INLAND RIVERS NETWORK

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Submission

Macquarie-Castlereagh Regional Water Strategy Shortlist

Introduction

The Inland Rivers Network is a coalition of environment groups and individuals that has been advocating for healthy rivers, wetlands, and groundwater in the Murray-Darling Basin since 1991.

Inland Rivers Network welcomes the opportunity to engage in the refinement of proposed actions for the Macquarie-Castlereagh Regional Water Strategy (RWS). We participated in the first stage of the RWS development process by providing feedback on options that are beneficial to the environment and community, options that would cause environmental harm and identified missing options.

We are concerned about the order of priorities outlined in the short-listed actions consultation paper for the RWS in that they do not meet the priorities and objects of the NSW *Water Management Act 2000.* While addressing critical human needs is priority under drought conditions, protecting environmental health of water sources is the main priority at all other times. The RWS process should reflect NSW law.

The Wambuul-Macquarie Valley catchment is predicted to be harder hit by climate change impacts than other inland valleys in NSW.

The probability of the 2017-2020 drought being repeated could increase from 1 in 1,000 years to 1 in 30 years. Inflows into Burrendong could decline by up to 50% by 2070.

Given these stark predictions, Inland Rivers Network considers that it is critical to prioritise environmental protection, and significantly improve water allocating processes in the Wambuul-Macquarie, Castlereagh and Cudgegong catchment.

Priority 1: Secure water supplies for growing regional cities and towns

Missing option: *Update Drought of Record*

Inland Rivers Network strongly objects that option 37 from the first draft RWS, which included considering a more conservative water allocation process, was not progressed to the second draft RWS.

Community feedback from the first draft RWS:

> *"There was concern that the drought of record currently being used in water management decision-making is not representative of current conditions and encouragement to update the drought of record for the purpose of developing the Macquarie–Castlereagh Regional Water Strategy."*[1]

Despite this feedback, this option was referred to the NSW Water Strategy, and appears as action 4.2.

The implementation plan for the NSW Water Strategy lays out the plan for investigating updating the drought of record, with the promise of a discussion paper by June 2024.

Inland Rivers Network maintains that this is a completely inadequate timeline. Based on feedback from the first draft RWS, investigation into updating the drought of record in the regulated Macquarie system for all licence types should be fast tracked.

Recommendation 1: That the final Macquarie-Castlereagh Regional Water Strategy incorporate investigations into lifting the cap on the drought of record for all water access licence types as a priority action**.**

Action 1.1 and 1.2 – *support confirming the level of water security needed to support regional cities.* The method of providing this water security should be updating the cap on the drought of record.

Action 1.3 - *Develop guidelines for managing extreme events in the upper Macquarie*. Supportive of environmental releases from Suma dam being protected from extraction, and stronger triggers to restrict irrigation access from Chifley dam releases.

Action 1.4 and 1.5 - A*dopt a stronger focus on urban water conservation and efficiency. Invest in innovative water supply options.*

Strongly support measures to reduce growth in water demend such as:

- water restrictions to limit town water use during dry periods and prolong water supplies

[1] Shortlist Macquarie-Castlereagh Regional Water Strategy page 22

- community water conservation schemes, such as installation of rainwater tanks and greywater systems, and encouraging water-efficient appliances
- reducing leakage from pipes
- smart metering and pricing

Strong support for increasing rainfall-independent water supplies for urban centres. Water tanks on houses and commercial buildings should also be subsidised.

All Local Councils should be supported to develop and implement an Integrated Water Cycle Management Plan as agreed to under the 2004 National Water Initiative.

Water sensitive urban design – the integration of urban planning with the management, protection and conservation of the urban water cycle that ensures urban water management is sensitive to natural hydrological and ecological processes.

Supportive of continued development of advanced water treatment and purified recycled water facilities.

Supportive of managed aquifer recharge.

Action 1.6 *Plan for the best long-term augmentation solution for the upper Macquarie*

Water diversions by on farm dams under the 10% harvestable right in the Upper Macquarie must be assessed for compliance.

Recommendation 2: Strongly support missing action - Urgently review the volume of water captured on farm in the Upper Macquarie catchment against the 10% harvestable right.

