



MACQUARIE MARSHES ENVIRONMENTAL LANDHOLDERS ASSOCIATION

“The Mole” Warren NSW 2824

18th September 2017

Secretary

Senate Standing Committees on Rural and Regional Affairs and Transport

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RE: INQUIRY INTO THE INTEGRITY OF THE WATER MARKET IN THE MURRAY DARLING BASIN

The Macquarie Marshes Environmental Landholders Association (MMELA) was formed in 1995 when there was increasing pressure to further reduce water flows to the internationally recognised Macquarie Marshes. MMELA members are local landholders, many of whom are third and fourth generation floodplain graziers in the area and are all dedicated to ensuring a healthy and productive marsh for future generations. Many MMELA members have been involved in water management on the Macquarie for more than forty years along with their forefathers from the time Burrendong Dam was first proposed.

MMELA members are very pleased and consider it vital that an inquiry into the integrity of the water market in the Murray-Darling Basin be carried out after the allegations made on the Four Corners program, and feel compelled to point out that other rivers and their communities are experiencing similar unfair and prejudicial water management practices.

While MMELA has been successful in forming positive and productive working relationships with many governments (both State and Federal), it has always had difficulties dealing with the various water management departments. The irrigation industry has consistently been favoured by departmental managers in water management development and decision making. This became quite blatant during the Water Sharing Plan development phase in the 1990s and continues as the years go on.

Some examples include:

- **1995** - an audit of irrigation meters along the Macquarie identified 25% of meters were operating satisfactorily and 75% were unsatisfactory for a variety of reasons including deliberate tampering. To our knowledge nothing has ever been done to address this matter and no further audits have been undertaken on the Macquarie.

- **1998** – The NSW Government department in charge of river management at the time refused to increase general security allocations on the Macquarie following significant rain that resulted in Burrendong dam levels rising considerably. This was contrary to the operational rules of the dam. When questioned, MMELA was told the department was operating under “unwritten” rules.
- **2002** – Again the NSW Government department in charge of river management at the time, accounted for environmental allocation carry over water in rainfall that had not as yet fallen. The carry over water was water that had in fact already run into the dam the previous water year and should have been available for use at any time. However it had been put into the general security bucket for irrigators. Had the environmental managers insisted on having the water released at the time the Macquarie Marshes needed it, the release would have caused the dam to ‘crash’ and be unable to meet critical needs such as towns etc.
- **2003** – Water managers reworked the resource assessment part way through the water year and took water from high security town supply and gave it to general security irrigators. This was at a time when both Nyngan and Cobar townships were struggling to meet town needs and were told they would need to go into the market and purchase additional water. This decision was strongly opposed by all other water interest groups in the Macquarie Cudgegong valleys but was approved regardless.
- **2004** - The NSW Government department in charge of river management at the time informed irrigators along the Macquarie that the Murray Darling Basin Authority was considering suspending supplementary water access due to prolonged low flows in the Murray Darling Basin. The department advised the irrigators to lobby against this move but did not inform any other groups in the valley, particularly wetland and floodplain graziers who would have benefited greatly from such a move.
- **2008** – The NSW Government introduced the Floodplain Harvesting Policy. Again it was developed and introduced following consultation with the irrigation industry only. No other water interest groups had any input. As a result we are left to work with a policy that the government has no capacity to measure or even assess the amount of water being taken. THERE HAS NEVER EVER BEEN an ENVIRONMENTAL IMPACT STUDY (EIS) on this Floodplain Harvesting Policy. It does not know the impact on downstream users and communities. It does not know the impact on the ecology of the rivers, wetlands floodplains, and it does not know the impact on the internationally recognised Macquarie Marshes. One could even go a step further and assume it does not care.
- Recently water NSW has changed the customer service committee to be called the customer advisory group, during this change water NSW declined the nomination of our representative (Simon Earl) who had previously been a member of the customer service committee, the reason being stated that MMELA do not hold an access licence. Our nominated representative **does** hold an access licence and this decision needs investigating.

