NSW GOVERNMENT

Gwydir Region Draft Regional Water Strategy

What We Heard

Public Consultation
December 2021

Find out more: www.dpie.nsw.gov.au

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Cover images: Courtesy of Belinda Collingburn

Acknowledgments: The NSW Government acknowledges First Nations/Aboriginal People as Australia's first people practicing the oldest living culture on earth and as the Traditional Owners and Custodians of the lands and waters. We acknowledge that the people of the Gomeroi/Kamilaroi Nations hold a significant connection to the lands encompassed by the Gwydir Regional Water Strategy.

Contents

Introduction

The Department of Planning, Industry and Environment (the Department) is developing 12 regional water strategies to provide long-term tailored water management solutions for NSW's regional communities.

Our vision for the Gwydir Regional Water Strategy is to support the delivery of healthy, reliable and resilient water resources for a liveable and prosperous region. To achieve this, we need to position the region so there is the right amount of water of the right quality available to people, Aboriginal communities, towns, industries and the environment.

The draft Gwydir Regional Water Strategy (the draft strategy) is one of six draft regional water strategies that were released for public exhibition during the second half of 2020.

An extensive engagement and consultation program, with the general public and First Nations/Aboriginal People , accompanied the release of the draft strategy. This included several face-to-face meetings, online webinars and opportunities to have a one-on-one phone consultation with the regional water strategies team. Submissions were also called for during the public exhibition period.

This report summarises the key issues we heard during the public exhibition and highlights how your feedback has informed the next steps in the development of the Gwydir Regional Water Strategy.

Figure 1 illustrates the process for developing the regional water strategies.

