Nature Conservation Council of NSW

The voice for the environment since 1955

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14th December 2007

SUBMISSION: STATE WATER OPERATING LICENCE ISSUES PAPER.

Dear Sir,

The attached submission on the State Water Operating licence has been prepared by the NGO Water Group through NCC.

Your attention is drawn to the letter from IPART to NCC dated 14/11/2007, your reference 06/376-2.

Yours sincerely,

Prof. Don White
Chairman

Nature Conservation Council of NSW

The voice for the environment since 1955

Submission: : STATE WATER OPERATING LICENCE ISSUES PAPER.

Issues:

- Environmental Water Manager and Water Pricing
- Customer Service Committees
- State Water Environmental Management Plan
    - Environmental Water Diversion
    - Introduced Species and biodiversity
    - Water quality
        - Algal blooms;
        - Cold Water Pollution
    - Erosion
- Reporting and Accountability
- Water Metering

Attachments:

"Caring for Our Rivers Report", NCC et al, November 2007.

SUBMISSION: STATE WATER OPERATING LICENCE ISSUES PAPER.

Environmental Water Manager

All environmental water in NSW should be managed by the Department of Environment and Climate Change (DECC). This includes; all environmental water in Water Sharing Plans, not just the planned environmental water and adaptive environmental water, but critically the environmental water defined by 'everything else that is left over after diversions against entitlements, planned and adaptive environmental water'. This comprises about 5000 GL of environmental water per annum in an average year.

It is currently being used to deliver water to irrigators – so it goes to the environment through evaporation and losses, but not necessarily when the environment wants or needs it.

Delivery of environmental water should be independently audited and reported on by the Natural Resources Commission (NRC).

Water Pricing

NCC supports the continuation of the Fixed: Variable cost ratio is a means of ensuring that water pricing acts as an efficiency driver in water use. We would like to see all water pricing reflect the true cost of water (including externalities).

State Water Customer Service Committees

The Water Group is of the view that the current arrangements for advice to State Water limit stakeholder input. In particular, there is little consideration of environmental protection in the **Customer Service Committees** as required by the committee charter. These committees are dominated by users being, water authorities, irrigators and industry.

Anecdotal advice is that recommendations from the Customer Service Committees are mostly directed at improving conditions for water extractors. Environmental water is seen only as an unallocated resource and the conditions and operations to protect environmental flows as defined in the water sharing plan do not receive balanced consideration. This means that the committees do not provide for a sufficiently balanced input into decisions about water sharing arrangements.

It is apparent that where Water Sharing Plans are suspended, the influence of **State Water Customer Service Committees has increased**. These committees consist almost entirely of representatives of industry, irrigators and water authorities. They are now regularly providing correspondence on Water Sharing Issues which is outside the objectives of the committees.

From the Customer Service Committees Business Plan 2000/2001. CSC were established by IPART to*: "Give customers a direct say the operational and asset management decisions impacting their rural water supply".(ref:Page 2)and "As part*

of the water reform agenda and a requirement of the COAG, the Department of Land and Water Conservation (DLWC) separated the role of service provision of bulk rural water from resource management (both policy and regulation). This institutional separation is intended to reduce potential conflicts of interest and achieve greater clarity of accountabilities across DLWC.(ref:Page 9)"

In a later document titled: "Customer Service Committees Terms of Reference and Operating Guidelines" (dated 1 April 2005): *"State Water must establish and regularly consult with valley based Customer Service Committees (CSCs) to enable customer involvement in issues relevant to the performance of State Water's obligations to customers under licence." (ref: page 2/14)"*

The key word is 'Customer'. The environment is a customer of State Water and accordingly needs representatives of its interest on the State Water Customer Service Committees. DECC representatives can to some extent represent the interests of the environment, they are also subject to the direction of government. Accordingly, it is the peak group's view that the environment's best interests are to be represented by an environmental representative on each CSC.

The objectives of CSCs are currently being reviewed by State Water. It is important that the governance of the committees is not compromised in this process. In particular proposals to allow the committees to have input into Water Sharing arrangements, extend the terms of CSC committee members without providing some automatic turnover and to negotiate with CMAs, when the CSCs do not have a charter to operate outside of State Water.

Specific Issues for IPART:

1. Establish clear accountabilities for CSCs in the Operating Licence, and;
2. Customer Service Committee members receive training in conflicts of interest and governance and the meeting minutes be audited and put on the State Water Website.

State Water Environmental Management Plan 2006 - 2011

The plan includes some valuable objectives, yet requires specific and detailed targets on water quality, erosion, environmental flows and management of introduced species impacting upon NSW's diverse riverine ecosystem. It is of concern that the report to IPART from State Water dated 1st September 2006 has many gaps, eg promises of reports in 2006/2007 (page 21).

- **Environmental water diversions**

The availability of water for environmental use is crucial to the healthy functioning of NSW Rivers. Environmental flows strongly influence the ecological diversity a NSW rivers by allowing for appropriate habitat and healthy ecosystem function.

State Water's performance on timely and adequate delivery of environmental water is poor. Environmental flows are calculated incorrectly, are delayed, are diverted and used for non-environmental purposes.

In late 2005, for example, environmental water allocated to the Macquarie Marshes was released from Burrendong Dam. However, DECC discovered water specifically released for the benefit of the environment appeared to have been diverted by landholders above and in the Marshes. Rather than reaching the Ramsar-listed sites and improving the health of vegetation, fish and birds, the water was essentially 'lost'. In addition, Environmental water releases are notorious for being released late, i.e. a three day delay between order and release, creating environmental havoc in the Marshes and failure of bird breeding events.

The Environmental Management Plan lacks any mention of a strategy to manage timing, flow allocations and reduce the loss of environmental water. This is a reflection of the low priority of environmental flows for State Water which needs to be rectified through the EMP.

