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Regional Water Strategies
Department of Planning, Industry and Environment
Locked Bag 5022
Parramatta NSW 2124

Attention: Corporate and Governance Director

SUBJECT: DRAFT NORTH COAST REGIONAL WATER STRATEGY SUBMISSION

Dear Director,

While I support the need for the North Coast Regional Water Strategy and the general principals contained in the draft, I have concerns about certain potential directions implied in the draft strategy, so hence this submission.

Traditionally, water has not been managed in a responsible manner by the NSW government. The over allocation of waters, lack of protecting waterways from poor land management practices, loss of native vegetation along water courses, the lack of ensuring compliance with licences and prosecution for noncompliance when discovered, have resulted in the degradation of our waterways. A well planned and implemented strategy must ensure the long term viability of our waterways for environmental sustainability and human use, with the responsible use of our water resource even under the assumed stresses that are likely to be increased with the lack of attention to climate change by the world's communities.

Prime issues of my concern are related to:

- Protection and enhancement of riparian zones;
- Ensure flows within waterways with minimum levels set for any extraction;
- No damming of coastal rivers for diversion to western rivers;
- Reuse of treated wastewaters including sewage for rural and town uses;
- No transferring of water or water licences from individual catchments;
- New industry cannot be permitted in areas where there is known likelihood of over demand for a limited water resource; and
- Emergency water supply provided by the proposed pumped hydro storage projects – dam storage to have zero impacts on national parks and wilderness areas.

Comment on individual options are as follows.

1. Expand the Clarence-Coffs Harbour Regional Water Supply Scheme – Connection of the Coffs Harbour/ Clarence system to Bellingen is opposed. The expansion of this system to include Bellingen is not viable as the time when Bellingen needs water, will be when the existing system would have the greatest demand of the Coffs Harbour and Clarence valley areas and the water resource would be at its lowest. Hence adding additional demand on an already stressed supply is flawed thinking. Alternatives of use of treated effluent and groundwater may overcome the rare potable water shortage. The prime reasons for this opposition are:

    - It is a plan for an inter-catchment diversion of water which is unsustainable on ecological and water availability. There is less need to consider Option 4 if this option is dropped.
    - While the volumes of water moved out of the Clarence catchment would not be as great as for a western diversion, it would still reduce flows in the Nymboida and downstream in the Clarence itself and would affect river health.
    - While climate change is likely to affect flows in both the Bellinger and Nambucca catchments, it will also affect flows in the Clarence catchment, possibly to an even greater extent.
    - This strategy lists other options, including desalination Option 2 and direct potable reuse of purified recycled water 12 that should improve the resilience of water supplies in the Bellinger and Nambucca. There would also be other possibilities including local off-stream storages, which were not included in the list of options for Bellingen.

2. Portable desalination – This will have some benefits in areas with access to waters with higher salt content but is unlikely to assist with shortage in the upper reaches of the Bellingen River.

3. Emergency water supply provided by new pumped hydro storage projects – The Oven Mountain Pumped Hydro Energy Storage project while potentially assisting with emergency Armidale water requirements. There is a real potential for the storages to negatively impact on the national parks and wilderness of the area. These are not acceptable impacts should in any design of such a system.

4. Augment Shannon Creek Dam – Augmenting the dam to existing proposed design capacity to cater for the expanding populations of the Clarence Valley and Coffs Harbour Council areas is opposed for the following reasons:

    - Raising the dam wall will mean a greater area would be inundated with impacts on biodiversity.
    - The area inundated when the dam was filled caused a significant loss of native vegetation and fauna decline. For example, there are fewer brush-tailed rock-wallabies in the area than there were prior to the dam construction. Enlarging the dam would lead to more biodiversity loss.
    - Shannon Creek Dam has been 20% or more below its maximum capacity for months despite heavy rainfall in the catchment. The level of turbidity in the Nymboida has severely restricted pumping of water from the Nymboida to the dam. Obviously, this issue needs to be dealt with for the Regional Water Scheme to operate effectively.
    - The dam currently is more than adequate for supporting the areas it was designed for and will presumably continue to be adequate for years to come even if river flows are reduced because of climate change.

5. Upgrade major town water treatment facilities – With an upgrade of systems water quality can be maintained at a more consistent higher standard. It may also permit the augmentation of supplies with the supplementary source of treated wastewaters which would reduce the demand on ground and surface water sources.