During the Northern Basin Review the following issues were identified to the MDBA and it appears the information has been ignored by the MDBA:

- **Site Flow Indicator:** The site specific flow indicator for the Macquarie refers to it as being at Marebone break. The gauge that is used to measure environmental flows is at Marebone **not** the Marebone break gauge. This simple fact brings into question the credibility of the modelling used to claim the Macquarie has reached 4/4 of the flow indicators.

- The MDBA were told that the timing on the lowest flow indicator (100gl over five months) was incorrect but they chose to ignore that advice. In Dubbo on the 15th of December 2016, Chris Pulkinen acknowledged that the MDBA had been told of this error. The flow indicator should read 100gl over three months. The failure of the lowest flow indicator brings the rest under question as only the 100/250gl indicators can be met from managed water. The other two (400gl and 700gl) can only be met by flood events. These have failed to be met in the observed data.
- The 100gl and 250gl flow indicators are not being met by managed environmental flows as they are absorbed by Burrandong and Windamere Dams and redistributed to general security allocation. The failure to meet flow indicators in the observed data and the fact that the model says it is achieving the flow indicators must raise a flag to the MDBA. If the MDBA continue to ignore the failure in the model for their planning then this brings into question all the other flow indicators in the Northern Basin. Only reaching 22/43 flow indicators is completely unacceptable. The MDBA must immediately stop calling the Macquarie over recovered, review the flow indicators and talk to the environmental water managers - (OE&H and Marsh landholders) who have some understanding of the issues facing the Macquarie.
- **Contribution to the Barwon:** At the engagement meeting in Warren on the 22nd of July 2016, MMELA was told by the MDBA staff present that the Macquarie Castlereagh was less connected to the Barwon/Darling than other rivers in the Northern Basin. It was a surprise to MMELA as in the Hydrological Modelling report, the Macquarie is in fact the largest contributor to the Barwon/Darling.
- As the Macquarie is a winter fed catchment in the Northern Basin the Macquarie is a critical contributor to the Barwon. The townships of Brewarrina and Bourke rely on the clean Macquarie water arriving in the spring that has been filtered through the Marshes. Not only have the amendments failed on the Macquarie FSI, the fact that the major contributor to the Barwon has only been identified as base flows brings into question the whole modelling process. This is possibly why the hydrological report was withheld by the MDBA only to be released just before the original submission date. It is our understanding that the irrigators had access to this document many months before (July 2016). This again shows a lack of transparency and a bias towards the irrigation industry.
- When the Marshes are wet and the area receives rainfall there is a huge catchment, the rain falling on the wet marsh lifts the flows at Bells Bridge and the flows entering the Barwon increase.
- **Cap Factors Reliability:** The process of setting the conversion factor must be transparent. The proposed 12gl to be sold back to industry could mean that 60gl be removed from the environments account. Reliability has decreased as a result of water trade as less water is used by small growers and larger growers buy water on the temporary market. The plan to raise the conversion factor in the Macquarie will do a great deal of harm to the environment. The conversion factor must stay the same throughout the whole basin and be transparent.
- All industries have become more mechanised during the life of the plan and will continue to become more efficient. If industry plant a full crop and the season is average it is possible that the 2017/2018 cotton crop in the Macquarie valley will be the largest amount of cotton ginned in the history of Warren. The NSW government issued flood plain harvesting entitlements and they continue to go unmetered. There is a 50gl cap on supplementary access water in the Macquarie but now this means nothing as it is just called flood plain harvesting. There continues to be cotton grown on farms that sold all their entitlements to the Commonwealth using floodplain harvest licence rules so the idea of the Warren community being affected by water buy backs

is completely incorrect. The proposed amendments are designed to lessen the impacts on Warren and the Water Minister has stated he has a moral responsibility to protect this community. If cotton is continuing to be grown on areas that received compensation from the Commonwealth surely this needs investigation. The same communities received large investment during the buyback period. The moral responsibility the government should be to the river and all water dependent communities, not just the large irrigation towns.