Specific Issues for IPART:

3. The DECC has the lead role in environmental water management on behalf of the estate government. DWE should not order this water on behalf of the environment and State Water should only release this water on instruction from DEC as the lead environmental water manager in NSW.
4. An audit role of environmental water flow calculations, timeliness and delivery is given to the Natural Resources Commission.

- **Introduced species and biodiversity**

Introduced flora and fauna species are a direct threat to the health and functionality of NSW's riverine environment. For example, Carp (Cyprinus carpio) have been described as one of the most serious threats to biodiversity in inland rivers of NSW. Carp compete with native species for resources and alter stream habitat by disturbing sediments and increasing turbidity.

Willows (Salix spp.), unlike native trees, release large amounts of leaf litter into streams resulting in increased nutrient load. This very often leads to a reduction in water quality, such as namely reduced dissolved oxygen and increased turbidity. Further, in-stream woody debris provides important habitats for macro invertebrates and fish. However, woody debris provided by willows is soft, smooth, lightweight, and therefore unsuitable for fauna habitation. A specific strategy addressing management of these introduced species in State Water Assets is crucial, but is lacking from the Environmental Management Plan.

As is stated in the Environmental Management Plan, riverine ecosystems owned by State Water adjoin properties with very significant environmental and conservation significance, some with high biodiversity values and threatened or endangered native flora and fauna. We believe these areas and others require a detailed and specific plan to control introduced species. This plan should use the framework of the NSW Invasive Species Plan which is presently being developed by the NSW Department of Primary Industries.

The threat of introduced species has merely been mentioned in the Environmental Management Plan, and the plan lacks any indication of a commitment to manage introduced species. Amendments to the plan and supporting strategies and targets are

required to manage the existing threat introduced species pose to biodiversity and native flora and fauna. Further, we contend that if no commitment to introduced species management is implemented for the period 2006-2011, the results could be extremely damaging and irreversible.

Specific Issues for IPART:

4. A specific strategy for addressing invasive species in riparian zones under the control of State Water is developed in accordance with the NSW Invasive Species Plan.

Water quality - Algal blooms

EMP Objective 2 outlines plans to improve monitoring and reporting systems relating to blue-green algal blooms, as well as water chemistry and temperature. NCC understands the importance of an effective system to monitor and report on existing water quality issues. We contend however, that the plan lacks an indication of a broader commitment to the strategies for prevention of water quality issues in NSW's rivers, such as algal blooms.

The elimination of algal blooms in NSW's rivers is unlikely; however, prevention of the severity of effects of algal blooms is possible. This can occur, to some extent, at least, by controlling introduced species such as Carp. The presence of Carp has been found to compound water quality issues as they have been linked to the release of nutrients as they damage aquatic plants. This process often promotes algal blooms.

Specific Issues for IPART:

5. State Water develops and implements a plan for management of Carp and other introduced species. These strategies should be developed and implemented collaboratively.

Water quality - Cold water pollution

Dams and weirs have the potential to release unseasonably cold water from deeper layers of thermally stratified reservoirs. Cold water is a threat to native flora and fauna health and functioning in many NSW rivers. There have been situations have arisen where exemptions for cold water improvements have been approved at times of planning for weir and dam upgrades. The result has been a lack of provision of cold water improvements and a related lack of continued improvements to water quality and aquatic habitat.

Contrary to decisions of the NSW Cabinet, the Environment groups note that in several recent upgrades to significant water infrastructure in NSW, namely dams and weirs, the Department of Primary Industries has acted to exempt State Water Corporation from the requirements to install fish ways and thermal regulators. This exemption could be because of the negative cost implications of improvements. Exemptions to mitigate the cold water releases are opposed and should be reported to an independent body. Continued improvements to cold water pollution are crucial to the healthy long term functioning of NSW Rivers.

Further, the Environmental Management Plan fails to address the issue of cold water improvements related to the update of significant infrastructure. The role of State Water should include monitoring cold water pollution and its impacts, as well as developing specific and achievable strategies and targets for continued improvements to cold water pollution from State Water Assets.

Specific Issues for IPART:

6. Exemptions should be at arms length and there needs to be an investigation and review by an independent body.

Erosion

EMP objective 1, improving the in-stream and riparian environment, is crucial to an increase in the health and functionality of NSW's rivers. According to the plan, this will involve managing flows in order to reflect natural flow variability, improve habitat and minimise erosion. The provision of details relating to minimisation of erosion is a component of State Water Corporation's Operating Licence. These details are lacking from the plan, as is any broader commitment to erosion control.

Erosion has the potential to significantly damage both in-stream and surrounding habitats. Situations that may arise from a lack of commitment to erosion monitoring and control related to regulated flows include altered geomorphology of the river and associated reductions in habitats crucial for fish breeding, feeding and habitat, damaged or reduced riparian vegetation and decreased aquatic water quality.

Specific Issues for IPART:

7. State Water commit to managing erosion related to regulated flows. This requires the provision of details related to erosion control strategies and targets.

- **Reporting and Accountability**

For NSW's rivers to maintain environmental health and be an ongoing sustainable resource, detailed and specific targets are necessary. Although targets are briefly outlined in the Environmental Management Plan, we believe they are too general to warrant the best achievable outcomes for NSW's rivers health and functionality. Few of the targets provided, such as those presented in objective 6, are detailed enough to provide accountability for specific actions.

Specific Issues for IPART:

8. Detailed and meaningful targets, and the provision of strategies for the effective implementation of these targets.

- **Water Metering**

The Water Group is concerned at the apparent slow action in implementing metering on all surface water extractions and groundwater bores in NSW. The supporting environmental groups were intimately involved, in the preparation of Water Management Plans under the Water Management Act (2000). At that time commitments were given by the then Dept of Land and Water Conservation to implement metering throughout NSW within a 5 to 10 year period.

