

LOWER NEPEAN / HAWKESBURY WATER USERS ASSOCIATION

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Recycled Water Price Review
Independent Pricing and Regulatory Tribunal
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Enclosed is the submission of the Lower Nepean-Hawkesbury Water Users Association to the IPART review of pricing arrangements for recycled water and sewer mining for metropolitan water agencies. The submission is contained on the enclosed CD and also hard copy.

I had hoped to attend the public hearing on the 31st March but unfortunately I will be interstate on that date. However our chairman, Paul Rasmussen, will endeavour to attend.

Yours sincerely,

Bill McMahon,

Secretary

Bill McMahon

**Submission by the Lower Nepean-
Hawkesbury Water Users Association
to the IPART Review of Pricing
Arrangements for Recycled Water and
Sewer Mining for Metropolitan
Water Agencies**

February 2006

The Lower Nepean-Hawkesbury Water Users Association represents over 600 commercial irrigators from Wallacia on the Nepean River to the last irrigation license downstream on the Hawkesbury River. The Upper Nepean Water Users Association represent commercial irrigators on the Upper Nepean River upstream of Wallacia.

The Chair and Secretary of our Association participated in a Effluent Irrigation Workshop conducted by Sydney Water on the 5th December 2002 at which all aspects of the use of recycled water for commercial irrigation were discussed. At that time it appeared that Sydney Water was moving ahead with some speed on the matter but since then no further movement appears to have occurred. We understood that there would be further meetings but none have been held.

At the workshop our delegates emphasised the following points and stated that guarantees would have to be in place before commercial irrigators would be willing to participate in the use of effluent for irrigation.

The following is a list of the criteria necessary for full participation of commercial agricultural irrigators in a effluent irrigation scheme;

- That we receive robust scientific data and a guarantee that long term use of effluent would not result in soil contamination. At the time of the workshop Richmond Golf Club was having trouble with STP water from Richmond STP which was secondary treated. This necessitated the installation of an acid injection system to counteract salinity. Richmond STP has recently been upgraded to tertiary treatment but overseas information and anecdotal evidence indicate that contamination may occur from heavy metals and soil imbalance over many years of use.
- That the cost of effluent water for irrigation be no more than water extracted from the river.
- A guarantee that the price of effluent water for irrigation does not rise after irrigators have committed themselves to the use of recycled water.
- That no irrigators should be forced to give up their licensed water entitlement and allocation.
- It would appear that the logistics of delivering the treated water to widely dispersed farms and the necessary storage of treated water may incur a cost that is unrealistic, and a cost certainly not able to be borne by farmers and irrigators given the relatively modest returns from farming and horticultural activities.

- It is our belief that in the main the only economic method of delivering recycled water to commercial agriculture is by returning it to the river in a clean state.
- Using farming lands for dispersal of STP water is a service which could be offered by some farmers but would need to be compensated for on a net basis.
- SWC be required to return a high proportion of the diverted river water back to the river in a clean state thus preventing the river from being in a constant ‘low flow’ condition.

Sydney Water Sewage treatment plants (STP’s), contribute 110 ML/day to river flow in our area. 70 ML/day from the South Creek STP’s, St. Marys, Riverstone and Quakers Hill. 24 ML/day from Penrith STP, 14 ML/day from Winmalee STP and 2ML/day from North Richmond STP. This flow will undoubtedly increase substantially, especially in South creek, with the planned developments at Berkshire Park, the ADI site and the large Bringelly development. A new STP is planned for Bringelly.

The Chairman and Secretary represented our Association on the Hawkesbury-Nepean River Management Forum which met for three years to determine future environmental flows for the Hawkesbury-Nepean River system. The Forum delivered its Final Report in March 2004. We were told by the expert panel members that the treatment of effluent at the above STPs was of very high standard, about 93% purity, and that only a very small further gain could be attained using the present system and technology. Anything more than 1-2% could not be attained without using the reverse osmosis (RO) process. We of course would like to see 100% pure water returned to the river from which it was originally taken. However, to treat the effluent to this standard via RO would be costly as well as the added problem of disposal of the brine or concentrate left over from this process.