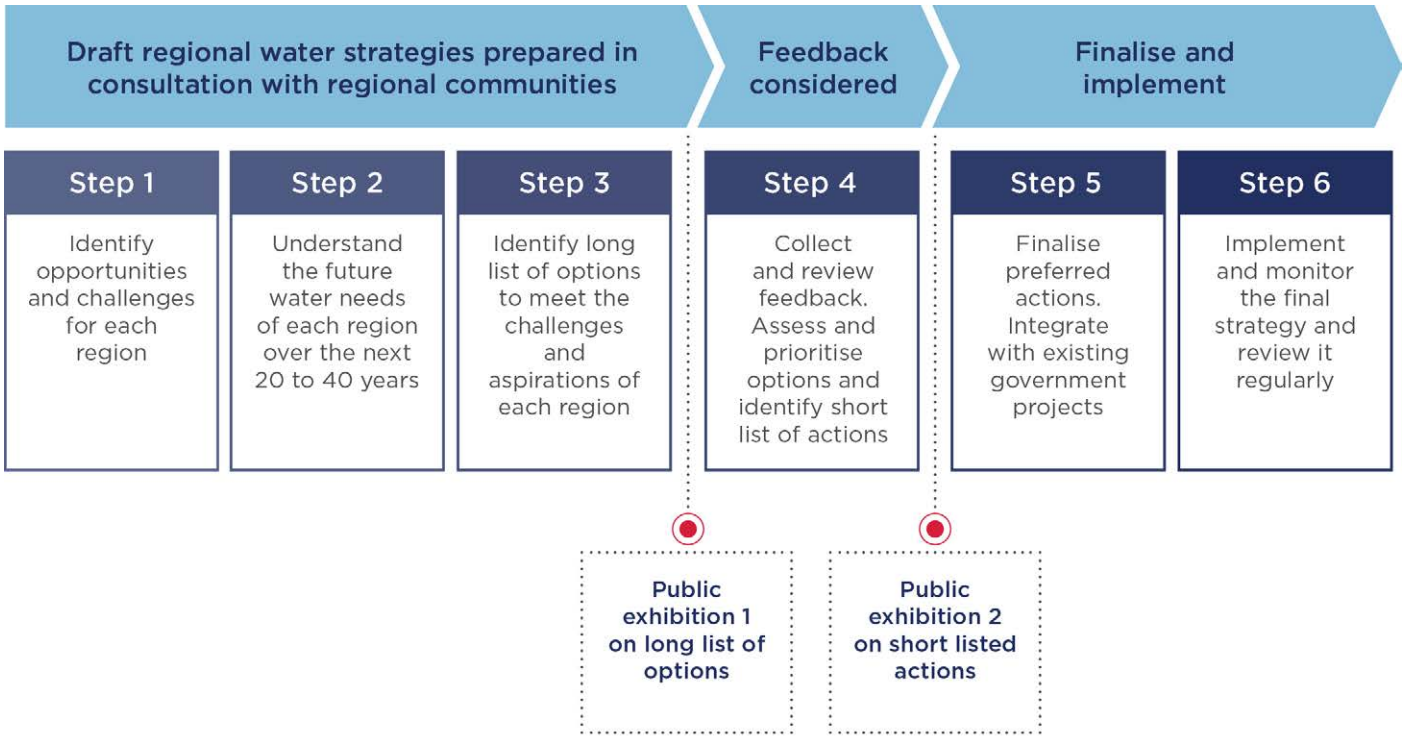


Figure 1: *The Department's approach to the development of the regional water strategies.*

Engagement Approach

Our engagement approach for the regional water strategies program is to share information, gather feedback and collaborate with key stakeholders on the development of the Gwydir Regional Water Strategy to ensure regional communities have influence in its development.

The Department is using a phased engagement approach, as illustrated in Figure 2. The timeline for engagement activities in Phase 2 (public exhibition) is shown in Figure 3.

How we engaged

The Department's engagement program involved:

- Consultation with councils and Aboriginal communities in the Gwydir region prior to the draft strategy being released
- A live webinar for Aboriginal communities on 13 October 2020
- A live webinar for the general public on 15 October 2020
- An Aboriginal community meeting in Moree on 21 October 2020
- A community meeting in Moree on 22 October 2020
- One-on-one phone consultations were offered during this engagement period with one conducted on 30 October 2020
- A formal submission process with over 30 submissions received.

These methods enabled the Department to share information about the regional water strategies program and seek feedback on the draft strategy and the long list of potential options.

Who we engaged

During the exhibition period from 25 September - 13 December 2020, the Department communicated and engaged with:

- Aboriginal community members and Aboriginal peak bodies
- Local government
- Business and industry stakeholders
- Landholders
- Peak representative organisations
- Individual members of the public.

Feedback was encouraged throughout the consultation period and was captured in each engagement activity as well as in the formal submissions.