Strongly oppose:

- Increasing the volume of water Orange can access each year from the Wambuul/Macquarie River.
- New infrastructure in the upper Macquarie, which could include a new Ulmarrah Dam at Dixons Long Point.
- Sourcing water for towns in the Macquarie from other catchments.

Action 1.7 *Reduce uncertainty in groundwater security for the region's towns*

Inland Rivers Network supports public investment at a state level to improve groundwater knowledge for the protection of groundwater dependent ecosystems and aquifer integrity.

Passing responsibility to local water utilities to investigate groundwater sources would stretch local council resources and skill sets.

Action 1.8 *Support management of Oberon's town water quality issues* – Supportive

Priority 2: Reduce water security risks in the region's west

Action 2.1 *Investigate an additional off-river storage at Nyngan*

Supportive of a third off river storage at Nyngan. The storages could be covered with solar panels to reduce evaporation and produce renewable energy.

The water supply to Nyngan also feeds Cobar. As a mining town, Cobar has forever been considered a temporary settlement with a cheap and inefficient water supply sufficient until the demise of the town. Cobar is not going away, as new mines commence in the district. Cobar has a larger population (4700) than Nyngan (2073) and has an assured future. The dependence of Cobar on water from the Macquarie River is added reason to improve the efficiency of the water delivery system, such as replacing the Albert Priest channel with a pipeline.

Action 2.2 *Create water savings through changed operation of regulated effluent creeks*

Inland Rivers Network notes that only 50% of the water savings achieved by finding alternative sources for stock and domestic supply along Gunningbar Creek, Crooked Creek and Duck Creek would be returned to environmental water accounts. Environmental water accounts service the length of the Wambuul-Macquarie River, not limited to the Macquarie Marshes as implied in this document.

While natural management of the creeks is potentially a good thing, significant community buy in would be required to successfully achieve this action.

A facebook campaign has begun that strongly opposes this action, and there is opposition being voiced by community members in Warren.

Inland Rivers Network considers that there is not sufficient modelling or community buy in at this stage to warrant this option advancing to the final strategy.

Albert Priest channel has a 50% loss rate. It should be filled in.

Action 2.3 *Continue to investigate regional water security solutions for the lower Macquarie*

Inland Rivers Network strongly supports the drought of record being updated when allocations are calculated for every water access type.

An urgent review of the water captured in the upper Macquarie under the 10% harvestable right, and rectification of any diversions over the 10% limit is required.

If addressed, these two actions could significantly increase water security for the lower Macquarie, reducing the need to investigate alternative water security solutions.

- Strongly object to increasing the full supply of Burrendong. Increasing the full supply level of Burrendong dam to 113% would be an erosion of Planned Environmental Water which is not allowable under the Murray-Darling Basin Plan.

  Dubbo, Narromine and Wellington would be at greater risk of flooding. This would be exacerbated as rainfall events become more intense and less predictable with climate change.

There would be an unacceptable impact to protected fish species, their habitat and properties upstream of Burrendong dam.

- Strongly object to a new re-regulating weir at Gin Gin. No more public money should be spent on investigating the Gin Gin re-regulating weir project.

  The proposed Gin Gin re-regulating weir would have had a significant impact on:

  - First Nations cultural sites
  - Threatened Murray Cod breeding habitat
  - Remaining threatened natural places
  - Ramsar listed wetlands
  - Migratory bird habitat

  The existing 120 year old Gin Gin weir should be dismantled, and engineering solutions for the existing pumps using the current Gin Gin weir pool be found.

- Object to a pipeline from Dubbo to Nyngan. Addressing the way water is allocated from Burrendong dam would be a preferable method of securing water supply to the mid and lower Macquarie.

