and distress many farmers are experiencing.

6. Environmental Management Plans (EMP's) proposed by NVIRP

(This section of the submission contains lesser, but still significant reference to aspects of water savings. It identifies many failings in environmental processes, which it is contended should have been major factors in denying NVIRP Stage 2 works environmental approval).

At the outset it is important to grasp that the NVIRP referral under the Victorian Environment Effects Act 1978[16] covering the identical area to referral 2009/5123, refers to 5 Bioregions (Page 21) containing a large range of Ecological Vegetation Classes (EVCs) located in the immediate area of the proposed works. The Bioregional Conservation Status of these EVCs is said to vary with many listed as being endangered, whilst there has been no study, or assessment made of likely impacts pending further definition of the required modernization work. A similar situation occurs with wetlands - a desk-top assessment of the potential impact of reduced channel outfalls on the 1137 wetlands identified in the GMID (Page 29) has taken place with only 10 now having environmental watering plans in place).

Note: NIVRP works potentially affect 33 listed species and communities, 19 migratory species with 20 threatened and migratory bird species listed under the EPBC Act, as well as listed fish species Murray Cod and Murray Hardhead.

Subsequent to the referral to the Victorian Minister, the NVIRP Water Change Management Framework (WCMF) has been prepared – Attachment 5 - confirming the above. (Page 35) --- "**NVIRP commissioned a desktop assessment (SKM 2008)** as part of the referral submitted to the minister for planning under the *environment effects act 1978*. ------- In addition there has been a "Priority Wetland Assessment" with DPI input to identify some of the effects of NVIRP works on selected wetlands.

The enormity of the environmental area and its dependent species that will be impacted, warrants more than desk-top studies and the gross uncertainties brought to notice in the WSP (Audit). In regard to "mitigation water" – where in this diminishing potential for real savings, will it be found?

Of the 1173 wetlands, 573 have high environmental values with 78 connected to the irrigation system and 23 benefitting from outfalls. Despite the significant need for mitigation that follows planned NVIRP works, the number of and extent of EWP's is still to be determined – what is certain that is the number of EWP's in place (approx) 10 is a very small diminution in the scale of the problems NVIRP introduces.

[16] http://www.nvirp.com.au/downloads/Planning/EES_attachments/090216_NVIRP_EES_Referral_Form_Amendment.pdf

Australia has international environmental agreements to adhere to under the Ramsar Convention and has already endured significant criticism over its failure to protect Ramsar wetlands – particularly the Coorong.

With the potential for savings fast diminishing and thus the justification for diverting annually 75 Gl to Melbourne, DEHWA should have been concerned that NVIRP, in preliminary assessments, have generally referred to diversions (particularly affecting outfalls) as relatively minor.

Ramsar sites hydraulically connected and therefore dependent on the irrigation system - Kerang Lakes, Barmah Forest, Gunbower Forest, NSW Central Murray State Forests, Hattah-Kulkyne Lakes, Riverland, Banrock Station Wetland, Coorong and Lake Alexandrina should not suffer through the introduction of a major new customer, the metropolis of Melbourne diverting a dwindling recourse from the highly stressed Murray-Darling Basin.

In this regard - The Productivity Commission Report. Page 117 - does not see "saving" return` flows (outfalls) as a proven benefit to the catchment, to quote ----- ***"Reducing return flows do not generally represent a saving from a whole-of-catchment perspective as this water would have been available for other uses. In some cases, however, return flows are of low quality and so reducing them is not always to the detriment of downstream users. Also, reducing groundwater recharge may or may not be a true saving, depending on whether the groundwater is accessible and or saline.***

Reducing flows to a local wetland is not a saving if that water would have improved the condition of a site that is valued by the community (although it may be that the water could have been used to produce a greater benefit if applied to a different site). This leaves reduced evaporation as the only component that is clearly a saving from a catchment perspective"- (my emphasis)

It is vital that EMPs be presented for public comment within the PER process and with modernization works well under-way fast-tracking is required, or the works should be halted until EMPs are completed. **EMPs must not be provided on a piecemeal basis ignoring the consequences of environmental effects on later stages of the works.** This leads to many non-compliance issues threatening the integrity of DEWHA processes.

The Friends of the Earth report ***"Out of sight, out of mind?[17]"*** released in June 2009, draws attention to the inadequacies of the monitoring process (and EMP's) for the North-South Pipeline, whilst referring to the Food Bowl Modernisation (NVIRP) and the decision to divert water to Melbourne and the effect on a stressed Goulburn River.