- ◆ **Climate Change:** There is increasing evidence of reduced rainfall and extended periods between flood events. The proposed amendments will reduce the Marshes ability to recover after droughts, this will compound with climate change. Many people are still undecided about long term climate change. The risk of doing nothing is unacceptable. The removal of any water from the environment would very likely impact on threatened species (nationally endangered), such as; Painted Snipe and Australian Bittern. Both birds have returned to the Marshes as a result of water buy backs. The amendments will most likely add to the demise of these birds that have already been identified as threatened.
- ◆ The proposed amendments would impact on the people living in the Marshes and the small villages (Carinda and Quambone) that rely on having a healthy community. The amendments would be welcomed by the large cotton growers but come at the expense of graziers in and around the Marshes. There are currently less people living in and around the Marshes than at any other time during human habitation of the continent as a result of over allocation of the water resource. The amendments would add to the decline in population and the Marshes depend on the people who live here to protect it.
- ◆ **Conclusion**
- ◆ After the water reform that took place in the Macquarie during the 80s and 90s we believed that we were in a position to work as a whole community to find solutions for managing a sustainable and resilient landscape. The amendments have reignited the tensions between irrigators and the Marsh landholders. The MDBA need to accept full responsibility for causing this tension. The failure of the proposed amendments to include suitable evidence of the need for change whilst at the same time creating social unrest and impacting on many people's lives is a disgrace. The whole process has been insulting for those involved who have gone to great lengths to treat MDBA staff with respect.
- ◆ The management of a resource as critical as water needs to be above political influence and sadly this has not been the case for this process. The MDBA alliance with the irrigation industry has meant that only one side gets heard. We can only hope that at some stage in the future those involved in the process will realise the injustice they have caused to many people.
- ◆ The poor consultation with the Aboriginal community shows a complete lack of respect towards people who have managed this landscape in a sustainable way for thousands of years. While you claim that you had consultation with the Aboriginal people, these meetings were separate from the other engagement meetings and no one else ever knew what went on.
- ◆ **Consultation Process:** MMELA does not believe the consultation process regarding the proposed amendments has been adequate, equitable or fair. The time taken for the Hydrological Modelling Report to be made available to all relevant parties was unacceptable. No one could be expected to prepare a detailed submission when they do not have all the pertinent information. Admittedly the report was finally made public, however it is so convoluted you would need a degree in hydrology to decipher it. The MDBA should have made

this report public prior to its community engagement meetings held throughout the Northern Basin so it could be explained and those present could have their questions answered. As it was, there was no time to properly analyse and question the Hydrological Modelling Report. It has also come to MMELA's attention, through reviewing information gained under the Freedom of Information (FOI) Act and passed on to MMELA, that the irrigation industry had access to this crucial report in July 2016. This information also states that the MDBA had consulted and negotiated almost exclusively with the irrigation industry, or 'super users' as they refer to them. This emphasises the MDBA's backing of one group of stakeholders (this also being the smallest stakeholder group) at the expense of all others. MMELA cannot understand why the MDBA would operate this way when the environment is the largest licence holder on the Macquarie. At no time did senior staff of the MDBA make an official visit to the Macquarie Marshes to speak with graziers and again this is very disappointing considering it is an internationally recognised wetland for which the Government has specific obligations and responsibilities. The Marshes are also one of the key environmental assets within the Basin. The entire consultation process has been inequitable, inadequate and insulting to many involved in this process.