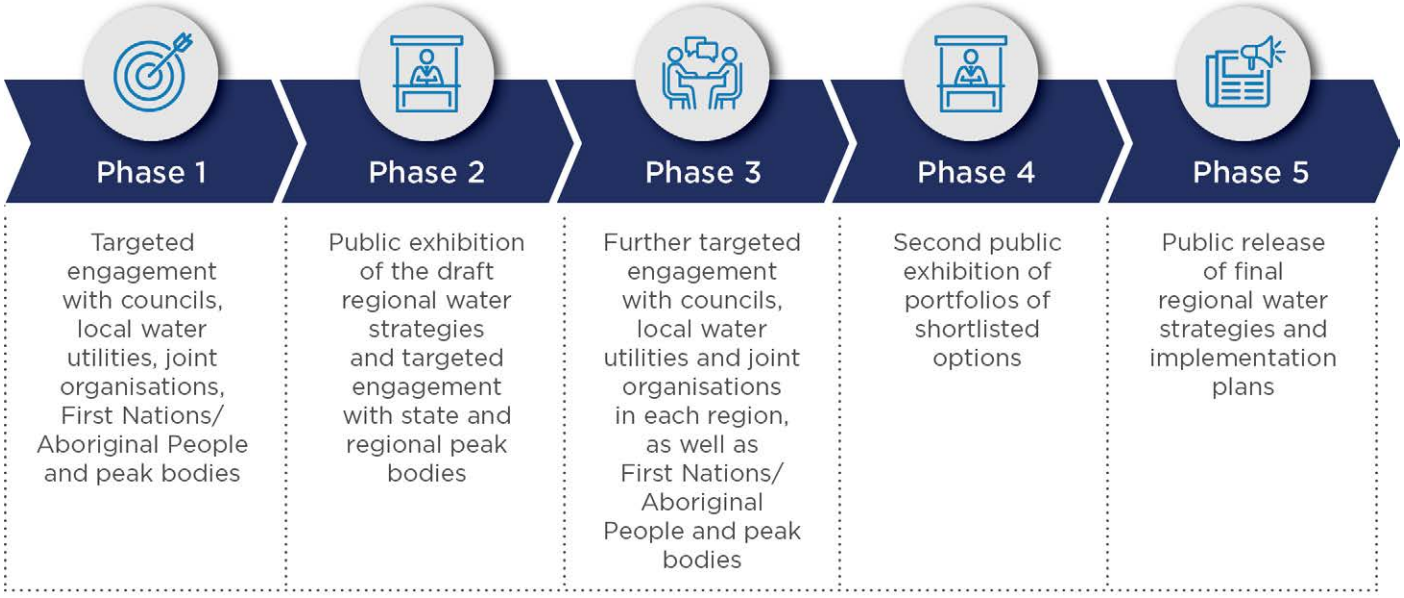


Figure 2: *Phased approach to engagement for the regional water strategies engagement program.*

Figure 3: *Timeline for the engagement activities in the Gwydir region.*

Engagement at a glance

1,008
unique website page visits

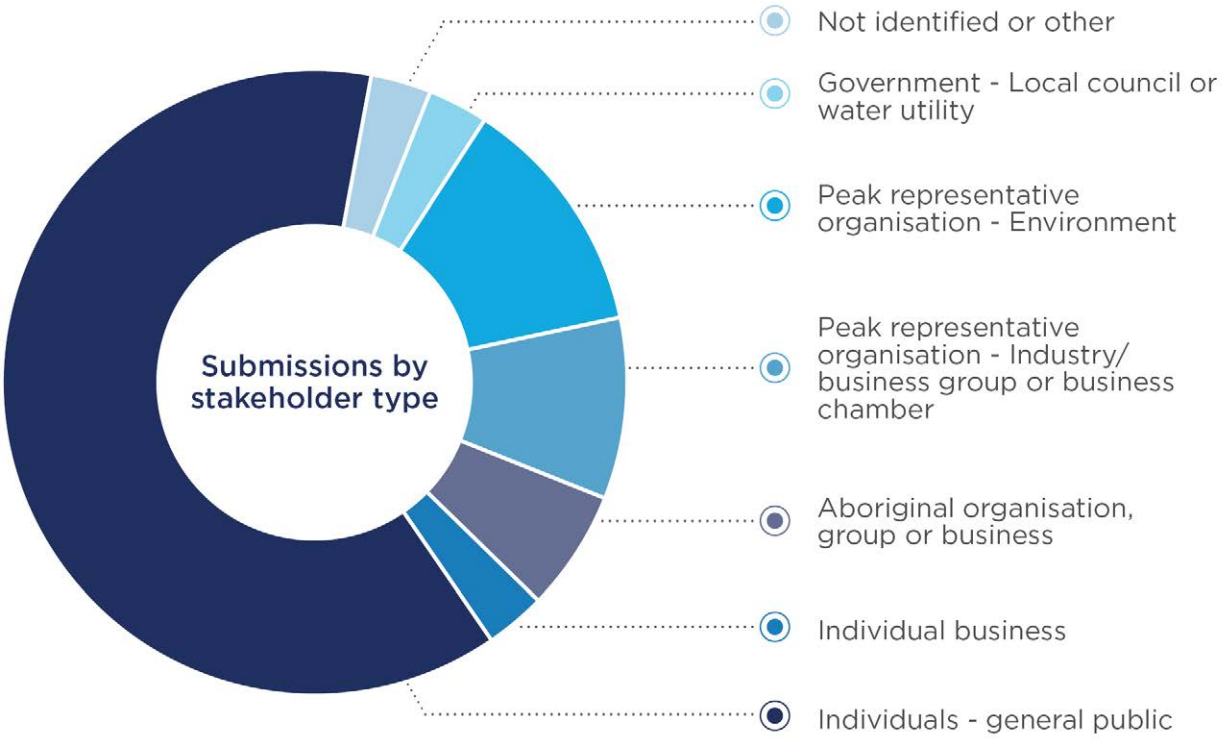
32
formal submissions

1
phone consultation
4 attendees

1
public information session
15 attendees

1
Aboriginal community session
6 attendees

2
live webinars
25 attendees



Our vision for the Gwydir Regional Water Strategy is to support the delivery of healthy, reliable and resilient water resources for a liveable and prosperous region. To achieve this, we need to position the region so there is the right amount of water of the right quality available to people, Aboriginal communities, towns, industries and the environment.

