Rosebank
Wallamore Road
TAMWQRTH NSW 2340

15th May 2001

Independent Pricing & Regulatory Tribunal
PO Box Q290
QVB Post Office
SYDNEY NSW 1230

Submission to IPART – Bulk Water Pricing 2001/02 – 2003/04

SUBJECT: A Critique by the Peel Valley Water Users Association of the NSW Agricultures Economic Assessment of Water Charges in the Peel Valley.

This economic assessment of bulk water pricing by the NSW Agriculture was started under contract to the DLWC around about Christmas 1999 and had to be completed in early 2000 in readiness for the DLWC's 2000 triennial (subsequently abandoned) bulk water pricing submission. The report had too short a time frame for completion, which placed the NSW Agriculture in an untenable position. The Peel Valley Water Users Association has had a lot of help, assistance and advice from many officers of NSW Agriculture and is with reluctance that we critique this report and are only doing so as we believe that our livelihood as irrigators of the Peel Valley is in jeopardy.

Well here we go:-

To read the first few pages of the NSW Agriculture "Economic Assessment of Water Charges in the Peel Valley" and the conclusion, as most people do, the reader would think that the irrigators lot in the Peel Valley was one of Milk and Honey with just a tad less honey with bulk water pricing at full cost recovery.

Page 6 "*Irrigation supplies from the Peel River are very secure compared to other Northern Valleys. Under current levels of development, irrigators can expect to receive their* ***full*** *allocations in 92 years out of 100. Simulated announced allocations for the Peel Valley, using historical climatic information from 1891 to 1998, yielded an average announced allocation of 94 per cent.*"

Page *7. "The alluvium in the Peel is typically between 10 to 20 metres thick with a porosity of 10%. Therefore, tinder each hectare of river flat there would be 10 to 20 ML of stored groundwater. There is a close connection between river levels, rainfall and groundwater levels. However, in times of drought, groundwater reserves are a more reliable source of irrigation wafer.*

Page *25 "The results indicate that the proposed price increases are unlikely to pose major viability issues for most irrigation farms in the Peel Valley. They will however add to the general picture of declining terms of trade common to many broad acre agricultural industries. This implies that in the longer term, farmers in the Peel Valley will need to*

continue to improve the productivity and efficiency of their production systems to remain ***viable or gain other income beyond the operation of the farm.***

The assessment of the Water Resources of the Peel Valley is misleading in the Extreme. The regulated surface water users of the Peel River have the lowest security of supply of all of the regulated systems in the Barwon region, Chaffey Dam has as its primary commitment, the supply of town water to the City of Tamworth. At Tamworth City's current usage the allocation at the start of the irrigation season with the Dam at spill is 80%. When the Dam is 50% or less the allocation is zero, The average start of season allocation for the 1990's was 50%. The regulated water user of the Peel Valley has the lowest security of supply of ALL of the states regulated systems. As Tamworth City increases its usage of Chaffey the security of supply will decrease even further.

The ground water system of the Peel alluvium is shallow, it recharges rapidly in wet seasons and discharges rapidly during drought years. There are strong linkages between surface and ground water in the Peel and transmission losses from the surface water exceed 30% in drought years. The ground water resources of the Peel, like many zones in the Namoi are grossly over allocated. The Peel ground water is extremely unreliable in drought years and for the NSW Agriculture to even suggest that ground water could be used to off set the use of expensive regulated water from Chaffey Dam defies comprehension.

To confirm this assessment of the bulk water resources of the Peel Valley, the Peel Valley Water Users Association strongly recommend that IPART consults with the Resource Manager. That is the Regional Director of the Barwon Region on 02 6764 5900.

The Peel Valley Water Users Association list the following "dot" points for IPART's examination.