Metering is extremely important. **Often, environmental flows can only be assured by measuring and controlling extractions**. This is due to environmental flows being measured or deduced as releases from dams, monitoring points on streams or other storages. Actual environmental flows are often the balance after extractions occur. There is also evidence that over-extraction is occurring in many areas, this evidence includes rapid depletion of groundwater tables and streams not flowing due to excessive extraction. However, this is difficult to prove without all extraction being metered and appropriate efforts being made to ensure compliance.

State Water has reported on the low level of over extraction of metered water. However, illegal extraction, over extraction of unmetered water and other diversions need to be estimated, reported and progressively improved to enable accounting of environmental water. Whenever State Water becomes aware of such diversions it should report them to the regulator.

The debate has become one focused on metering standards. Rather than one focused on accounting for water usage and in particular environmental flows. The environment groups want to see all extraction metered from water sources in NSW.

Specific Issues for IPART

9. Metering of all water used, including basic rights water is needed;
10. Reporting through measurement or estimates of environmental water accounting from State Water storages and infrastructure is needed.

Delivery Constraints

NCC supports water order debiting on orders. In addition, scheduling of water releases to entitlement holders to reduce delivery losses and improve efficiency is needed. The environmental water savings should be credited to DECC.

Specific Issues for IPART

11. Implement water order debiting and scheduling to minimise environmental water wastage.

Risk Based Auditing

Risk based auditing is usually applied to reduce costs once monitoring standards reveal predictable results. This requires comprehensive monitoring and experience with the results. State Water has not demonstrated such results in managing environmental water to date. In addition, we are unsure how such an approach would better serve the specific risks to delivery of environmental flows.

Specific Issues for IPART

12. Risk based auditing not be applied at this satge.

'Caring for our rivers report'

A report on operation of the Water Management Act (2000), associated legislation and policies.

By the NGO Water Group comprising:

Nature Conservation Council of NSW;

National Park Association of NSW;

Total Environment Centre;

Inland Rivers Network;

Australian Conservation Foundation;

Community Environment Network;

John Asquith
Convenor

November 2007.

Nature Conservation Council of NSW

The voice for the environment since 1955

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Introduction:

The Auditor Generals is conducting a follow-up Audit in 2007 to the **2003 Performance Audit – 'Protecting our rivers'**. This report follows a submission by the NGO Water Group to the Auditor General.

The timing of this Audit was fortuitous as the previous inquiry occurred before amendments to the Water Management Act in 2004 and 2005 occurred and the endorsement of the National Water Initiative by the State Government in 2005.

NCC member groups have raised concerns in regard to implementation of the Water Management Act (2000) and the State Water Management Outcomes Plan (2002, SWOMP) over the past few years. At the NCC Annual Conference 2005, the following motion was passed:

'Wetlands and Waterways" Motion 4.

4. Audit of the Water Management Act, 2000
Submitted by the Community Environment Network Moved: John Asquith
Seconded: Jane Smith
The following amended motion was carried:

THAT the Nature Conservation Council of NSW:
(a) deplore the slow and inadequate implementation of the NSW Government's water reform commitments to date, including the already gazetted but inadequate water sharing plans; and

(b) initiate or conduct an audit and review of the implementation of the Water Management Act and associated regulations and documentation.

Background:

The Water Act (1912) was established to provide a mechanism for government regulation of water extraction, structures and flows. It provided for licencing of activities associated with water in streams, rivers and groundwater. The legislation was directed at managing the use of water as a natural resource. Ownership of all water was vested in the relevant Minister on behalf of the crown.

In 1994, the Council of Australian Governments (COAG) responded to growing concern about the alarming state of many Australian river systems and realized that the solution was an establishment of new policies and some institutional changes. The result was a national policy for the efficient and sustainable reform of Australia's rural and urban water industries developed by the Council of Australian Governments (COAG), called the COAG Water Reform Framework.

To implement the COAG agreements significant changes needed to be made to water management legislation in each state. In NSW this resulted in the Water Management Act 2000 (WMA). The Act gave the environment priority except when a critical water shortage occurs. In that situation, the water usage in an area declared as having 'severe water shortage' is determined by the Minister. The following prioritisation then occurs: Firstly, for - 'the taking for basic landholder rights for domestic purposes and for essential town services', secondly, for the 'need of the environment' and lastly (if any water remains) for 'other licence holders' (i.e. mining and irrigation).

The National Water Commission overseas the implementation of the National Water Initiative (NWI) and monitors its implementation in each state. The NWI is an agreement between the Commonwealth and state and territory governments, which provides a blueprint for how Australia manages it's water resources. The NWI addresses fundamental areas such as water entitlements, water planning and environmental flows. It also sets out the establishment of water markets, accounting standards, and provides information on how much water is being used and for what purposes.

The NGO groups have been involved in river health issues since the COAG reforms. This has included, considerable work with other stakeholders in developing the Water Management Act (2000) and participation in and nomination of members to Water Sharing Plan committees throughout NSW and major policy groups such as the State Water Outcomes Management Plan committee. The State Water Management Outcomes Plan was gazetted in 2002. It establishes *"the over-arching policy context, targets and strategic outcomes for development, conservation, management and control of the State's water resources."*

In 2004 NCC and WWF notified the government by letter that they believed two aspects of the Gwydir Water Sharing Plan were not consistent with the Water Management Act (2000). Legal action was launched by the Groups. In 2005 the State Government passed legislation to prevent appeals against Water Sharing Plans.

Since 2006, the NGO groups have not received any support from government to participate in water processes. This has led to an increase in influence by water extractors, particularly industry, irrigators and water authorities in river management.

In November 2006, the State Government released the State Plan. It has the objective of: *"delivering better results for the community from Government services."* The specific targets relating to river health are:

Priority Target E1:
Secure and sustainable water supply for all users
- Restore water extraction levels from rivers to sustainable levels.