Discussions commenced as early as December 1924 between the then Water Conservation & Irrigation Commission (now part of DNR) and the Metropolitan Water Sewerage and Drainage Board (now Sydney Water Corporation) regarding the necessity for a compensation flow release from the proposed Warragamba Dam to be built on the Warragamba River. This release of water was to compensate Lower Nepean and Hawkesbury River irrigators for the loss of water that would occur when the dam was built. In 1945 the Metropolitan Water, Sewerage and Drainage Board recognised that,

“The construction by the Board of Warragamba Dam, which will have a very large storage, and the diversion of a large proportion of the total annual flow of the Warragamba River will considerably affect irrigation on the Hawkesbury River flats”.

The Board finally guaranteed to release the equivalent of 50 ML/day over Penrith Weir from Warragamba Dam as a compensation flow for loss of water by irrigators that would be caused by the building of Warragamba Dam. This compensation flow is a guarantee for irrigators in a similar manner as the building of the weirs on the Upper Nepean River as compensation for the building of the Avon, Cordeaux and Nepean dams many years earlier. Warragamba Dam was completed in November 1960.

Several months ago the then Minister for Energy and Utilities, the Hon. Frank Sartor, MP, announced that the environmental flow from Warragamba Dam of 50 ML/day would be halved to 25ML/day. This water is not environmental water but irrigators' compensation flow; according to the Forum Report there will be no environmental releases from Warragamba Dam until 2015 after extensive works are carried out on the dam delivery system. Our Association has taken the matter up but has not as yet made a major issue of it as there have been no restrictions yet placed on river extraction.

There have been unrealistic estimates by some agencies on the volume of water extraction by agricultural irrigators. Some estimates go as high as 100 gegalitres per year. These are based on the assumption that 100% of all irrigators will extract 100% of their water allocation; this is a mischievous claim that would never happen.

Hawkesbury – Nepean farmland is in a relatively high rainfall area with rainfall well distributed throughout the year. Irrigation is of a supplementary nature, ie, irrigation is only to supplement a rainfall deficiency. We estimate that the extraction by agricultural irrigators is 40 gegalitres per year and falling. Our Association actively supports the metering and monitoring of irrigation water extraction to prove our claim. We are well on the way to achieving this, and as well as being in advance of other unregulated rivers in NSW. Furthermore, given the cost of electricity and diesel for pumping, no irrigator in his right mind would use any more water than was necessary to finish his crop.

The economic value of agriculture in the Hawkesbury-Nepean catchment is estimated at \$1.069 billion per year of which \$600 million per year derives from irrigated agriculture and is a major source of turf and horticultural produce for the Sydney market.

While in principle we are committed to looking seriously at the use of recycled water for agricultural irrigation we have considerable concerns about the safety and economic viability of the proposal and would reiterate and emphasise our concerns as expressed above. These are:

- That we receive robust scientific data and a guarantee that long term use of effluent water on productive farmlands would not result in soil contamination thus rendering farmlands useless.

- That the cost of effluent water for irrigation be no more than water extracted from the river.
- A guarantee that the price of effluent water for irrigation does not rise after irrigators have made investments and committed themselves to the use of recycled water.
- That no irrigators should be forced to give up their licensed water entitlement and allocation upon taking up the use of recycled water.
- It would appear that the logistics of delivering the treated water to widely dispersed farms and the necessary storage of treated water may incur a cost that is unrealistic, and a cost certainly not able to be borne by farmers and irrigators given the relatively modest returns from farming and horticultural activities.
- It is our belief that in the main the only economic method of delivering recycled water to commercial agriculture is by returning it to the river in a clean state.
- Using farming lands for dispersal of STP water is a service which could be offered by some farmers but would need to be compensated for on a net basis. And finally,
- SWC be required to return a high proportion of the diverted river water back to the river in a clean state thus preventing the river from being in a constant 'low flow' condition.