COMMENTS ON NSW AGRICULTURE'S "ECONOMIC ASSESSMENT OF WATER CHARGES IN THE PEEL VALLEY"

- This report was NOT provided to the Namoi-Peel CSC and its comments were therefore NOT incorporated into the report as claimed in IPART'S Report No 7, 2000 page 19. This is a *serious integrity* issue for all water users, but should be of particular concern to all Customer Service Committees.

- The NSW Ag. Dept is currently working on a revision of the report and reassessing its assumptions – particularly those of irrigated area and gross margins.

- The representative farms are hypothetical NOT actual farms and are not cross referenced to actual farms.

- Three of the four "representative" farms are unrepresentative of the valley and represent only the largest 20% of Licence holders.

- Peel regulated usage and reliability data incorrect. Peel has the lowest reliability of supply of all the northern regulated rivers NOT the best.

- Ground water details are also wrong, in dry times the ground water depletes rapidly and is an unreliable source of water and is well over allocated – with respect to sustainable yield.

- The conjunctive licence conversion for the Peel was calculated by the Namoi Ground Water Management Committee using a start of season allocation of 50% resulting in a conversion rate of 3.0ML per Ha, The highest rate of conversion in the Namoi system. This high conversion rate had the consensus of this committee, which included among others the EPA and National Conservation Council.

- There are no other crop options in the Peel, which have a higher gross margin than Lucerne. The chances of finding one is slim as all avenues to find a crop / enterprise to be a third industry along side Lucerne and Dairying was exhaustively examined over nearly a year in 1998 by a combined effort with NSW Agriculture and Peel Valley Water Users Association "Emerging Opportunities in Agriculture 9th October 1998" (Copy provided for Ipart's information). This information is provided to IPART to demonstrate that the irrigators of the Peel Valley have got off their butts and tried to find alternate enterprises, as it was quite apparent even in 1998 that in the fullness of time that the NSW Government's Bulk Water Pricing Policy was and now is going to have severe socio economic impacts.

- Irrigated areas of cutting Lucerne too large.

- Volume of water used per season too low.

- Usage charge ONLY was factored into the gross margins

- The hypothetical representative farms production and costing is related to the actual DLWC recorded water use in 1997/98, which was an average season but with unusual rainfall patterns in that of five cuts it would have been likely that only three cuts would have been watered – There is significant room for error when hypothetical not actual farms are correlated with actual water usage.

- Cross checking with the Hay maker project on water use can be used as a guide only as the acres of cutting Lucerne monitored in the Haymaker project were only relatively small sections of the actual farm acreage sown to irrigated Lucerne. Because of the likely variation in irrigated area of the farm, the yield obtained and the impact of water pricing – the effective price of water should have been used to calculate the "gross margins per ha" to reduce this error effect.

- Despite all of these deficiencies, the report demonstrates a reduction in Net farm income of 11% ranging to 27% and a reduction in operating returns of 16% to 109% across the four representative farms.

- "Major viability" has been reassessed by the Ag Dept and defined as sending the irrigator broke. This was also not spelt out in the report.

- IPART and DLWC have selectively quoted from this document in a manner, which can only be described as mischievous and lacking integrity. As I explained at the Sydney CSC meeting of 9/4/01, the DLWC submission is dishonest.

Each of the above points are important and can be expanded if necessary but for the purpose of this exercise only Irrigated area and Water Usage will be further detailed as the accuracy of these two factors have a major impact on the accuracy of the economic analysis.

1. Irrigated Area

The Peel Valley Water Users Association contends that the area's listed "as irrigated' for the hypothetical farms are unrepresentative. They are too large relative to entitlement, They are too large relative to the actual areas of irrigation in the Peel and the whole irrigated area is according to the NSW Ag study sown to Lucerne.

Most farms in the Peel have an irrigation area something less than half of their entitlement divided by 6ML/Ha. (Area to volume conversion rate for the Peel regulated system) because of the Peels low reliability of access to entitlement.