[17] http://www.foe.org.au/resources/research-papers/water/ecol%20impacts%20o...

The following is an extract from the summary section of the report "Out of Sight out of Mind?"

------*"This report attempts to catalogue the environmental impacts associated with the construction of the North South pipeline. Public debate on this project has understandably tended to focus on social impacts and concerns by affected communities, about whether the project is needed, and the process by which it was developed and implemented.*

We believe that there are, and will continue to be, significant environmental problems associated with the actual footprint of this project – especially in the Toolangi State Forest, as well as from plans to pump water from the Goulburn River system, ***in spite of the fact that expected water savings from the Foodbowl Modernisation Plan are likely to be far less than had previously been anticipated.***

In addition to the problems caused during construction, we need to see this project in a broader context. The Goulburn River system is already extremely stressed and when it comes to pumping water from the river, it has been made clear by the state government that Melbourne will get first option on water saved through the Foodbowl Modernisation program. Given the dire condition of the river, it can instead be argued on ecological grounds that the river should get 'first drink' from any savings."-----

This raises the issue of The Expert Review Panel:

The Panel has been formed at the request of Minister Justin Madden and has some similar characteristics to the PIA (Panel) assessment process approved by the same Minister for the North-South pipeline – a process that from an environmental aspect was seen by many as a dismal failure.

The following statement that has been attributed to the review panel is seen to be a corroboration of an NVIRP view which logically should be subject to major challenge and resolution -

*"The impact of NVIRP in reducing inflows to waterways and wetlands needs to be separated from the cumulative impacts of drought, drought-related management practices and existing system demands. As such, the documents referred to ERP (*Expert Review Panel) w*ere assessed from a perspective which takes account of the influencing factors beyond the responsibility of NVIRP which have changed and are changing the hydrologic connections between wetlands and waterways and the irrigation system, as well, as associated management of environmental water."*

It is ludicrous that NVIRP, which has been supporting the Governments' widespread advertising that LTCE water savings of 425 Gl can be achieved, is now putting the view it cannot be held to account for deficiencies in the delivery of water savings and mitigating water for the environment and that because of the imprimatur of the Expert Review Panel, they are absolved from further responsibility.

Well things are not fine - $2 billion dollars are on the line and NVIRP cannot just opt out, under the cloak of long term drought (climate change), water trade and Commonwealth water purchases.

It's time to face facts; this project is ill conceived; has been from day one and now is the time for a radical re-ordering of irrigation upgrading that ensures value for money. As a first step a critical cut-off point must be determined and declared as to when the net loss of water out of the GMID makes it impossible for significant water savings to be achieved.

With this background DEWHA were forewarned the evaluation of the PER for the NVIRP should cover the range of possible environmental effects, avoiding a piece-meal approach, whilst demanding and ensuring the highest level of compliance.

6. Goulburn and Murray Rivers and icon sites affected by NVIRP works

(Similarly, this section of the submission contains lesser, but still significant reference to aspects of water savings. It identifies further failings in environmental processes, which it is contended should have been major factors in denying NVIRP Stage 2 works environmental approval).

It is obvious the proponent is proposing only a very limited examination of the effects of NVIRP actions and their consequences. The PER must recognize this and for probity and the integrity of the process, require the proponent to acknowledge and deal with the wider effects of the NVIRP works that are patently relevant to the assessment.

In evaluating the PER it is of critical importance, to be aware the (Victorian) Minister refused an EES for the Sugarloaf Pipeline project, with the EPBC Act approved PIA (Panel) assessment process adopting guidelines which excluded any examination of the plan to source the 75 gigalitres in water savings from the Food Bowl (now NVIRP) project. **The effect on the Goulburn and Murray rivers and associated wetlands - from diverting the 75Gl pa to Melbourne - was also excluded from examination under the PIA (Panel) process for the pipeline. However, it must be noted the proponent (Sugarloaf Alliance) informed DEWHA at the PIA (Panel) hearing that *"potential impacts on flow downstream from Goulburn Weir are to be managed as part of the environmental assessment being undertaken on these issues for the FoodBowl Modernisation Project".***

Despite this the WCMF report prepared for the NVIRP referral has not addressed the issue - "*The Goulburn River was also recommended in the SKM report for further investigation. This will be addressed in NVIRP's response to condition 4 of the Minister's decision and is outside the scope of this WCMF".*