Image courtesy of Belinda Collingburn

What we heard

During the public exhibition we received over 30 submissions on the draft Gwydir Regional Water Strategy and the long list of options. Stakeholders shared many comments on the regional water strategies program, the content of the draft strategy and the long list of proposed options.

There was general support for the regional water strategies program and the development of the Gwydir Regional Water Strategy. Stakeholders urged the Department to progress the development of the NSW Water Strategy to provide an overarching framework and objectives that would guide the 12 regional water strategies and the associated implementation plans. Since that time, the NSW Water Strategy has been released for public consultation and finalised.

The Department also heard that the next phase of the Gwydir Regional Water Strategy should be accompanied by an open, transparent and broad-scale consultation process to ensure all stakeholder voices are being heard and a broad cross-section of the community is represented in the discussion. We will be undertaking a further round of public consultation on a shortlisted set of actions before the Gwydir Regional Water Strategy is finalised.

Many stakeholders appreciated the opportunity to provide feedback to the draft strategy documents and reinforced the need to integrate and align the regional water strategy work with the NSW ongoing work programs - including the implementation of the Murray Darling Basin Plan and other state water reform processes.

The consultation and engagement program for the draft strategy highlighted a wide variety of views on a range of issues. These issues can be categorised under the following themes:

Climate and modelling

Aboriginal knowledge and connection to Country

New and existing water infrastructure

Environment and ecosystem health

Entitlement reliability and risk management

Groundwater

The following section summarises the feedback received for each of these themes.

The draft strategy also included a long list of proposed options for the region. This long list is included on page 15. Feedback was received on each option and is summarised in the Options section.

Themes

Image courtesy of Belinda Collingburn

1. Climate and modelling

Stakeholders expressed interest in the development of the new climate datasets and updated modelling, but raised some concerns about how it would be used in future decision-making processes. Stakeholders requested the release of the final report prepared by the Office of the Chief Scientist and Engineer on the review of the regional water strategies climate risk methodology.

Key support

- The new climate modelling allows communities to have a conversation about water security and reliability risks in the Gwydir region and about cost-effective ways to address them.
- Aids future business planning and decision-making and helps water users to be better prepared for climate change.
- Some stakeholders thought the new climate risk method was sound and should be used for future water management decisions, land use planning and economic development in the region (e.g. including agriculture) and inform population growth projections.
- Climate data and modelling should be made available to assist communities and councils in their planning (including Integrated Water Cycle Management Strategy development).
- Modelling results are supported by other research that suggests that the climate change predictions in the draft strategy may not just be a 'worst-case scenario', but a potential likely future for which the community can prepare.

Key concerns

- How the new climate modelling would be used in future water management decisions with particular regard to planning for worst case, or other level of climate change scenario.
- How the new data will be shared with communities and agencies to ensure a consistent basis for future climate risk planning.
- Limited information about the link between the new modelling, groundwater sources and the impacts on water quality.
- The Chief Scientist's Review of the modelling method undertaken by the independent expert panel convened by the Chief Scientist and Engineer has not been released so accuracy of the modelling has been raised as a concern.
- Impact of future climate change (particularly more frequent and severe droughts) on communities, services and economic activities in the region.
- Questions of accuracy and the role of stochastic modelling in the statistical analysis used in the development of the draft strategy.
- Clarifications sought on specific data modelling inclusions and source data.

2. Aboriginal knowledge and connection to Country

There was broad support for improving the recognition of First Nations/Aboriginal People 's water rights, interests and access to water, as well as for the proposed options that integrate Aboriginal water management knowledge, protection of cultural heritage and creation of employment for local First Nations/Aboriginal People. There was recognition that inclusion of Aboriginal knowledge of land and water management could enhance the outcomes of many of the proposed options.