Node	Base Allocation	Peel Valleys Theoretic Irrigated Area ½ Base Allocation. 6	NSW Ag Irrigated Area a
20	253	21	37
21	126	10.6	24
22	314	26	34
23	417	35	50

The areas of irrigated area in node 21 could be a little greater than that listed above, (10.5) as the water licence is quite small but it is inconceivable that the zone which appears to have an average licence of 126ML has 24 Ha of irrigated area i.e. it appears that all farms in the zone are developed beyond their Licence entitlement at 6 ML/Ha.

At the General meeting of the Peel Irrigation Council held on Tuesday the 1st May to discuss the current DLWC pricing submission in the presence of Robert Marsh representing the DLWC Pricing unit.

There were 41 Lucerne haymakers out of a total attendance of 90

No & % of Lucerne Haymakers	Area of Cutting Lucerne
3 or 7% cut	>40 Ha (1 00ac)
5 or 12% cut	28-40Ha (70ac- 1 00ac)
9 or 22% cut	20-28Ha (50ac – 70ac)
24 or 59% cut	<20 Ha

Compare these results with NSW Agricultures report

Area of Cutting Lucerne	Survey Results	NSW Ag Representative Farm
>40	7 %	25%
28-40	12%	50%
20-28	22%	25%
<24	59%	NIL

i.e. the areas listed as irrigated for the representative farms are NOT representative of the 41 haymakers present at the meeting.

The area listed as "*irrigated*" by the "representative farms" is translated in the report into 100% cutting Lucerne in the financial analysis. This translation is NOT justified as an irrigator who is a dedicated Lucerne grower (one whose major enterprise is Lucerne) would have no more than 75% of the irrigated area sown to Lucerne.

Why? – (a) because good agronomic practice for disease control requires a break crop and fallow

(b) Lucerne fixes nitrogen in the soil and economics dictate that a crop, which uses Nitrogen, should be grown to maximise the economic benefit of growing Lucerne.

(c) Whilst Lucerne can be grown back to back research in the 70's early 80's in the USA identified water soluble toxins, found mainly in the leaf of the Lucerne plant, that inhibit germination and establishment of seeding Lucerne. This term is called **allelopathy.** It was identified as an additional factor in the failure of Lucerne sown back into old Lucerne country, Many farmers describe it as Lucerne sick soil.

All of these factors add up to support the Peel Valley Water Users Associations claim that the NSW Ag's reports areas sown to irrigated Lucerne are too large and therefore the representative farm gross incomes are far too high.

2. Water Usage.

The water usage tabled in NSW Ag's report of 2.7ML per Ha for two of the representative farms is far too low and the usage of 3.7ML/Ha for the other two farms is on the low side but could be applicable depending on the season and rainfall pattern if the number of cuts was restricted to five. Many Lucerne growers especially those with higher annual yields make 6 – 7 cuts and therefore would require additional water.

To support the Peel Valley Water Users claim that the water use figures are too low the following information is offered.

(i) A survey of irrigators in the Peel Valley demonstrated that most Lucerne growers used 1 .O – 1 .3 ML per Ha per cut, It was recognised that on occasions depending on the rainfall pattern some cuts required little or no irrigation water.

(ii) North West Magazine, April 9, 2001 "Lucerne grower benefits in being water wise." Tamworth Lucerne grower Bryce Wythes has made this provisional comparison for this season to date

Hand shift uses 1.25ML/Ha per cut and produces 2.92T/ML
Travelling Irrigator uses 1 .0ML/Ha per cut and produces 2.8T/ML
Sub surface uses 0.93ML/Ha per cut and produces 3.93T/ML

(iii) Lucerne in Farming Enterprises March 2001 (Publication by NSW Agriculture, Queensland Dept. of Primary Industries and CRC for Tropical Plant Protection) Irrigated Hay Making – Inglewood /Texas by Phillip Burrill DPI Warwick.

"Most producers grow from 16-40 Ha, with several up to 60 ha plus. Yields average 20T/Ha/year with 6-7 cuts / year. Irrigation Water Usage on Lucerne is approximately 10ML / Ha / Year with side roll or centre pivot irrigation equipment being the main systems in use.