Whilst it is obvious that the PER should ascertain the authenticity of savings, it is also vital that the effect of the extraction rate on the Goulburn River (a Heritage listed River) is examined to ascertain compliance with the controlling provisions. There is a major anomaly here with potentially serious effects on rare species. The initial extraction rate from the Goulburn River

was set at 300Ml per day (75Gl per year) based on a stream flow of 5000-10000ML/day during the irrigation season. With substantially lower High Security Water deliveries due to drought, stream flow over the past 2 irrigation seasons has been around 1500-2500 Ml/day making the proposed extraction rate a potentially damaging percentage of stream flow affecting the riverine environment. Furthermore the extraction rate serving the Melbourne pipeline is not transparent with no stream flow gauge installed at the take-off point in the Goulburn River, whilst recording of inflows to Sugarloaf Reservoir were not made public. The daily extraction rate from the Goulburn River expressed in Ml/day should have been recorded on Melbourne Waters website to ensure probity and transparency.

This clearly is an aspect of the NVIRP works, primarily water savings and flow rates that DEWHA must resolve as a matter of urgency under the shadow of water being again drawn from the Goulburn River to service the North-South Pipeline in 2010.

It should also be noted t**he Senate Rural and Regional Affairs and Transport Committee inquiry and report on the Coorong and Lower Lakes**[18] released on Friday October 10, 2008 includes the following comments and recommendations in regard to the North-South Pipeline and its effect on the health of the Murray Darling Basin.

5.76 The (majority) committee (report) ***"emphasised the importance of the Minister for Environment, Heritage and the Arts' conditions of approval for the Sugarloaf Pipeline (North-South Pipeline), and believe it would be inappropriate for the Victorian Government to use this pipeline in ways that would reduce flows in the River Murray".***

It should be quite clear that the exclusions referred to in the preamble to the PER guidelines cannot be sustained. Many studies have drawn attention to the perilous situation of the Goulburn River, Ramsar listed wetlands and icon sites. There is little doubt that any water diverted to Melbourne is water lost to the system – lost to production and lost to the environment, with adverse effects on the Goulburn River and the Murray River all the way to the Coorong.

Water designated for the environment: Minister Garrett has stated in Condition 11 – ref C08/15098, Sugarloaf Pipeline (the North-South Pipeline) – decision dated 12 September 2008, that : ***"All water savings taken from the Goulburn River must be sourced from projects that comply with the requirements of the Environment Protection and Biodiversity Conservation Act 1999"*** **Interim "water savings" to supply the N-S pipeline in 2010-2011 are foreshadowed to be sourced from two projects, Central Goulburn channels 1,2,3,4 and Shepparton Irrigation Area Modernisation. These projects are not part of the NVIRP works area, but were federally funded on the basis of providing any savings to benefit the**

[18] http://www.aph.gov.au/Senate/committee/rrat_ctte/lowerlakes_coorong/report/report.pdf

Murray and Snowy River environment. Given the serious deficiencies revealed by the WSP (Audit) for these projects, it would appear use of water from these sources would breech the Minister's directive.

The NVIRP works and the North-South (Sugarloaf) pipeline are inextricably linked and assessment and compliance with the various controlling provisions are critical. It is not unreasonable to expect DEWHA to reiterate and reinforce all directions to ensure compliance to gain maximum benefit for significant wetlands and threatened and migratory species. It should be seen, the controlling provisions related to the NVIRP works are operative throughout the Goulburn and Murray River systems. **The probity of the PER in facilitating assessment must not be compromised by a view that the 75 Gl pa for Melbourne has to be assured. It is clear that there are thresholds - relevant to the controlling provisions, primarily sustainable water savings - to be met before this should ever re-occur.**

7. Environmental Record of the person(s) taking the action

(Similarly, this section of the submission contains lesser, but still significant reference to aspects of water savings. It identifies further failings in environmental processes, which it is contended should have been major factors in denying NVIRP Stage 2 works environmental approval).

Para 3.7 of the PER guidelines relates to the environmental record of the responsible party (the previous Victorian Government) and should be a major consideration in forming guidelines for the PER.

The proponent makes special mention that it has no record but there have been a number of unscheduled water spills emanating from modernized works with environmental consequences:

1. In the Rochester Irrigation District a Regulator failed, causing it to close and send a flood down the Corinella Creek.