Priority Target E4:
Meet the NSW government targets for Natural Resource Management;
Water:
- By 2015 there is an improvement in the condition of riverine ecosystems;
- By 2015 there si an improvement in the ability of groundwater systems to support groundwater dependent ecosystems and designated beneficial uses;
- By 2015 there is an improvement in the condition of important wetlands and the extent of those wetlands is maintained.

Community:
- There is an increase in the capacity of natural resource managers to contribute to regionally relevant natural resource management.

Hence, water reform and implementation is now driven by a range of legislative and policy changes since the Water Management Act was passed in 2000.

Issues

Water Management Act Amendments

The *Water Management Act 2000* provides the basis for the sustainable management of water in NSW. The Act was amended in 2004 for the National Water Initiative and in 2005. Farmers, irrigators and environment groups were not consulted before the state government pushed through amendments in 2005. The amendments went through parliament in a little over a week, even though they involved some significant changes.

The changes were partly designed to cut off a court case by NCC in the High Court testing the validity of the Gwydir Water Sharing Plan. In particular, the case could have resulted in a greater allocation of environmental water. However, the government faced the prospect of most water sharing plans being invalidated if the case was successful.

On top of this, initiatives at both the Commonwealth and the State level such as the National Water Initiative, the statutory water sharing plans and enhanced water trading required some amendments to the Act.

However, other aspects of the changes to the Act are alarming. For example, the use retrospective legislation, which has happened on at least 10 occasions when environment groups have made court challenges. The changes will validate any action by government likely to be contrary to the Water Management Act.

Compensation is payable if water allocations are reduced by government action. Hence, the changes require that any reduction in the available water is clearly identified and documented. However, in regard to water management plans the government has moved to protect itself from compensation. Under the amendments compensation is not payable in relation to certain conduct including *"(a) any act or omission, whether unconscionable, misleading, deceptive or otherwise, (b) a representation of any kind, whether made verbally or in writing and whether negligent, false, misleading or otherwise."* This provision sets an extremely worrying precedent that enables governments to act with impunity and without accountability in the conduct of their business.

Some proposed provisions would have allowed water utilities to increase their extraction without requiring them to purchase the water off other users. The impact of this would have been to reduce environmental flows or to reduce the water available to extractors. The government decided to withdraw these amendments under pressure from irrigators and environmental groups. Some rural communities would not be able to afford to buy water on the market. So the impact of these further negotiations will be much wider than just the price of water or compensation. NGO Groups have not been invited to discuss these changes.

Cold water pollution from major dams requirements are modified to encourage utilities to reduce the temperature variation of discharges below 2 degrees. The regulation of this activity now comes under the water access licence. The Environment groups note that in several recent upgrades to significant water

infrastructure in NSW, namely dams and weirs, the Department of Primary Industries has acted to exempt State Water Corporation from complying with the requirement to reduce cold water pollution and to improve fish passage, possibly due to negative cost implications of providing such improvements.

Floodplain harvesting activities were to be regulated by an attachment to water sharing plans and are not eligible for compensation. Regardless, these amendments to water sharing plans have not happened.

The relevant regulatory departments have few compliance officers to ensure compliance with regulations affecting rivers.

Impacts on groundwater from quarrying or large-scale excavation were included in the WM Act (2000). However, planning policies adopted for State Significant Development have exempted these activities from the WM Act (2000). This creates the situation where the only activities likely to cause a significant impact on the groundwater resources or the environment are exempted from needing a licence or interference approval.

Environment groups are concerned that the amendments plus suspensions and exemptions could lead to reduced environmental flows and the health of rivers being given a lower priority. This would be a major reversal of the position that the health of rivers and their long term sustainability was fundamental to the COAG reforms.

Lastly, CMAs have very limited roles and accountabilities in river health. To date they have facilitated consultation on macro water sharing plans.

Specific Issues:
1. Amendments plus suspensions and exemptions impact adversely on the COAG reforms.
2. Compliance officers are insufficient for monitoring and managing the regulations.

State Water Management Outcomes Plan (SWOMP)

The State Water Management Outcomes Plan (SWOMP) commenced on 20th December 2002 by an instrument known as the State Water Management Outcomes Plan Order 2002.

It provides for two reviews:
- A performance assessment strategy of monitoring and reporting will be established within six months (June 2003).
- The SWOMP will have effect for five years and is to then be reviewed and updated (December 2007).

In addition, in Part 2 the SWOMP contains 66 Five Year water management targets.

The Water Sharing Plans are each a regulation in their own right, so suspension of any of the plans does not suspend the SWOMP.

Specific Issues:
1. An audit should review the SWOMP targets individually, in order to obtain an indicative score of the sustainability of the State's water resources.

Macro Water Sharing Plans

Macro Water Sharing Plans are legal frameworks to improve sharing water between water users and the environment. There are local water sharing plans implemented for areas with a risk of over-extraction, i.e. rivers with high levels of extraction.
The macro plans being prepared are on a macro not local scale and therefore determined from desktop models with some local assessment, rather than being developed by water management committees. The Catchment Management Authorities (CMA) are involved in the consultation process.
One shortcoming of this macro planning process is the lack of adequate recharge and discharge data that is available as a basis for long-term prognosis on large scale areas. Monitoring the health of natural systems is nearly impossible without adequate baseline data. There is a lot of focus on surface water but not enough on groundwater use. However, both systems are interconnected and significant impacts are not just short term impacts on specific extraction sites, they are also cumulative, long term impacts which are much harder to predict. Enormous areas are encompassed in macro plans which cannot take small scale (local) variation in soil structure, population growth and rainfall patterns into account, making local creeks and vegetation vulnerable to potential over exploitation. Instead, the macro plan uses long term extraction and highly unpredictable model-based rainfall averages as a baseline.

Specific Issues:

1. Macro plans contain generalisations, which may not apply to particular catchments, thereby endorsing management actions that may adversely impact many streams and aquifers.
2. The Macro plans are large-scale management tools and should be assessed by an environmental manager, such as DECC. This will ensure that all actions that create environmental impacts are adequately assessed.