Action 2.4 *Investigate ways to improve connectivity with the Barwon– Darling on a multi-valley scale*

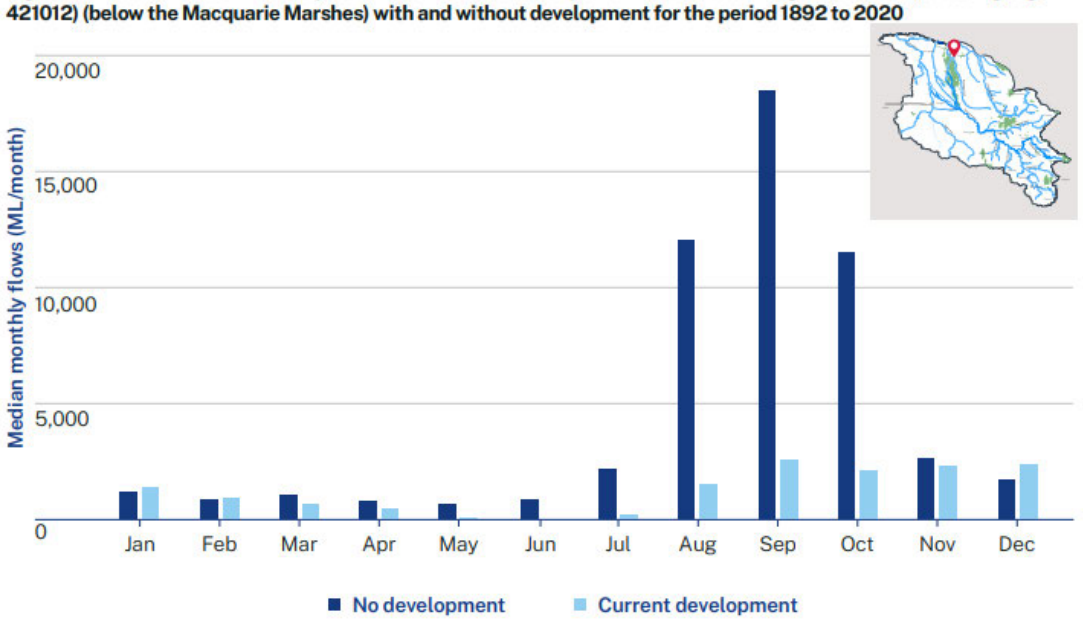
Inland Rivers Network is supportive of steps that improve connectivity between the Wambuul-Macquarie and the Barwon, which is an objective of the Basin Plan.

Historically the Wambuul-Macquarie River has contributed 20.8% of flows to the Barwon-Darling[2].

Irrigation has significantly reduced the connection of the Wambuul-Macquarie and the Barwon.

[2] https://www.industry.nsw.gov.au/__data/assets/pdf_file/0007/478096/critical-needs-analysis.pdf page 7

Figure 7. Modelled median monthly flow in the Wambuul/Macquarie River at Bells Bridge at Carinda (Stream gauge 421012) (below the Macquarie Marshes) with and without development for the period 1892 to 2020



ref: RWS page 33.

Recommendation 3: Inland Rivers Network strongly supports mid valley and end of system flow targets embedded in unregulated Water Sharing Plans to manage extraction and improve connectivity. These flows must be protected from extraction downstream.

Priority 3: Support industry and community climate adaptation

Action 3.1 *Invest in continuous improvement to surface and groundwater modelling*

Currently, NSW water models and water use data lack transparency.

Recommendation 4: NSW water models for water sources in the Murray-Darling Basin must be made available to the Murray Darling Basin Authority for annual validation, valley scale audits and adjustments for real world performance.

Action 3.2 *Improve public access to climate information and water availability forecast*

Support increased transparency of all water information, not just climate and water availability forecasts.

Despite the interim Matthew's report into *NSW Water Management and Compliance* recommending details of water ownership and trading history be freely available to the public, the NSW government have made only superficial changes to online portals that provide aggregated catchment level information.

Action 3.3 *Support adoption of farm climate adaptation and water efficiency measures*

There has been hundreds of millions of dollars of public money invested in the Macquarie-Castlereagh irrigation industry for the return of 27 GL of Commonwealth environmental water entitlements[3]. Details of these investments and returns should be publicly available.

Innovative ways to reduce evaporation from on farm storage, like covering them with solar panels should be encouraged at the industries expense.

Flood irrigating crops with ground water should be banned, as it is very wasteful.