2. As a consequence of the above Regulator failure, a siphon burst and the computer system failed to pick up the fault allowing 1,000ML to flood Lake Cooper over an entire weekend

In addition the lack of environmental water plans for endangered wet-lands, the lack of assurance for mitigation water, together with the proposal to exclude significant wetlands including the Ramsar listed Kerang Lakes from the current PER, indicates a less than desirable attention to Environmental probity.

More significantly the PER should have cognizance of EPBC - Reference – C08/15098 Sugarloaf Pipeline (the North-South Pipeline) - dated 12 September 2008, that approved subject

to conditions –"*To construct and operate a water pipeline and associated infrastructure to transfer up to 75 gigalitres per year , from the Goulburn River, near Yea, to the Sugarloaf Reservoir, Victoria".*

This permits the diversion of water from the Murray-Darling system and has been predicated on genuine savings being made. It goes without saying this must not be achieved to the detriment of the environment affected by NVIRP works and the related Goulburn and Murray Rivers. **The significance of this is brought into stark focus with the current media[19] alert to the presence of an algal bloom the effect of which now extends from Hume Dam for several hundred kilometers along the Murray River to Echuca (ABC Radio February 16, 2010).**

The actions of the Victorian government as overseer of the pipeline proponent (Melbourne Water/Alliance) are highly relevant to evaluating the PER for the NVIRP works as both government entities are inextricably linked in modernization works and the proposed supply of water for the pipeline.

Breeches or non-compliance with safeguards to the pipeline construction have been acknowledged by the pipeline proponent. This is a failure that must ensure that the related, but significantly more wide ranging Food –Bowl Modernisation (NVIRP) project, is subjected to wide scrutiny.

Details of the breeches relating to the North-South Pipeline Construction are contained in the Environmental Protection Biodiversity Conservation (EPBC) Act compliance report[20] (pages 25-27) released in August 2009.

The reported breeches – are also out-lined in a Friends of the Earth media release[21] ***"North-South pipeline threatens protected species"*** dated Friday 16 October 2009 – documenting substantial environmental damage.

Extracts from the FOE media release are as follows:

"The compliance report on the controversial North South pipeline prepared by the Sugarloaf Pipeline Alliance shows that the known or possible habitats of a number of vulnerable species, including Matted Flax-lily, the Golden Sun Moth, Striped Legless Lizard, and Growling Grass Frog have been compromised during the construction of the pipeline.
------While the Federal Government set strict conditions on construction of the pipeline under the Environmental Protection Biodiversity Conservation (EPBC) Act, the compliance report which was quietly released in August shows that the proponent admits that there has been a

[19] http://www.abc.net.au/news/stories/2010/02/16/2820858.htm

[20] http://www.sugarloafpipeline.com.au/content/library/system/SLPA_annual_r...

[21] http://www.melbourne.foe.org.au/?q=node/610

number of instances of non compliance. Non compliance means possible risk to a range of threatened species. -----
------"What is really tragic is that none of this needed to happen. We continue to believe that Melbourne has many other options to meet its water needs, without resorting to taking water from the gravely stressed Goulburn River system.
"We call on Minister Garrett to ensure his department closely monitors future activities by the State Government, with a view to ensuring that the EPBC Act conditions are adhered to."

This record provides further compelling evidence for DEWHA to ensure the integrity of the PER assessment process at all stages. There was valid concern that a PER could permit the Victorian Government as principal proponent, to circumvent many "safeguards" as has been seen with the North-South Pipeline. Similar to the NVIRP project the North-South Pipeline project was denied an EIS, with the ensuing Panel Process seen widely to lack adequate environmental safeguards.

Appendix 3 - a letter from an irrigator published in the Country News (Shepparton) on January 18, 2010 is an illustration of the concern many farmers have in regard to the water reserve policy, which for most is a devaluation of their water assets. (This is included to show the widespread pressures that beset many irrigators and the concern that the motivation for NVIRP works has been highly influenced by the drive to assure a supply for the North-South pipeline serving Melbourne).

Again it should be noted changes are so profound and shrouded in technicalities, frustrating most farmers from expressing their concerns – indeed opposition risks sanctions, with GM Water dismissing a group of long-standing representatives and spokes-people, with replacements that were to be constrained through a written agreement.