Key support

- Acknowledgement that genuine consultation with First Nations/Aboriginal People through this process can provide an important step in addressing past disparities and resetting the water agenda with these communities.
- General support for Aboriginal community options that support people on Country looking after Country – particularly the establishment of a Regional Aboriginal Water Advisory Committee and the River Ranger Program. However, there were some concerns that options were not yet developed in detail enough to garner examined feedback.
- Involvement of local First Nations/ Aboriginal People in the design and implementation of proposed programs in the draft strategy.
- Need to prioritise and protect environmental flows and establish cultural flows.
- Simplifying the application process for Aboriginal cultural licences and clear and transparent information on their use.
- Options that advance employment opportunities – especially for young people.
- Support for securing flows to cultural sites, recognising cultural knowledge, and reducing barriers to water access for First Nations/Aboriginal People.
- Opportunities to integrate Aboriginal knowledge in other options development (including environmental, groundwater and land use options) and help in their implementation.

Key concerns

- Consultation and engagement with First Nations/Aboriginal People in the region left insufficient time to co-design Aboriginal community options.
- Options in the draft strategy do not adequately address the concerns of First Nations/Aboriginal People in the community – particularly infrastructure options.
- Limited focus on water security for Aboriginal communities and options that would drive economic outcomes for First Nations/Aboriginal People.
- Complexity of water policy and laws and the need to develop tailored educational resources to help empower Aboriginal communities.
- First Nations/Aboriginal People often feel excluded or forgotten in arrangements within their local government area, especially communities that are responsible for providing their own water supplies.
- Concerns that the river is viewed as a water delivery system which is in clear discord with vision and understanding of First Nations/Aboriginal People.

3. New and existing water infrastructure

Most of the comments related to this theme focused on the proposed enlargement of Tareelaroi Weir (Option 1) and the proposed new Lower Gravesend Dam (Option 2).

Key support

- Augmentation and construction of new water-related infrastructure could provide greater economic, environmental and water security benefits.
- Some stakeholders expressed support for cost-effective infrastructure options that provide water security and improved reliability to communities.
- Suggestion made to include an option for a pipeline from the proposed Lower Gravesend Dam for high security and other critical essential needs.
- Infrastructure projects and inter-regional pipelines could underpin future reliability and water security and become important mitigations.

Key concerns

- Strong stakeholder opposition to the proposed Lower Gravesend Dam; feedback shared of stakeholder opposition from prior times when this option was investigated, including concerns that it would not meet commitments under the NSW Water Management Act 2000 or the Murray-Darling Basin Plan.
- Increased evaporation from increasing the size of shallow water storage infrastructure.
- Belief that the stated cost efficiencies would not be realised in the construction of the proposed new infrastructure projects, for example, additional infrastructure would not necessarily provide additional water security.
- Strategies focus too much on water-related infrastructure instead of sustainable resource management and use.
- Augmentation and construction of new water infrastructure will likely have an impact on the environment and ecology of the Gwydir region and downstream regions, especially on native fish populations, threatened species and natural flows, due to increased regulation and impacts on flow regimes and end-of-system flows. Feedback acknowledged that there have been positive steps toward restoration of river health in recent times, with concern that these infrastructure projects may negate those achievements.
- Impacts on communities, including displaced households and businesses.
- Lack of clarity as to how the (infrastructure) options will be assessed through the options assessment process.

4. Environment and ecosystem health

Many comments stressed the need to protect the environment and ecosystems in the Gwydir region, and voiced strong concerns about the potential for severe environmental impacts should proposed infrastructure options be progressed. In contrast, many stakeholders were supportive of water efficiency and water saving options, demand management measures, land management and water quality improvement options as well as environmentally focused and groundwater options. There was a focus in the feedback on the need for consideration of downstream connectivity and end-of-system flow needs.