Suspension of Water Sharing Plans

The Group has become aware through Government Gazettes, and reports from member groups that many water sharing plans have been suspended Statewide as a response to the drought conditions.

Suspending plans during drought indicates that the plans are not sufficiently robust for a range of climatic extremes. There is currently no statement, policy or process by government on when and how the Water Sharing Plans will be reinstated.

There are two issues of concern:

1. What is the trigger to recommence the operations of the plans? From a plain English reading of the plans, once general security allocations are recommenced, as they have in several valleys, the plan should recommence, including all environmental allocations under the plans.

2. The water availability and resource allocation frameworks of each of the Water Sharing Plans was underpinned by the '*drought of record*' obtained from the water data available. Now that the drought of record has been

reached or exceeded in areas where Water Sharing Plans have been suspended, each of these plans should be reviewed and revised to reflect the new '*drought of record*'. Any changes that are required to the Water Sharing Plans which reduce entitlements, as a result of this review should not attract compensation.

Whilst we understand the hardship and concerns that drought is bringing, we beleive that the current approach in unhelpful in the longer term. In particular providing a free allocation of high security (i.e. environmental) water is removing the financial incentive to drive more efficient water use. For example, Cost benefit analysis to justify capital expenditure by utilities for projects which improve water efficiency will not work without an economic benefit for water savings. This is the case in the Hunter Power Stations where water recycling or reuse requires capital expenditure. This can only be justified in a business case if the cost of water is sufficiently high or the need is critical.

Water Sharing plans that have been suspended include:

- Hunter;
- Wybong;
- Ourimbah Creek;
- Macquarie;
- Cudgegong;
- Murray;
- Murrumbidgee;
- Lachlan;
- Many groundwater plans.

Environmental Flows are suspended in all streams where the Water Sharing Plans have been suspended. In addition, environmental flows in the Hawkesbury Nepean system, i.e. Water Act (1912) have been suspended.

Specific Issues:

1. Suspended water plans be reinstated as soon as possible. This includes restoring plans before water restrictions on urban water supplies are lifted or as soon as the annual **Available Water Determination** for allocations to users are above 10% (say) in rural areas, in addition;
2. Establish rules and process for the suspension of plans and for the restoration of environmental flows.

Murray Darling Basin Issues

Catchment management within the Basin remains characterised by a lack of caution. Surface waters and ground-waters have been grossly over-allocated for human use. Until very recently, little has been done to remedy this situation, and even now reform is happening far too slowly. Major government initiatives, such as the *National Action Plan 2000* and (to a lesser extent) the *National Water Initiative 2004* have failed to recognise cumulative impacts of incremental catchment development.

Many major groundwater bores, not only in the Basin but across the continent, remain unlicensed and un-metered, and where compliance programs exist they are usually poorly resourced. The implementation of CoAG groundwater commitments, is now essential if further environmental and economic damage is to be avoided.

Plans to protect catchment ecosystems cannot be effective without adequate knowledge of the relative value and the current condition of these ecosystems. There is an urgent need to develop comprehensive State inventories of inland aquatic ecosystems, incorporating both value and condition data as well as critical inter-dependencies of ground and surface water flows.

Specific Issues:

1. Lack of data and information on condition of ecosystems
2. Lack of information on interdependency of groundwater and surface water.

State Water Customer Service Committees

The Water Group is of the view that the current arrangements for advice to State Water and Natural Resource Management at DECCW limit stakeholder input. In particular, there is little consideration of environmental protection in the **Customer Service Committees** as required by the committee charter. These committees are dominated by users being, water authorities, irrigators and industry.

Anecdotal advice is that recommendations from the Customer Service Committees is mostly directed at improving conditions for water extractors. Environmental water is seen only as an unallocated resource and the conditions and operations to protect environmental flows as defined in the water sharing plan do not receive balanced consideration. This means that the committees do not provide for a sufficiently balanced input into decisions about water sharing arrangements.

It is apparent that while Water Sharing Plans are suspended, the influence of **State Water Customer Service Committees has increased.** These committees consist almost entirely of representatives of industry, irrigators and water authorities. They are now regularly providing correspondence on Water Sharing Issues which is outside the objectives of the committees.

From the Customer Service Committees Business Plan 2000/2001. CSC were established by IPART to: *"Give customers a direct say the operational and asset management decisions impacting their rural water supply".(ref:Page 2)and "As part of the water reform agenda and a requirement of the COAG, the Department of Land*

and Water Conservation (DLWC) separated the role of service provision of bulk rural water from resource management (both policy and regulation). This institutional separation is intended to reduce potential conflicts of interest and achieve greater clarity of accountabilities across DLWC.(ref:Page 9)"

In a later document titled: "Customer Service Committees Terms of Reference and Operating Guidelines" (dated 1 April 2005): *"State Water must establish and regularly consult with valley based Customer Service Committees (CSCs) to enable customer involvement in issues relevant to the performance of State Water's obligations to customers under licence." (ref: page 2/14)"*

Where CSCs are required to liase with CMAs, evidence should be provided to auditors that CMAs have signed off on these issues. The objectives of CSCs are currently being reviewed by State Water. It is important that the governance of the committees is not compromised in this process.

Specific Issues:

1. Consideration be given to appointing a person with suitable environmental expertise and interest to each Customer Service Committee, and;
2. Customer Service Committee members receive training in conflicts of interest and governance and the meeting minutes be audited.

Diversion of environmental water

The Water Group is concerned from media releases and reports from member groups that environmental water is being diverted to alternative uses. There have been reports of environmental flows being reduced in the Hunter, Wybong, Ourimbah Creek, Macquarie, Cudgegong, Murray, Murrumbidgee, Lachlan, Hawkesbury Nepean System and in many groundwater plans.