(iv) **Sharing the Water Resources on Unregulated Rivers** _ Dept of Land and Water Conservation 2000
Draft Conversion Rates – Climate Zone 3 – Tamworth – Narrabri

	Theoretical Average Irrigation Water Requirements	Return Cards 20th percentile	Metered Usage Regulated system	Namoi Water User Survey	Draft Conversion Rate
Lucerne ML/Ha/Year	11.0	5 . 0	4.5 to 6.0	5.0 – 7.0	6.5

The draft conversion rate of 6.5ML/Ha was agreed to by the Namoi Unregulated River Management Committee in its deliberations on the area to volume conversion in the unregulated system of the Namoi-Peel system The 6.5 ML/Ha conversion for Lucerne producers was supported by consensus of the committee which included as members the **Dept of Land & Water** – who in the past have grossly over allocated the water resources of the Regulated and Ground Water systems and were NOT about to over allocate the Unregulated system by allowing excessive crop water conversion rates.

The **Environment Protection Authority,** which along with the other agencies is charged with the responsibility of ensuring that the NSW Government Water Quality and River flow objectives are met.

The **Nature Conservation Council** whose interest as IPART is fully aware is the provision for as much water as possible being used for environmental purposes.

All of the above points support the view of the Peel Valley Water Users Association that the water use figures used by NSW Agriculture are too low and therefore the financial impacts of fill cost recovery in their economic assessment are significantly under estimated.

In closing IPART would be aware that the Peel Valley Water Users association has given the NSW Agriculture considerable encouragement over the past 9 months or so to re-assess the criteria that they have used. Following a meeting on Thursday 4th May 200 1 with representatives of NSW Agriculture and the PVWUA, the Dept. agreed to re-assess the "irrigated areas" of the representative farms. The faxed results of the NSW Agricultures re-assessment are shown in the attachment (Jason Crean) which concludes on page 3.

" The conclusion of this work is that the original estimated irrigated areas used in the study for Nodes 20 and 21 closely reflect actual areas. The areas used for Nudes 22 ***and 23 over estimate actual areas by 40 and 21 per cent, respectively.*** *These findings be treated with caution as further ground truthing of the data is desirable. This would help confirm the proportion of lucerne grown on the irrigable area, the presence and types of other crops and the water source. This could probably only be obtained either through on-farm visits or telephone contact but may involve significant time in doing so.*

On the basis of previous work, a reduction in the areas of lucerne in Nodes 22 and 23 (presuming that the over estimated proportion is not generally being used by other profitable crops) would lower overall net farm income. Consequently, under a base case situation, irrigation farms in these nodes of the Peel would appear more marginal to start with. This would make them more vulnerable to any significant change in production costs (like an increase in water prices) or a fall in income (like a drop in commodity prices). The impact of proposed price increases would be more significant in these circumstances. "

It is clear from all of the above that the assertion of the Peel Valley Water Users Association that NSW Agricultures "Economic Assessment of Water Charges in the Peel Valley" in it's current form is not worth the paper that its is written on is the correct assessment of this report.

However, the Peel Valley Water Users Association considers that with more work, this report can be made a useful benchmark tool and consider that IPART should direct that the works be completed to the satisfaction of the **Namoi - Peel Customer Service Committee.**

The Peel Valley Water Users Association request that **IPART suspend the current bulk water price hearings** as the quality of information contained in NSW Agriculture "Economic Assessment of Water Charges in the Peel Valley" does not allow the DLWC to make any reasonable **Impact Assessment** of their bulk water pricing submission as required by the IPART process.

Thankyou, for allowing us once again, to participate in the IPART process. Should you have any concerns with this assessment please do not hesitate to contact the undersigned on 02 **6760 7152.**

Yours faithfully

Laurie Pengelly

Laurie Pengelly
Representing the Peel valley Water Users Association