This was the situation with the Pyramid-Boort Water Services Committee, representing an area where major channel/waterway changes are under-way that results from NVIRP works. Despite widespread support from their community and support from a former Chairman of GM Water who testified strongly on their behalf – this situation stood, leaving the aggrieved and their large support base with no recourse. Surely this is a breech of the much vaunted policy of consultation and a clear need for an open inquiry into all aspects of the FoodBowl Modernisation and the related North-South Pipeline. (It should be noted that the current Victorian Government has arranged for the Victorian Ombudsman to conduct an inquiry for presentation to Parliament that largely covers these concerns).

Many irrigators are also aggrieved that they ceded part of their long held entitlements, including what was then referred to as stock and domestic supply, to provide a reserve in Lake Eildon to combat hazards such as blue green algae, only to see this same reserve ear-marked to supply the Melbourne pipeline in 2010.

It is increasingly clear that the actual average loss over coming years, <u>given that a significant proportion of the "losses" are not recoverable</u>[22], falls well short of the planned 225Gl (Stage 1) with the further 200Gl of savings to come from Stage 2, purely illusory.

This should place the $1 billion Stage 2 of the NVIRP program at grave risk as Commonwealth funding has been long promoted as being contingent on half the projected savings of 200Gl being available for the environment. The plan (subject to due diligence) by the Commonwealth to fund Stage 2 of the modernisation, in the light of the projected unrealistic level of savings for the Food Bowl Modernisation should be reviewed – the insignificant benefit to environmental flows could not be seen to justify the expenditure. A more equitable and cost effective means of adding to environmental flows should be found elsewhere, perhaps involving funding of on farm irrigation methods in the Food Bowl area to achieve real savings, to benefit both the environment and food security.

The NVIRP PER should have stood or fallen on a full and frank evaluation of economic and social impacts encompassing the critical issue of assessing genuine water savings. A process that has been seen to be dominated by the proponent - that the preamble to the PER guidelines indicate has been in train - unless revisited, is certain to lead to widespread community disquiet for years to come.

8 <u>Summary:</u>

The overwhelming community reaction to the Water Act 2007 is one of rejection as it is seen to place undue emphasis on the environment to the detriment of irrigators and their communities. The Act should be re-written to ensure equity, preserving food security and the viability of regional areas.

However, the "politics" around the environment are pervasive and this submission serves to alert the Committee that "short cuts" to gaining water "savings" that the current NVIRP program might promise are ill founded and inequitable and should not be funded by the Commonwealth Government.

<u>With regard to water savings:</u> The protection and maintenance of the extensive environment affected by NVIRP works is almost invariably dependent on water availability. Consequently, water savings - the raison d'être, for the NVIRP works (formerly Food-Bowl Modernisation) - has to be evaluated and seen to be evaluated independently and accurately. The NVIRP audit (WSP) process has been seen to be highly deficient in this regard. Meanwhile a process of re-tagging of water previously in productive use is in train. This is a major departure from the community's understanding

[22] [22] For example the Kerang wetlands an icon site has an estimated long term loss that varies between 70Gl and 100Gl per annum, with losses reducing to accord with lower allocations to irrigators.

of water savings, poses a serious threat to the integrity of the project, leads to large uncompensated losses to many existing irrigators and the forced sales of their water entitlements.

<u>With regard to the environmental process undertaken by DEHWA for NVIRP works:</u> It has to be reiterated that the exclusions referred to in the preamble to the PER guidelines made any assessment proceeding on the basis of these exclusions, an absolute nonsense.