6. Repurpose existing assets to provide emergency storage for local industries – The investigation of the opportunity to repurpose decommissioned local storages and groundwater bores to provide improved water security to towns and/or industries has merit especially if it can reduce the requirement for the construction of additional dams. The sustainable use of any groundwater must be guaranteed prior to any progression of such a proposal.

7. Vulnerability of surface water supplies to sea level rise and saline intrusion - By undertaking the investigation of the potential impacts of sea level rise, one can determine the need for additional or

varied sources to augment existing supplies and the actual need should some of the existing uses be not required due to inundation of the sea.

8. New industry and rural licence category within major council storages – This option is concerning given the likelihood of an inadequate resource caused by an increase in residential use with the inevitable increase in population. New industries should be based on highly efficient water use and the use of treated wastewaters. An increase in water demand by intensive horticulture does not seem a sensible option given the existing issue with water supply. While some intensive horticulture can treat and reuse waters drained from contained operations, there is some doubt if existing or augmented town supplies should be used for this purpose. Other types of intensive agriculture have a high use of water. Use of chemicals some of which are banned in other countries and a history of noncompliance with regulations makes some agricultural practice undesirable. There is a finite amount of water and if an industry cannot be water efficient and not draw on a resource that is already experiencing stresses due to demand then the industry should not be permitted to start just because someone wants to do so. Town water storages must be available for its design purpose and not used for agriculture. Establishing new industry just because it can be without having all the resources to do so and demanding access to an already limited resource must not be permitted. Hence, this option is opposed.

9. Protecting coastal groundwater resources for town water supplies and rural water users – A thorough knowledge of the existing groundwater is necessary. With this knowledge, appropriate planning for its use can be made to ensure the resource is not abused as has past practice has demonstrated. The over use of groundwater especially in coastal areas has seen infiltration and contamination by waters with unacceptable salt levels. If groundwater sources are available, this may be a solution for communities like Bellingen.

10. Remove impediments to water reuse projects – Treatment and reuse of wastewaters powered by renewable energy, has long been ignored and is technically possible. Wastewater has wrongly been considered a problem to be disposed of rather than a resource to be utilised. The disposal of the removed contaminates is a lesser issue than the obtaining water from other sources which may have higher negative impacts on the water resource and the environment.

11. Increase use of recycled wastewater for intensive horticulture – This is the smartest water resource for this use. Intensive horticulture usually adds various nutrients and minerals to its irrigated waters. In many applications runoff water is collected and reused with automated water quality controls. This type of industry use is already in practice in Australia and must be encouraged and supported.

12. Indirect potable reuse of purified recycled water – There is no technical reason why this cannot be done. The only impediment is the public perception of this use and the source of energy to power the treatment system. Caution and appropriate monitoring systems must be employed to ensure community health is not endangered. The negative environmental impacts of new or enlarged water storage and the potential impacts of the disposal of effluents of a lesser standard of treatment would be negated. Disposal of the removed contaminants is the lesser of the issues to be considered.

13. Direct potable reuse of purified recycled water - Similar comments as made to Option 12 apply.

14. Increased harvestable rights – Online dams on private property has a high probability of depleting flows down the catchment. This option is a risky especially given the extremely poor record of ensuring appropriate flow in waterways is maintained. The private sector has not demonstrated a responsible approach to adhering to specified levels of harvesting and government has not shown an ability to regulate and police the specific standards. There is little trust in the community for this to occur in a sustainable manner. Hence, this option is opposed.

15. Increased on-farm water storage - Off stream private on-farm water storage has some possibilities and is more likely to ensure sustainable river flows. Extraction of waters to fill such dams is problematic as shown in other catchments within Australia. There is still a community mistrust that this can occur in a responsible and properly policed manner.

16. Establish sustainable extraction limits for North Coast surface water and groundwater sources – There is real concern and a level of mistrust by the community that this can be responsibly done.

History has shown that government has not achieved this in the national and state waterways. The demand by various public and private sources with over allocation of licences has resulted in the degradation of river systems and their ecology. Government must significantly improve its performance for this to occur. It must stand up to demands of sections of the community and the politicians that are supported by these sections. The outcome of determining limits to meet the sustainable outcomes implied in this option's description, must include variations in existing extraction levels to achieve the objective to protect the ecological needs of coastal lagoons, estuaries and wetlands. The establishment of such limits must be coupled with an effective level of compliance monitoring which does not include self-regulation of licensees. I have personal experience that this has been proven not to function honestly in the adherence to licence conditions.