Inevitably these actions are to provide additional water for irrigators, industry or water authorities. The provision of environmental water as an interim measure at no cost to users is not a sound policy approach. Without any driver for more efficient use of water is unlikely to yield longer term benefits thorough investment in infrastructure or operational changes which improve agricultural efficiency.

This includes the **Hunter Environmental Contingency Allowance**. This water was to be held in reserve to assist in maintaining river health from pollution, excess salt and algal incidents. The quantity is 20 000 ML. It is reported in the Australian Newspaper of 25th May 2007 that this water is now earmarked for the power industry.

Specific Issues:

1. Involvement of all stakeholders when amendments to water sharing arrangements are contemplated, and;
2. Realistic costs, particularly during drought, be allocated to the diversion of environmental water for industry to ensure that the economic drivers are in place to improve water usage efficiency.

Loss of Environmental Water (refer Attachment A.)

Attached are details of a number of particular cases where environmental water has been either appropriated for uses unrelated to ecological outcomes, allegedly stolen or 'lost'. These details include the recent proposals to drain wetlands along the Murray to provide emergency water.

Some of the examples also demonstrate that under recent arrangements, when MDB water management in NSW was spread over at least 3 government agencies, conflict between these agencies, a lack of transparency and inadequate communication led to a number of instances of poor management.

Environmental water releases are notorious for being released late, i.e. a three day delay between order and release, creating environmental havoc in the Marshes and failure of bird breeding events. A notable exception to this state-wide issue is the environmental water releases managed by the Murray Wetlands Working Group whose water orders were submitted by the regional director of DNR. Each of these orders was delivered on time and was accurate in terms of the amount supplied.

Finally there are numerous circumstances where landholders with water infrastructure appear to have been notified of the environmental water releases and take active steps to 'steal' or divert this precious water. In no instance has there been prosecution of such individuals, despite the numerous Government agencies knowing of their actions.

These cases raise a number of issues that require attention in meeting NSW commitments under the NWI and Water Management Act.

Specific Issues:

1. The property rights of environmental water need to be recognised and given full recognition and security and should not be undermined
2. Any decisions to sell or loan environmental water should only occur when it has been shown that there is an overriding public emergency and benefit. If that is the case is should be justified in a clear, transparent and public process that includes a robust and independently conducted or peer reviewed analysis of the risks to ecological assets.
3. Where environmental water is loaned to another water user, there should be a clear agreement on payback of the water, either in water or money equivalent.
4. The security of all entitlements are eroded when plans are 'switched off' during drought and such an approach must be avoided in the future.
5. Clear protocols are required for environmental water arrangements when going into or out of drought.

Water Metering

The Water Group is concerned at the apparent slow action in implementing metering on all surface water extractions and groundwater bores in NSW.
The supporting environmental groups were intimately involved, in the preparation of Water Management Plans under the Water Management Act (2000). At that time commitments were given by the then Dept of Land and Water Conservation to implement metering throughout NSW within a 5 to 10 year period.

Metering is extremely important. **Often, environmental flows can only be assured by measuring and controlling extractions**. This is due to environmental flows being measured or deduced as releases from dams, monitoring points on streams or other storages. Actual environmental flows are often the balance after extractions occur. There is also evidence that over-extraction is occurring in many areas, this evidence includes rapid depletion of groundwater tables and streams not flowing due to excessive extraction. However, this is difficult to prove without actual extraction measurement.

Specific Issues

1. Milestones needed for implementing the rules for metering as agreed with stakeholder groups during the preparation of water management plans.
2. Metering of all water used, including basic rights water is needed.

Groundwater

Groundwater is usually extracted through wells drilled into an aquifer. How much can be extracted will depend on how much water is in the aquifer initially, how much new water enters (recharges) the system and how much water is discharged through avenues other than extraction. The rate of extraction will depend on the permeability of the aquifer and the number and depth of extraction points. If discharge exceeds recharge, groundwater levels will drop. The groundwater level in an unconfined surface aquifer is called the groundwater table. Extracting more groundwater than is recharged is referred to as groundwater mining.

While in some cases groundwater mining is a justifiable management approach, in most cases aquifer management by State water agencies attempts to limit extraction to a 'sustainable' level, in essence using exactly the same philosophy governing limits imposed on surface waters.
In 2006, NCC and CEN held a workshop on Groundwater. It was apparent that many policy issues with groundwater are outstanding. This includes, aquifer interference approvals and water licences associated with extractive industries and mining. In addition, recent research indicates that the calculations of sustainable yield were overly optimistic, based on poor data, unknown extractions and high rainfalls.

There is a need to implement the CoAG groundwater policy to develop catchment/aquifer management plans (or water allocation plans) which clearly demonstrate effective integration between ground and surface water management. If groundwater is to be used as a buffer against drought, it is vital that a reserve be left for this purpose, for example by aiming to allocate only a part of the annual sustainable yield in 'average' years. In addition, should be calculated and delivered in a way which meets agreed Commonwealth/State environment flow principles.

Specific Issues:

1. Implementation of COAG Groundwater Policy;
2. Finalise the status of aquifer interference policy and approvals;
3. Implement a moratorium on any increased groundwater extraction;
4. A separation of regulator and resource licencing agency is needed.

Floodplains

Floodplain harvesting remains a major loophole within NSW water management as it is almost always un-metered, and the water is neither paid for nor regulated.
Illegal water diversion occurs when individuals take water or use their works contrary to licence and approval conditions. There are also serious concerns that environmental water could be stolen through harvesting activities.
Some large irrigation diversion schemes have been approved under the *Water Act (1912)*, but many works that enable floodplain harvesting have not been approved, either under the *Water Act (1912)* or the *Water Management Act (2000)*, so remain unauthorised and unregulated.
The lack of regulation severely limits the effectiveness of public investment in efficiency savings or market mechanisms to return much needed water to the environment.

Specific Issues:
1. A floodplain management regulation to be implemented.