Key support

- Sustainable water use should be the focus of the strategy and options to protect the environment, ecosystems and water sources, as well as enable connectivity.
- Construction of fishways to improve native fish breeding and feeding grounds, especially in relation to current or future infrastructure; there was strong support for currently the approved fishways that have not yet been constructed.
- The strategy is an opportunity to reset thinking on the systemic management of the Gwydir region and ensure the environment is not deprived of water.
- Opportunities to encouraging improved land management, creating habitat for native and threatened species and remove floodplain structures.
- Suggestions that riparian vegetation has an important role to play in maintaining a healthy watercourse.
- Removal of structures on floodplains that hinder flood flows.
- The need to review existing sleeper licences and buyback of entitlements to support the environment.
- The draft strategy should focus on resilient water resources and sustainable water use, downstream connectivity and end-of-system flows to improve the conditions of existing wetlands, waterbird and native fish breeding habitats.

Key concerns

- The strategy leans towards fostering growth of water-dependent industries instead of focusing on sustainable use of water.
- Potential environmental impacts if large scale infrastructure projects are progressed.
- The vision of the draft strategy is not broad enough and does not consider connectivity across multiple catchments.
- Some stakeholders raised concerns that the definition of connectivity is not clear and should not be interpreted as only drought-proofing.
- Concerns that the draft strategy did not adequately consider NSW's commitments to the Murray-Darling Basin Plan.
- Regional growth could impact existing ecosystems and primary production and could be unsustainable in the long-term.
- Too much emphasis on flows to protect the environment instead of focusing on non-flow related measures given the river system is intermittent/ephemeral and has episodic cease-to-flow periods.
- The need to use water close to its source, and reduce the focus on connectivity.
- Unregulated nature of floodplain harvesting and the significant volumes that are removed through this action impacting river connectivity.

5. Entitlement reliability and risk management

Most of the comments related to the potential climate change risks on future water availability and (entitlement) reliability in the Gwydir region. Stakeholders also emphasised the need to better understand the risks to develop appropriate mitigation strategies and to be better prepared for a possible future with less water.

Key support

- Preference expressed for the focus of the draft Strategy to be on reducing and managing water demand versus increasing water supply; to use available water in a sustainable way.
- Promote reduction in water use and less dependency on the river systems and groundwater sources.
- Develop efficiency initiatives in farming and industry as well as in the townships.
- Need to start a conversation about suitable risk management strategies to address potential future impacts to reliability.
- Strategy should provide opportunities to identify suitable options to reduce water demands, promote water efficiency measures and minimise transmissions and evaporation losses.
- Suggestion that it is important to improve knowledge of groundwater sources and should be prioritised.
- Important to ensure a high level of water security for towns without compromising reliability for other licence holders.
- A submission contended that the licence/entitlements framework is working and is designed to adjust to climate conditions.
- Stakeholders expressed a strong interest to have access to new datasets, models and modelling results, and stressed that the Department needed to consider how the new climate data and modelling can be publicly shared to help individuals better manage their own risks.

Key concerns

- The reliability of some entitlements is already low and could decline further with climate change.
- The regional water strategy objectives do not align with the broader NSW water management framework and legislation which places the environment and critical human needs at the top of the priority list.
- The impact of some options on future entitlement reliability. Suggestions were put forward to conduct a comprehensive "Reliability Impact Assessment" of all options to analyse the positive and negative impacts of the options on the reliability of entitlement holders.
- Ability of water resources in the region being able to support population growth was raised as a risk to water security and a consideration in mitigations.
- How the new climate datasets and modelling will be used in future water allocation decisions and the potential impact on reliability.
- Lack of a clear definition of what critical human needs are in the context of the regional water strategies.
- The option to convert general security entitlements to high security entitlements could reduce the security of all other water users.
- Concern that the Gwydir region is already over-allocated and that this needs to be acknowledged and managed.

6. Groundwater

Stakeholders expressed that better groundwater knowledge was imperative and that more work is needed to better understand the relationship between surface water and groundwater resources. There was concern that groundwater sources could be over-allocated and under stress in future extreme weather events.

Key support

- General support for the protection of groundwater sources and emphasis on sustainable use as several towns and communities are dependent on groundwater as their primary water supply.
- Strong support for more research into the connection between surface and groundwater, and the health and sustainable use of groundwater sources.
- Providing secure access to groundwater for towns and communities in the region.
- Some stakeholders were supportive of reviewing/adjusting extraction limits (groundwater) in the region.
- Greater knowledge of groundwater system is required to understand the long-term security of supply in protracted restricted surface water scenarios; need to understand recovery rates, groundwater dependent ecosystems, recharge and impacts of other infrastructure projects in the region.