● **Environment:** As you are aware the internationally recognised Macquarie Marshes is situated between Warren and Carinda. The Macquarie Marshes is unique both environmentally and economically. Research indicates it is the most important colonial nesting waterbird breeding site in Australia for species diversity and nesting density (Kingsford and Thomas 1995). The majority of the breeding colonies are situated on privately owned land where landholders have looked after and protected them since settlement. The Macquarie Marshes Nature Reserve, "Wilgara" Wetland and U Block are listed on the Ramsar Convention of Wetlands of International Importance. The Nature Reserve is also listed on the Japan - Australia Migratory Bird Agreement (JAMBA) and the China - Australia Migratory Bird Agreement (CAMBA) along with several other agreements. It is the responsibility of the whole community, including State and Federal Governments to ensure management of the wetland does not compromise values set out in the above mentioned agreements. Continued water flows are the lifeblood of this unique wetland and its associated floodplain and any decrease in these flows without proper research and assessment could compromise the integrity of this vibrant area. In the supporting documents the MDBA states that all four (4) environmental outcomes or specific flow indicators were met when modelling environmental outcomes, in fact in reality none of the indicators were met in the observed data. Again, this highlights the dangers of working with 'assumptions'. The NSW Government states in its Northern Basin Review Synopsis (November 2016) that it considers assumptions underpinning the Tool Kit as being 'not fit for purpose' and 'both unrealistic and unachievable'. MMELA supports this view. Given that the NSW Government will be responsible for implementing these measures, this position destroys the Tool Kit's credibility and usefulness. Stakeholders in the Macquarie valley have been at the forefront of environmental flow management as there has been an Environmental Water Account of some sort managed in the Macquarie since 1967 when 15,000 acre feet (18,500ML) was set aside to be used for the health of the Macquarie Marshes. This was put in place when Burrendong Dam was completed and the government of the day accepted that there would be reduced water flows to the Macquarie Marshes. MMELA cannot understand why the MDBA did not seek advice and information from the environmental managers in the Macquarie instead of taking advice from other groups, in particular Macquarie River Food and Fibre, resulting in incorrect assumptions being made about the success or otherwise of

environmental management water in this valley. One of the biggest threats to the ecology of the Macquarie Marshes is the reduced frequency of large floods as it is only on these large floods that the colonial nesting waterbirds breed. These key species such as egrets and ibis are not long lived birds, 7 to 8 years. When they previously nested in the Marshes, they did so in their hundreds of thousands every two to three years. We are lucky to see them breed every 6 to 8 years, numbers are declining and will continue to do so until there are no birds left to breed. One breeding event in a bird's lifetime is not enough to ensure these species' survival. Even worse, if we accept the MDBA's 114 year model it predicts periods of "NON BREEDING" greater than bird life expectancies. This is government sanctioned extinction of many fauna species. Reduced water availability will place constraints on flows for habitat maintenance at crucial times such as extended dry periods as experienced in the 2002/2009 drought. The ability to provide even small in channel flows in times of drought are vital for vegetation health and wildlife survival.

● **Cap Factors:** The MDBA's proposed amendments suggest a reduction in recovered water of 12GL on the Macquarie, however depending on what Cap Factor or Conversion Factor is used, this will be anywhere from 29GL to 60GL. This is totally unacceptable to MMELA. How conversions are determined has been a concern for stakeholders on the Macquarie since 1980, when licences were converted from area based licences to volumetric based licences. At this time all valleys in NSW were converted at a factor 6ML/ha, however the Macquarie irrigators convinced the government of the day to allow them to convert at 8ML/ha (WJ Johnson 2005). As a consequence the NSW Water Resources Commission in 1981 admitted that the regulated flow in the Macquarie was 'overcommitted.' Since 1981 commitments in the Macquarie River have doubled casting doubt on Macquarie River Food and Fibre's claim that the conversion factor in the Macquarie is 53%. This allocation of water has been over generous and has never been properly addressed. It is particularly galling to hear the recent demands from Macquarie irrigators for water to be 'returned.' Conversions have a long and murky history in the Macquarie. The current debate about Conversion Factors is confusing and secretive, excluding many stakeholders who are materially affected by such decisions. MMELA remains fearful that allocations can be manipulated to favour any one group of water users over others. The entire process needs to be simplified and made clearer so all water users can have confidence in the numbers. MMELA presumes the approach to calculations of Cap Factors used for determining licence volumes in the Northern Basin will also be used in the same way in the Southern Basin. If not then this again becomes an equity issue. Another concern for MMELA is who will have responsibility for calculating and negotiating Cap Factors? particularly if the proposed amendments are not approved. It is the opinion of this organisation that the role of setting Cap Factors should rest with the MDBA to ensure fairness across state boundaries and throughout the Basin.