Carryover

Carryover of water entitlements from one year to another was not envisaged to be used in the *Water Management Act (2000)*. However, when a water sharing plan is suspended it appears to be becoming commonplace. Usually this is to suit irrigators or industry.

Carryover provides flexibility during drought conditions for extractors. However, it is not being applied equitably to environmental water and it could be reducing the quantity of environmental water available. An analysis of the impact of 'carryover' is needed before any decisions are made to vary Water Sharing Plans.

Specific Issues:
1. An independent analysis of the impacts of carryover on Water Sharing Plans and environmental water.

Cold Water and Fish Passage

Every time significant infrastructure improvements are planned, it triggers a requirement that the Government agency also provide fish passage and cold-water improvements. Complying with these requirements reduces cold water pollution and improves fish passage.
The Environment groups note that in several recent upgrades to significant water infrastructure in NSW, namely dams and weirs, the Department of Primary Industries has acted to exempt State Water Corporation. This exemption could be because of the negative cost implications of improvements.

Specific Issues:
1. Exemptions should be at arms length and there needs to be an investigation and review by an independent body.

Attachment A.

20 July 2007

The Hon Morris Iemma
Premier
Level 40 Governor Macquarie Tower,
1 Farrer Place,
SYDNEY NSW 2000

Dear Premier Iemma

Re: Appropriation and Theft of Environmental Water

We are writing to you regarding of a number of outstanding concerns that we have about environmental water management in NSW, and to request that the NSW government commits to repaying all appropriated environmental water at the earliest available opportunity and provides the environment with some of the first inflows as per the priorities contained within the *Water Management Act 2000.*

We would also like assurances that arrangements will be put in place to provide future environmental water with adequate security, including against theft and misappropriation, in line with the property rights accorded under legislation. Long term sustainable plans, where the management and allocation of resources reflects the variability and often lack of water, are also required, to ensure more sustainable water management and avoid similar 'emergency' situations wherever possible. Such plans should also ensure that there is clear accountability for the delivery of environmental water.

Attached are details of a number of particular cases where environmental water has been either appropriated for uses unrelated to ecological outcomes, allegedly stolen or 'lost'. These details include the recent proposals to drain wetlands along the Murray to provide emergency water.

Some of the examples also demonstrate that under recent arrangements, when MDB water management in NSW was spread over at least 3 government agencies, conflict between these agencies, a lack of transparency and inadequate communication led to a number of instances of poor management.

These cases raise a number of issues that require attention in meeting NSW commitments under the NWI and Water Management Act.

These include:

- The property rights of environmental water need to be recognised and given full recognition and security and should not be undermined
- Any decisions to sell or loan environmental water should only occur when it has been shown that there is an overriding public emergency and benefit. If that is the case is should be justified in a clear, transparent and public process that includes a robust and independently conducted or peer reviewed analysis of the risks to ecological assets.

- Where environmental water is loaned to another water user, there should be a clear agreement on payback of the water, either in water or money equivalent.
- The security of all entitlements are eroded when plans are 'switched off' during drought and such an approach must be avoided in the future.
- Clear protocols are required for environmental water arrangements when going into or out of drought. For example, the Murray and Murrumbidgee WSPs have been switched off due to drought, but it is unclear what the triggers are for switching the plans back on again and what will happen to volumes within the environmental account etc when they are switched back on. Similarly there need to be rules on how significant inflows should be apportioned during a drought when the WSPs have been set aside.
- Through the NWI the States agree to empower the environmental water managers to trade water on temporary markets at such times as water is not required to contribute towards environmental and other public benefit outcomes (e.g. section 79e). A broad discussion is required about how to ensure the environmental managers have the skills, resources, and ability to fulfil clear ecological objectives in relation to environmental flow use and are not subject to politically driven decision making.

The environments' property right has clearly been eroded or extinguished in the above examples. This is totally unacceptable in a system of resource allocation based on property rights.

Please contact Amy Hankinson (02 8270 9904) or Arlene Buchan (03 9345 1124) if you have any questions.

Yours sincerely,

Arlene Buchan
Healthy Rivers Campaigner
Australian Conservation Foundation

Amy Hankinson
Coordinator
Inland Rivers Network

cc. The Hon Phil Koperberg, Minister for Climate Change Environment and Water

Case 1: 'Lost' environmental water in the Murrumbidgee

Towards the end of 2006, at least 3 different volumes of environmental water were 'lost' or used for non-environmental purposes in the Murrumbidgee system.

1) When the Murrumbidgee Water Sharing Plan (WSP) was suspended, 64GL of environmental water was used to provide more water for the towns along the Murray and take some pressure off Hume Dam. Had the water been used as intended, most of it would have been utilised to secure ecological outcomes in high conservation value wetlands on Yanga Station.

Our understanding is that this arrangement is being treated as a straightforward loan of water. However the arrangements were finalised without any agreement on the details of pay-back, or indeed whether the water would be paid back, give that this class of environmental water is not normally eligible for carry-over. Rather it must be used for the environment on a 'use it or lose it' basis.

2) 49GL of environmental water has been 'lost' from the account through incompetent accounting procedures and incredibly complex WSP rules. State Water failed to properly implement the translucency rules (apparently they used the wrong algorithm) resulting in 26GL entering the environmental account but as the environmental water managers did not know it was there the water was not used and again due to an inability to carry over the water the 26GL was socialised. Another 23GL should have passed through Burrunjuck Dam as a translucency release following inflows that triggered the release, but again incorrect application of the translucency rules meant that this water was not released, and so socialised at the end of the water year.

3) The Department of Natural Resources (DNR) has used 50GL of environmental water to underwrite general security allocations, gambling that they could either replace the water before it was needed through dam inflows or that DEC would choose not to use the water. However due to the drought they were unable to replace the water it because of the drought and it is now unavailable to the environment. This is quite possibly common practice.