Action 3.4 *Undertake research to inform reviews of groundwater extraction and condition limits*

It's important that research into groundwater condition includes mapping of all groundwater dependent ecosystems; is publicly funded, comprehensive and not dependent on economic development opportunities; and takes into consideration the baseline condition of the aquifers.

Action 3.5 *Develop ongoing arrangements for participation of local Aboriginal people in water management*

Inland Rivers Network is strongly supportive of actions that advance the objectives of the Closing the Gap agreement.

Action 3.6 *Support place-based initiatives to deliver cultural outcomes for Aboriginal people*

Supportive of actions to develop cultural watering programs in the Wambuul-Macquarie. It's important that any projects once established receive ongoing support from the Department.

Supportive of developing a cultural watering program for important cultural places like Beemunnel Creek. We note that this is a complex issue with many unapproved works in the upper catchment of the Ewenmar creek having impact to the water availability. Combined with the failure of a large weir at the Ewenmar Macquarie junction, the creek now dries up on low to medium flows.

Action 3.7 *Support the development of new water related Aboriginal business opportunities in the Macquarie– Castlereagh region*

Inland Rivers Network is supportive of a dedicated Aboriginal Senior Regional Coordination officer position being permanently funded, to provide on-going support to new water related Aboriginal businesses.

Action 3.8 *Modernise the water management framework so it can continue to support sustainable economic diversification*

Inland Rivers Network does not support increasing the availability of high security licences. If there is a large pool of potential sellers of licences, as the strategy states, these licences should be sold to the Commonwealth.

The catchment is fully allocated, and water will becoming increasingly scarcer. New industries need to be realistic about what water security can be achieved in this catchment without significant structural adjustment of the whole water sharing system.

[3] RWS shortlist page 86

Action 3.9 *Improve public access to the Macquarie Marshes*

Inland Rivers Network is supportive of expanded Traditional Owner management of Macquarie Marsh reserves. Infrastructure developments in the Marshes must not adversely impact the Marsh ecosystem.

Priority 4: Best use of existing water for the environment

The RWS identifies the key challenge:

> "Maintaining and improving the health and resilience of the region's aquatic and floodplains ecosystems."

Page 99 of the RWS states:

> "Feedback provided in earlier consultation showed support for:
>
> • restoration of river health and a commitment to reversing historical ecological damage, with connectivity considered a key component in the resilience of water-dependent ecosystems
>
> • improving downstream connectivity to wetlands/waterbird breeding habitat."

However the priority action proposed by the RWS to address the community backed mandate to reverse historical ecological damage is merely "Best use of existing water for the environment".

State and Commonwealth held environmental water is already effectively managed in the Wambuul-Macquarie catchment.

Given the climate change predictions presented in these strategies, the only way to maintain and improve river health is to increase the volume of water available for the environment significantly.

Recommendation 5: the final Macquarie-Castlereagh regional water strategy rename this priority 'Improve the environmental condition of the environmental assets in the Macquarie Castlereagh catchments'

Recommendation 6: the priority to improve the environmental condition of the Macquarie and Castlereagh catchments be listed as the number one priority in the final Macquarie Castlereagh Regional Water Strategy

Recommendation 7: the final RWS include an action to review the Sustainable Diversion Limits in the Macquarie-Cudgegong regulated and Macquarie unregulated water sharing plans.

Action 4.1 *Modify or remove barriers to delivering water for the environment*

Strongly support:

- Cudgegong River at Rocky Waterhole Bridge – Cudgegong River flows are restricted to around 1,500 ML/day by the limited capacity of the Rocky Waterhole Bridge. The Cudgegong River crossing could be upgraded to allow higher flows.
- Mumblebone Breaks – while the Northern Basin Toolkit has funded a scoping study and basic design, funding for detailed design and the implementation of solutions is needed should these be viable and proceed.
- Upper Crooked Creek – investigation of options to reduce the channel constraint at the inlet to Crooked Creek.

Action 4.2 *Reinstate natural channel profiles in selected streams in the southern Macquarie Marshes*

Support erosion mitigation for the Breakaway, Monkeygar Creek and Oxley Break works to the regulator and fish passage.