17. Convert low-flow water access licences to high-flow water access licences – Rivers must be protected especially during low flow times when the greatest ecological stresses occur. There is also a concern that certain environmental requirements that occur during high flow occurrences, would be negatively affected. This especially applies to certain river side ecological system including but not limited to wetlands. These systems must be protected for ecological reasons as well as the maintenance of breeding areas for resources relative to the fishing industry.

18. Long-term water plans to support healthy coastal waterways – This must occur to ensure the health of our coastal rivers. There is doubt that the stated experience gained in the management of inland rivers will not give the north coast community any confidence in the government's ability to achieve outcomes described in this option. This possibly the most important option as such a plan would underpin all other options.

19. Characterising coastal groundwater resources – This must occur before any use of groundwater is considered. The current uses need to be optimised with detailed knowledge of the resource. Approval of any use should not be done without the full knowledge of the resource both from volume and quality perspectives. Mismanagement of groundwater has caused serious issues for water availability and quality in other coastal areas of Australia. Rectification of these problems only occurred after extensive detailed research into the features of the groundwater resource. In some areas this is still a work in progress with some decisions to ensure the sustainable use being unpopular with thse who considered they had an historical right to the resource even though the privilege of its use was being abused to the detriment of all users.

20. Protecting ecosystems that depend on coastal groundwater resources – The previous uses in some situations have jeopardised the viability of these ecosystems. Accurate knowledge and characterisation of the groundwater resource is essential to ensure the protection of these ecosystems. In areas where degradation has occurred. Varied regulation of the traditional uses of the groundwater must be made.

21. Improve stormwater management - The principles of water sensitive urban design (WSUD) have been known for 50 years and should be forced to be applied in all applications even to retrofitting existing applications. These principles must be the first option with harvesting while being a subset of WSUD should only follow the secondary approach. Capture of any increased runoff frequency caused by additional impervious surfaces by capturing the initial portion of runoff is an option but needs to be managed carefully so as not to negatively impact on ecological factors within a catchment. The concept of reuse is confusing as normally stormwater has not had a previous use.

22. Bringing back riverine and estuarine habitats and threatened species – This option should be compulsory but with a government which over recent years, has reduced the protection of our natural heritage by its continued lowering of the protection standards within policies, laws and regulations, it is difficult how the community can have any confidence that this will occur. Returning to forestry policies that prevented logging of riparian zones which are now permitted along with logging on steep slopes, both which increase the probability of degrading water quality and significantly negatively impacting on the ecology of waterways. This option must be included in any formalisation of this strategy and be extremely high within the priorities to ensure the stability of our rivers and the water quality within them.

23. Fish-friendly water extraction – This is essential as native fish are endangered by numerous factors. This is one that can be simply implemented with all extraction licences having a suitable condition included.

24. Improve fish passage in the North Coast region – While there are a few major impediments to fish passage in the region, there are numerous smaller historical facilities. The major ones which this option appears to address, can be actioned but smaller ones such as the degrading weir downstream of the Everlasting Swamp National Park, can be more readily rectified improving the fish viability within rivers.

25. Addressing cold water pollution – The technology has existed for some time to prevent cold water pollution and should be implemented in all installations with any new facilities not proceeding without this feature. Retrofitting of existing structures must be undertaken to esnsure the ecological healthy of our rivers.

26. Coastal, regional focused water reference groups – This is a commendable option with the membership including a community member with recognised environmental local knowledge. The local knowledge of "lay" persons is invaluable and ensures an input from someone without a vested interest. This also assists in ensuring the transparency of our water management as long as the representatives of such groups are not gagged.

27. Planning for climate change impacts on coastal groundwater resources – It appears that this problem is inevitable with the undesirable impacts being difficult to ameliorate. While this may be able to be achieved in the short term, many of the existing demanding uses may also be impacted by sea level rise and cease to exist. This will need to be incorporated with the coordination of broader discipline planning future uses as well as probable planned retreat from some coastal areas.

28. River Recovery Program for the North Coast: a region-wide program of instream works, riparian vegetation and sediment control – The technical expertise has been available for decades and has been implemented in many situations in NSW over the last 30 years. There are multiple reasons why this option must be included in a final strategy as it will ensure the long term viability of our rivers and the water resource by ensuring no further degradation of features that protect our rivers and rectify the myriad of errors of the past. This must include altering the regressive practices now introduced in forestry activities which have been permitted to alter practices which precluded logging within riparian zones of waterways. The redress of the state's vegetation protection policies, laws and regulations must be made to return to conditions where riparian vegetation is removed with significantly greater ease than was the case 20 years ago. The state's vegetation protection laws must be reviewed and upgraded so that natural vegetation is protected in a far superior manner.