It has been recently confirmed in the MDB Initiative River Murray System — Drought Update No.5*, Dec 06 that DNR has reserved this water (along with that identified in point 1)) to help support NSW Murray and Murrumbidgee water supplies."

Response: The temporary value of this 163GL of water is around $50 million. ACF and IRN are concerned that so much of the little amount of water made available for the environment in the Murrumbidgee has been 'lost' or loaned in this way without clear and transparent arrangements for payback. The Australian Government and the National Water Commission should require that the NSW Government make a clear and transparent commitment to return the borrowed or 'lost' water in a manner that does not compromise ecological values, and should take action to prevent such losses as incurred under points 2 and 3 above from happening again in any of the river systems in NSW.

Case 2: Unjustified cancellation of environmental watering plans and sale of environmental water

The Murray Wetlands Working Group (MWWG) planned to use 2.02GL of high security environmental water (with the allocation reduced by 55% as consistent with other high security licences at the time) at Thegoa Lagoon near Wentworth. However they were instructed by DNR to stop pumping without any justification, reasoning or process and the water was then sold.

The MWWG anticipate that environmental degradation will now occur, but believe that it would have been avoided had the environmental water been used to achieve the planned environmental outcomes. The lack of process and reasoned justification has resulted in a lack of transparency and accountability for the use of environmental water, and a subsequent loss of confidence in the intent of politicians and bureaucrats.

Response: A clear and transparent public process should be required before environmental water can be sold or loaned. This is consistent with the NWI insofar as environmental water managers should only trade environmental water on temporary markets "at times such water is not required to contribute towards environmental and other public benefit outcomes" (e.g. Section 79ie). In this case, the environmental manager (ie the MWWG) are confident that the water would have secured environmental benefit and that the decision to sell the water was driven solely by political considerations. The sale of this water also contradicts the NWI requirement for environmental water to have "at least the same degree of security as water access entitlements for consumptive use and be fully accounted for" (e.g. as set out in section 35(i)). The allocation under the entitlement was appropriately reduced by 55%. It was inappropriate to appropriate and sell the water at a time when it was needed for the environment .

Case 3: Diversion of water during an environmental flow release – Macquarie Marshes

In late 2005 the small amount of water allocated for the environment in the Macquarie Valley was released from Burrendong Dam in an attempt to maintain a small core area of the Macquarie Marshes. This water arrived in the Marshes at the beginning of November (it takes about 12 days to flow from the dam to the Marshes) and continued until early January 2006.

However evidence strongly indicates a small number of landholders siphoned some of this water off for their own use through floodplain harvesting. Banks and channels drained and pushed the water away from the wetlands into storage tanks and dams and onto paddocks.

Officers from the Department of Environment and Conservation flew over the Marshes on 18 November and 8 December 2005 to monitor the spread of the environmental water in the wetland.

On this flight they discovered that water specifically released for the benefit of the environment appeared to have been diverted by landholders above and in the Marshes. They saw banks and water diversion channels cut into the floodplain and knew the water was part of the environmental release because it was tannin stained from passing through the wetland.

A recent FOI request to State Water and DNR has indicated that of the several properties investigated, none ordered the water that drained from the wetlands, confirming that it was environmental water being siphoned off from the wetlands. Whilst one owner did order a very limited amount of water it was less than that in

their dam and extensive channels, and would also have been extracted from the river channel rather than through a river red gum woodland.

If this water had not have been diverted it would have spread through the wetlands and Ramsar sites in the Marshes, improving the health of the red gums, vegetation, fish and birds. Some of it may later have re-entered the river, improving river health downstream.

Despite being aware of the problem and asserting that they are investigating the problem there is no further evidence from DNR as to how or whether they are dealing with the matter, nor are there indications that the water will be returned or that due compensation forthcoming.

Anecdotal evidence has also intimated similar situations in the Lachlan Valley and during releases of environmental water in the Gwydir Valley. If environmental water is to have adequate security and environmental outcomes are to be met as required under the NWI there needs to be a full audit and assessment of floodplain development and extraction in systems where environmental water is being released, and development must be modified and removed as necessary to ensure that environmental water is not diverted and can get to where it needs to go.

Case 4: Northern Bypass Channel – Macquarie Marshes

The Northern Bypass Channel in the Macquarie Marshes was constructed in 1970 to provide stock and domestic water to properties downstream of the Marshes. In February 2006 the bypass channel was desilted and widened by State Water. The works were reportedly more extensive than those under the original agreement with the NSW Department of Environment and Conservation. They also resulted in the draining of the Ramsar Listed Nature Reserve.

Despite the major implications of the works they were no reported to the Federal Minister for the Environment for consideration under provisions of the *Environmental Protection and Biodiversity Conservation Act*, nor was an environmental impact assessment conducted prior to the works.

Further areas of the Macquarie Marshes have been drained through the deepening of the channel while flood gates were opened during the year.

There has been no indication of any follow up or remediation of the damage inflicted on the drought stressed wetland. Nor is there an indication that the drained water will be replaced in the environmental water allocation.

The gauging and monitoring of water flows into the Marshes need to be investigated. Also, the Integrated Quantity and Quality Model (IQQM) developed for the Macquarie-Cudgegong Water Sharing Plan has not been yet been accredited by the Murray Darling Basin Commission.

Draining of wetlands

Recently it was announced that eight wetlands within the Murray Darling Basin are to be drained to provide emergency water in the Murray, a number of which are in NSW. it is understood that the drying of these wetlands was in the first instance considered for water recovery as part of the Living Murray First Step.

Whilst it is appreciated that many of these wetlands are now permanently inundated due to river regulation and that there may well be environmental benefits from reinstating a more natural wetting and drying cycle, care must be taken not to cause problems such as saline intrusion.

Furthermore, any water regained through such measures should in fact be used for the environment. Where it is shown that there is an overriding public emergency and benefit – as being argued now – there may be a case for borrowing environmental water. However, this water must be paid back at the earliest opportunity.