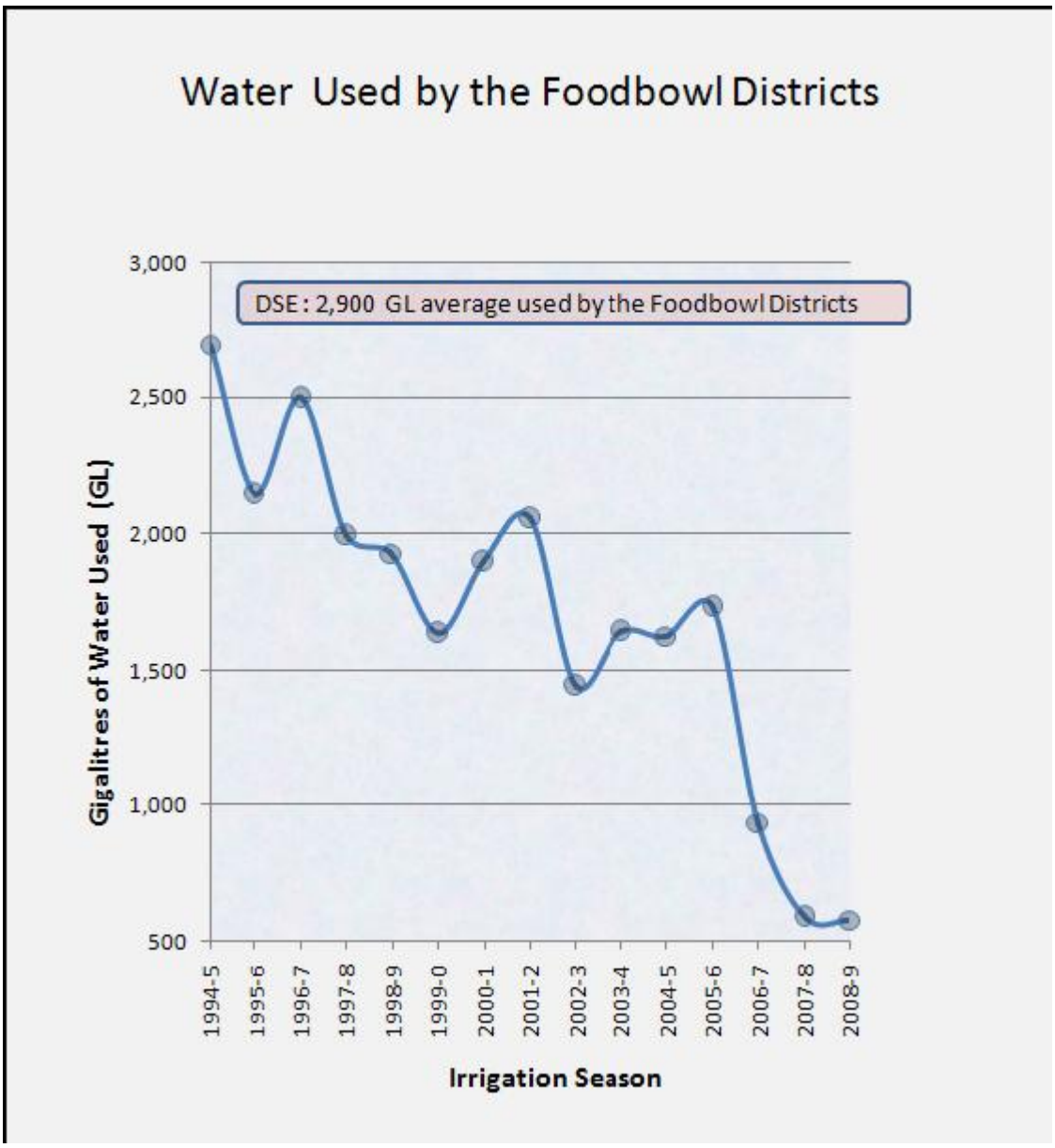
The time has come to accept that the North South Pipeline[23] and the NVIRP works are highly integrated in their effects on the Goulburn and Murray Rivers and associated wetlands – evaluation of the PER should have recognized this and put in place a rigorous process of ensuring the adequacy of water "savings". The piece-meal approach to the assessment of environmental threats will be seen as an abrogation of DEWHA responsibilities adding to what has been widely seen as the failed evaluation process for the North-South Pipeline construction.