● **Flow Assessment:** Using averages to assess, model or guess river flows in the Northern Basin (NB) has always been fraught with dangers. Because the NB, including the Macquarie, historically experiences such variation in flows from large floods to prolonged low flows to no flow, it is impossible to rely on averages to model flows with any degree of accuracy. The Macquarie also has a responsibility to supply flows to the Barwon Darling system. Including supplementing the town water supplies for Brewarrina, Bourke and Wilcannia. Bourke Shire Council has acknowledged that when water from the Macquarie arrives at Bourke the cost of filtration of the town water supply is greatly reduced. This is a result of the natural filtration as water flows through the

Macquarie Marshes' vast phragmites reed beds and other aquatic vegetation. Historically the Macquarie was the largest contributor to the Barwon Darling however flows reaching Brewarrina and Bourke have significantly reduced since the advent of river regulation. This is according to the MDBA's Hydrological Modelling Report. Any additional reduction to Environmental Water Accounts will further compromise the Macquarie's ability to achieve its obligations to downstream systems. Documents received by MMELA question the concept of Specific Flow Indicators (SFIs) and their usefulness in assessing environmental outcomes, particularly in the unregulated north. They also suggest that SFIs are not fit for purpose in the NB and given much of the lower Macquarie is unregulated the use and effectiveness of SFIs here must be questioned. It is also unclear how the hydrological modelling is linked to SFIs.

- **SUPPLEMENTARY ACCESS** - Supplementary Access licenses also impact the wetlands, floodplains and effluent creeks of the Macquarie. The original intent of providing Supplementary Water Access Licences was to grant opportunistic access to water in times of 'plenty' and when there would be no adverse impact on the environment or downstream users and communities. However access to water under these licences is now being granted every time the trigger point is reached regardless of the environmental health of the river, creeks and in particular the Macquarie Marshes. Tributary flows and Dam spills are the life blood of the effluent creeks and the lower Macquarie system. By allowing access every time the 5,000ML per day at Warren trigger occurs you severely impact these areas, as this is the height most effluent creeks begin to flow. The creeks just start to flow then supplementary access is announced and the flow in the river retracts thus dropping levels and stopping flows to these creeks and the lower river. One measure the MDBA should be looking at is lifting the Supplementary Access trigger for the health of the effluent creeks and the lower Macquarie River.
- **IMPROVEMENTS TO TECHNOLOGY** - During the years since water recovery programs were introduced there has been enormous advances in technology for farmers. Some of these include, self-steer technology for tractors, driverless tractors, automatic weed sprayers such as 'Weed Seeker', cotton pickers that bale as they go and computerised irrigation systems. All of these innovations have resulted in reduced employment on irrigation farms. How has the use of this new technology been considered in the process of determining the so called impacts of water recovery on farms and communities or in the socio economic assessments?

As stated in the Four Corners program "there is no appetite for compliance" on any of the NSW Rivers and so this type of discriminatory behaviour continues in the Macquarie valley and several other valleys to this day. We are still in a situation where irrigators are given information either exclusively or well before other interest groups. It is true that open and transparent negotiations and fair and inclusive consultation has never existed for the majority of river valleys in NSW. This has also been evident during the review of the draft amendments to the Northern Basin Plan and the development of the proposed amendments. The proposed amendments again will only favour extractive users to the detriment of other users and communities in the northern basin. The situation is unlikely to change in the near future unless this bias behaviour is not exposed and replaced with a true open and accountable process for water management in NSW. During the development of the water resource plans the NSW government has continued to highlight that there be no third party impacts (to the irrigation industry) but are continuing to push for a 30% growth in production. The NSW government has

not demonstrated any genuine commitment or cooperation to the aims and objectives of the basin plan.

MMELA suggests that the only option is for the MDBA to withdraw the proposed amendments and work with the whole community to better manage this limited natural resource.

MMELA has documented evidence for all of the issues raised above and can produce this should you require further information. Our organisation would also like to be included in any ongoing investigation or inquiry. Our members are available to come and meet with you and/or would be very pleased to host you on another visit to our treasured Macquarie Marshes.

Yours faithfully
Garry Hall
Chairman
MMELA