Action 4.3 *Mitigate impacts to fish communities*

WaterNSW is undertaking fish passage works at Dubbo North Weir and Marebone break regulator under their responsibilities to offset dam safety upgrade work.

Strongly support fish passage project at Gin Gin weir as designed for the dam safety upgrade fish passage offset project.

Supportive of fish screens, but not at the expense of environmental water being sold to fund works.

Supportive of cold water pollution measures.

Action 4.4 *Remediate unapproved floodplain structures*

The difference between the draft and the final Macquarie Floodplain Management Plan identified that two thirds of the floodplain works in the Macquarie are unapproved.

Many of these works are considered ‘hot spots’ that impede critical flows into the Macquarie Marshes.

Many of these unapproved works, including 6 hotspots, are being considered for floodplain harvesting licences.

Strongly support the urgent remediation of unapproved floodplain works before the issuing of floodplain harvesting licences.

Action 4.5 *Provide clarity and certainty for environmental needs during drought operations*

Inland Rivers Network is supportive of this action. The Environment and Heritage Group should always be consulted by the NSW Water Minister when decisions regarding supplementary access to first flows following a drought.

Action 4.6 *Assess gaps in the flow regime and identify cooperative actions to improve ecological outcomes*

The environmental flow regime is effectively managed by the Macquarie-Cudgegong Environmental Flows Reference Group, who make well informed decisions based on all available information and decades of local knowledge.

It is true, as stated on page 104 of the RWS that climate change will make delivering environmental water more difficult in the future. That is why the sustainable diversion limit in the Macquarie should be reassessed (see recommendation 7)

Action 4.7 *Fully implement the NSW Floodplain Harvesting Program*

Inland Rivers Network strongly objects to the licencing of floodplain harvesting in NSW until there has been an assessment of the cumulative environmental and cultural impact of floodplain harvesting.

The controversial floodplain harvesting regulation proposed by NSW has been disallowed in the NSW Upper House an unprecedented four times. Some of the reasons for these rolling successful disallowance motions include:

- Locking in an environmentally unsustainable level of water diversion from Ramsar wetlands, floodplains and downstream
- Provision to allow for 5 years of entitlement to be captured at once
- exclusion of rainfall runoff from licences
- cease-to-divert flow targets that are scientifically based on environmental sustainability are not included
- failure to require that works should not be licenced until action 4.4 (removal of unapproved floodplain works) is completed

Action 4.8 *Identify regionally significant riparian, wetland and floodplain areas to protect or rehabilitate*

Inland rivers network supports public investment in comprehensive vegetation mapping in the riparian zone of all inland rivers, and wetland complexes.

Monitoring and evaluation of environmental outcomes must be undertaken in all catchments, including unregulated catchments like the Castlereagh.

Recommendation 8: That the specific or measurable environmental objectives, strategies, and indicators for each water source be clearly embedded in each water sharing plan

List of Recommendations

1: That the final Macquarie-Castlereagh Regional Water Strategy incorporate investigations into lifting the cap on the drought of record for all water access licence types as a priority action

2: Strongly support missing action - Urgently review the volume of water captured on farm in the Upper Macquarie catchment against the 10% harvestable right

3: Inland Rivers Network strongly supports mid valley and end of system flow targets embedded in unregulated Water Sharing Plans to manage extraction and improve connectivity

4: NSW water models for water sources in the Murray-Darling Basin must be made available to the Murray Darling Basin Authority for annual validation, valley scale audits and adjustments for real world performance

5: The final Macquarie-Castlereagh regional water strategy rename the fourth priority 'Improve the environmental condition of the environmental assets in the Macquarie Castlereagh catchments'

6: the priority to improve the environmental condition of the Macquarie and Castlereagh catchments be listed as the number one priority in the final Macquarie Castlereagh Regional Water Strategy

7: The final RWS include an action to review the Sustainable Diversion Limits in the Macquarie-Cudgegong regulated and Macquarie unregulated water sharing plans

8: That the specific or measurable environmental objectives, strategies, and indicators for each water source be clearly embedded in each water sharing plan

For more information about this submission please contact IRN at:

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