Peter Murray

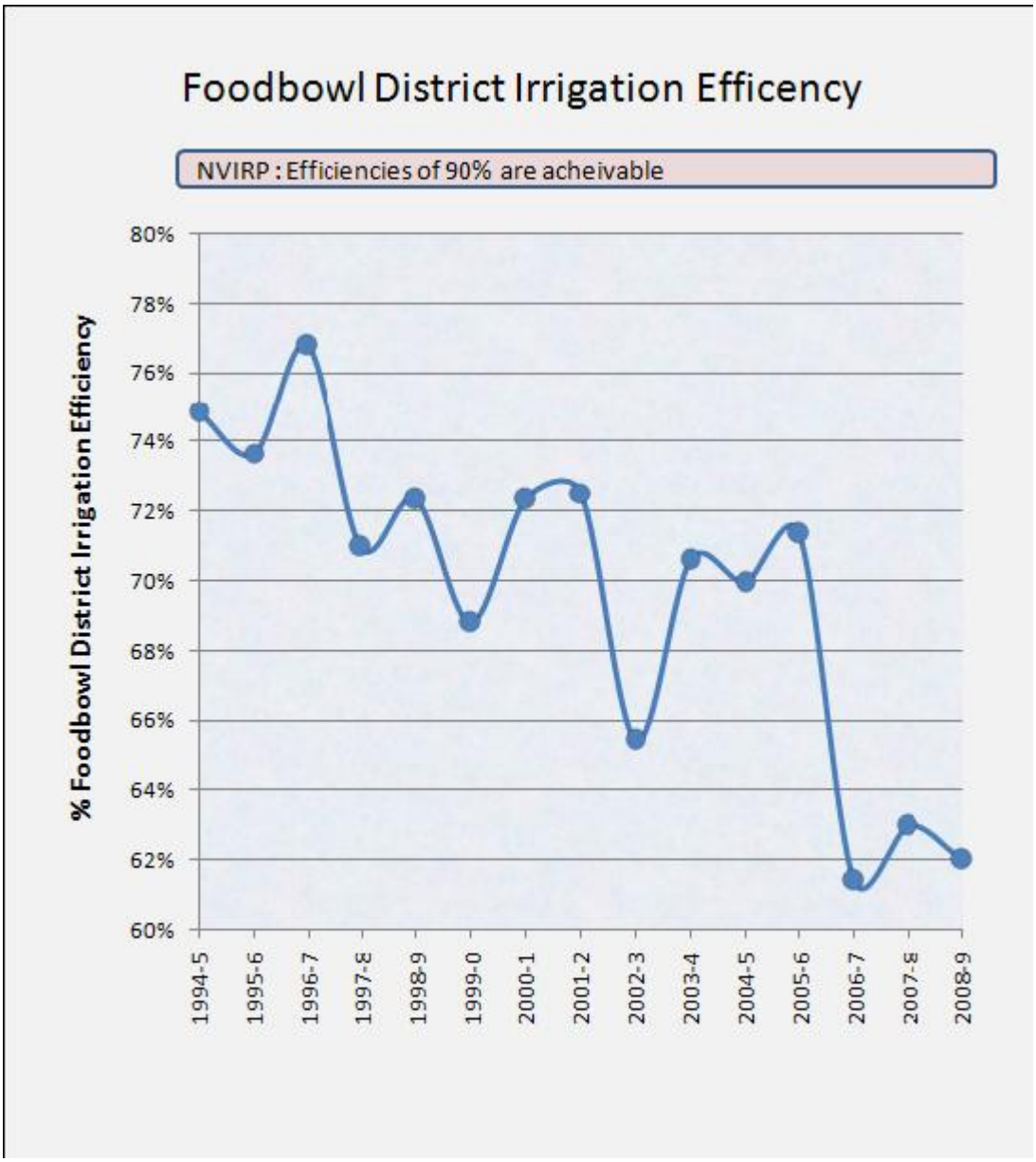
March 17th, 2011

[23] The election of the Liberal/National government in Victoria has brought about an indefinite deferment of further water transfer to Melbourne. However, the existence of the pipeline (cost of $750million - funded by Melbourne Water and the $300 million commitment by Melbourne Water to Stage 1 of NVIRP works) remains a threat to water availability in the MDB.

Appendix 1 --- Source - **Plug the Pipe's Submission to the Senate Inquiry into Food Production in Australia**
20 June 2009



Graph 1 ---Water Use in the Foodbowl Gravity Irrigation Districts



Graph 2 – Declining FoodBowl Gravity Irrigation Efficiency

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

By comparing graphs one and two an excellent correlation is seen 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 efficiency also corresponds to the lowest amount of water ever used in the Foodbowl Districts[7]. ([7] Foodbowl water deliveries were 578 GL in 2008-09 irrigation season, a record low.)

Appendix 2

Market Mechanisms for Recovering Water in the Murray-Darling Basin

Productivity Commission Draft Research Report

December 2009

Pages 117 & 118.

Box 6.3 **issues in assessing water savings**

From an individual irrigator's perspective it can be reasonably straightforward to define and measure water savings that arise from upgrading irrigation infrastructure or changing management practices. For example, if an on-farm infrastructure upgrade means that a given crop can be grown with 70 megalitres (ml) of water instead of 100 ml, the irrigator has achieved a 30 ml water saving.