29. Improved data collection on water use and patterns – This is essential as the water resource cannot be competently managed if uses and patterns are not known. It partially due to the lack pf knowledge that we have a less than optimum use and management of our waterways and the water resource. Local government has limited resources to finance this and must be subsidised by the state. In some catchments, the whole catchment is not controlled by one local government and hence the state must take responsibility for this data collection in all catchments.

30. Active and effective water markets – Markets must be regulated so that the resource is not over utilised and environmental flows ensured. Over allocation of the water resource must not be repeated and any new use rigorously assessed prior to any approval for the use or the additional use of water. The death of rivers as has occurred with many of our western rivers due to extremely poor management and regulation, must not be repeated in our coastal rivers. Water trading between catchments must be prohibited.

31. Apply the *NSW Extreme Events Policy* to the North Coast region – The concept of such a policy is commendable but environmental flows must be guaranteed. Information both scientifically and anecdotally from the community, must obtained to ensure a knowledge base to permit such a policy to be accurately developed. Any decisions of the panel of water use is to be referred to the reference group for input to any final decision on water management.

32. Regional demand management program – This needs to be developed with not only those entities detailed in the description but also those with ecological knowledge including the general community and the indigenous community. Any program must achieve results and lot be a “feel good” talk fest.

33. Regional network efficiency audit – This is sound infrastructure management and should a given, not require a strategy option. If not undertaken as a part of general infrastructure management and any failures of the system rectified, then it is a failure of the duty of the operator. It is unfathomable that infrastructure is not maintained ensuring the efficient operation of the facility.

34. Regional capacity building program and skills hub – This seems somewhat a reflection of incomitance of existing water management as the technology has been available for decades and general neglect of best practice has resulted in the current situation. One would hope this would not be another example of development of a program that should be automatic good management once a full set of data is available to all parties. Government should have been orchestrating this continuously and common sense and not selective individual demands dictating the current management of our waterways. This should not be set up as a regional structure but as a state wide program to ensure that all water managers, government and private have access to the best technology and methods. Individual regional programs appear to be inefficient and a duplication of resources purely to ape to be placating local interests. If specific issues arise within a region, it should be addressed in a professional and technically sound manner.

35. Support for local councils to lift performance standards – Some of our local councils are under resourced due to the large area serviced with a rate base that cannot permit the required resources to be available. Sound water management, be it in the supply of water or the application of best practice methods, managing issues such as stormwater quality controls or assisting landowners in achieving sound water management practices will be essential is optimum water management is to be achieved. Support for under resourced local government is needed followed by audits to ensure the support is implemented and effective.

36. Regional framework to manage restrictions for non-urban water users of town water – This will be important, but the better strategy will be to make those users more self-reliant with reuse and other methods of water conservation. Use of town water should not be available for non-urban uses. Industries outside towns should be established and operated on their own sustainable water supplies.

While not included as an option in the draft North Coast Regional Water Strategy the Inland diversion options these are mentioned in the Border Rivers (Options 7 and 8) and Namoi (Options 1) plans. This is options by subdiffusion and an example of government being less than open by ignoring the option in the North Coast Plan while making it a real option in the other plans, with it being Option 1 in the Namoi plan. The inability to download a copy of the Namoi plan to check the exact details of the option further makes one suspicious of the government’s intentions. This is the very reason why the community mistrust of government exists and the belief that the government’s claim to be transparent in its public consultation and actual decision making process is not believed. Some reasons for opposing these options area:

- All diversions mean the removal of significant volumes of water from natural catchments with inevitable impacts on river health.
- Diversions also result in economic impacts for industries which rely on healthy river ecosystems (for example, the fishing industry in the Clarence estuary).
- Less rainfall resulting from climate change means that rivers like the Clarence will be under greater stress more often than currently, even without inter-catchment transfer of flows.
- Plans for western diversion of rivers such as the Clarence are generally based on calls from irrigators who have over the years extracted far too much water from rivers in their own catchments to the detriment of local riverine health apparently caused partially by government incompetence in over allocation of the resource and some farmers undertaking unlawful extraction.

- There is very strong local opposition to any plan to divert water from the Clarence River system. An example of this is Clarence Valley Council's announced opposition to diversion proposals whenever they regularly surface from the north or the west.

I request my submission being considered, my concerns thoroughly addressed, advice on any further opportunity for input and be informed of any decisions made.

Yours faithfully,