Complexities arise, however, when water savings are looked at from a catchment perspective (as is necessary in managing the basin's water resources). In the example given, the 30 ml of water 'saved' might otherwise have ended up as a mix of return flows to a river, recharge to groundwater, water entering a local wetland and evaporation. Not all of these represent true savings at the catchment scale.

Reducing return flows do not generally represent a saving from a whole-of-catchment perspective as this water would have been available for other uses. In some cases, however, return flows are of low quality and so reducing them is not always to the detriment of downstream users. Also, reducing groundwater recharge may or may not be a true saving, depending on whether the groundwater is accessible and/or saline.

Reducing flows to a local wetland is not a saving if that water would have improved the condition of a site that is valued by the community (although it may be that the water

could have been used to produce a greater benefit if applied to a different site). This leaves reduced evaporation as the only component that is clearly a saving from a catchment perspective.

As an additional complexity, any water savings achieved through upgrading infrastructure may be reduced from what was expected if the infrastructure becomes under - utilised as a result of climate change and/or water being traded out of the area.

A number of studies point to the need to understand these complexities when examining claims for how much water can be saved through actions such as upgrading irrigation infrastructure, and related claims that water is being wasted or that water use can be made more efficient (crase and o'keefe 2009; molle and turral 2004; perry 2007; pc 2006).two overlapping themes in this literature are that: water savings achieved within one area often reduce the amount of water available downstream; and apparent water savings can prove to be illusory when examined at the appropriate scale.

Improving the accuracy of water metering is another activity that is sometimes claimed to save water. Introducing more accurate metering will result in water users extracting less water against a given set of allocations, if the previous metering tended to understate water use. This brings about a reallocation of water rather than water savings.

Those water users whose meters have been replaced get less water (and so will produce less, unless they enter the market to buy replacement water) while more water is available in the system for other uses, including environmental uses. While there can be good reasons for introducing more accurate water metering, achieving water savings is not among them.

Appendix 3

Additional Reserve will Cost irrigators

January 18 2010

Country News

Forget climate change, Goulburn System irrigators need to prepare themselves for the DSE Office of Water's Additional Reserve drought of 2010-2011, potentially costing Goulburn system irrigators up to $83 million.

The Additional Reserve policy was developed in the Victorian Government's Northern Region Sustainable Water Strategy.

One of the main aims of the policy is to ensure that the two major pipelines - the North-South Pipeline and the Bendigo-Ballarat Superpipe - don't suck air.

The Additional Reserve will eventually see 500 000 Ml quarantined from use or trade by farmers in the Goulburn and Murray systems.

Water that must be paid for, and will be in the storage (Eildon), but not accessible to use or trade by irrigators.

The Additional Reserve means irrigators can't access up to 40 per cent (340 000 Ml) of "actual" water in storage and are only able to access 50 per cent of the high reliability water share (495 000 Ml) in the Goulburn system.

When Goulburn irrigators would have had 84 per cent high reliability water share, they will now only have 50 per cent. However, they will be required to

pay for the full 100 per cent without assistance or compensation.
The Additional Reserve will distort (corrupt) the temporary water market, costing irrigators in the order of $15 million for water actually in storage, but not accessible to them.
Further, the lost opportunity to use or trade water, costing another $68 million (if water is valued at $200/Ml to use or trade) will have a definite negative impact on the Goulburn system irrigation community.
This year Goulburn irrigators can only access 50 per cent of their high reliability water share, but must pay for 100 per cent with no drought assistance available, effectively doubling the cost of accessible water. This means $20 million will be paid out this year by Goulburn irrigators for water that doesn't exist!
Next year the water will be in the dam, will have to be paid for, but won't be available to Goulburn irrigators.
But don't despair, G-MW says it's good for you. It means you can access carryover on August 15 of the next year.
The only problem with this scenario is that less than 10 per cent of active irrigators hold any carryover.

You can see the problem then: 90 per cent of customers bear significant financial stress for the benefit of 10 per cent of customers.
Of course, the urban authorities (Melbourne Water, Coliban Water and Central Highlands Water) are the chief beneficiaries with their carryover and pipelines.
So 2010-2011 will be remembered as the year of the DSE's Additional Reserve induced drought.

This should disgust and dismay you, and is another nail in the coffin for irrigated agriculture.

Murray Haw

Pyramid-Boort Irrigator

http://www.countrynews.com.au/story.asp?TakeNo=201001181956166

SUBMISSION ENDS