Key concerns

- Lack of consideration of groundwater in the draft Strategy, including a lack of groundwater related data, lack of assessment of the current condition of groundwater and a lack of proposed options that specifically address groundwater issues.
- Impact of some of the proposed options on groundwater recharge and future dependencies on groundwater sources.
- Impact of climate variability and climate change on groundwater demand, recharge and groundwater levels.
- Potential damage to aquifers and wariness of an over-reliance on groundwater as a water source, especially in times of drought.
- Concerns about future availability of groundwater given existing pressures.
- Concerns about limited information around the current condition of groundwater sources and limited acknowledgement that groundwater systems were over-allocated beyond what should be considered sustainable.
- Concerns about managed aquifer recharge compared to natural recharge.

Options

Image courtesy of Sally Anderson-Day

Long list of proposed options identified in the draft Gwydir Regional Water Strategy

Maintaining and diversifying water supplies

1. Enlargement of Tareelaroi Weir
2. New Lower Gravesend Dam on the Gwydir River downstream of Warialda Creek
3. Reuse, recycling and stormwater projects
4. Managed aquifer recharge investigations and policy
5. Reliable access to groundwater by towns
6. Town water security planning and investment for Gwydir Shire
7. Town water security planning and investment for Uralla Shire
8. Reliable access to groundwater for the Moree Special Activation Precinct

Protecting and enhancing natural systems

9. Removal of system constraints in the Gwydir catchment to improve flows reaching the Gwydir Wetlands
10. NSW Fish Passage Strategy
11. Ability to direct excess supplementary flows
12. Cold water pollution mitigation measures
13. Diversion screens to prevent fish extraction at pump offtakes
14. Improved understanding of groundwater processes
15. Sustainable access to groundwater by all users
16. Improved clarity in managing groundwater resources sustainably
17. Active management to share flows between consumptive and other uses
18. Modification and/or removal of floodwork structures causing adverse impacts
19. River Ranger Program
20. Investigation of water quality mitigation measures
21. Secure flows for water-dependent cultural sites

Supporting water use efficiency and conservation

22. Water efficiency projects (towns and industries)
23. Review of water markets in the Gwydir region
24. Connectivity with downstream systems
25. Review urban water restriction policy
26. Addressing inefficient delivery system management

Strengthening community preparedness for climate extremes

27. New drought operational rules (Gwydir River)
28. Review of surface water accounting and allocation process
29. Investigation of licence conversions
30. Improved data collection and storage
31. Training and information sharing programs:
    - new climate data/ modelling
    - managing groundwater resources sustainably
32. Land use change impact on water resources

Improving the recognition of with First Nations/Aboriginal People's water rights, interests and access to water

33. Culturally appropriate water knowledge program
34. Water-dependent cultural practice and site identification project
35. Shared benefit project (environment and cultural outcomes)
36. Regional Cultural Water Officer employment program
37. Regional Aboriginal Water Advisory Committee
38. Water portfolio project for Aboriginal communities
39. Co-management investigation of Travelling Stock Reserves
40. Aboriginal cultural water access licence review

Table 1: *Long list of proposed options for the Gwydir region*

Options 1-8: Maintaining and diversifying water supplies

Large infrastructure projects were not well supported, with opposition for the Lower Gravesend Dam option continuing from previous times when this has been proposed. There is concern for town water supply reliability and security, with a cautious approach to the use of groundwater without further research and increased understanding of potential consequences and impacts.

Options	Summary of feedback received
1. **Enlargement of Tareelaroi Weir**	• The enlargement of Tareelaroi re-regulating weir would be detrimental to the Gwydir Valley where significant deterioration of river health and the native fish population has been identified; preference expressed was to prioritise the environment and river health. • This project will capture more environmental water and reduce flows into the important Gwydir wetlands and compromise connectivity with the Barwon-Darling River. • Support indicated was due to the project potentially resulting in an immediate increase of water supply in the system.
2. **New Lower Gravesend Dam on the Gwydir River downstream of Warialda Creek**	• There was strong opposition to this option. Many stakeholders were concerned that it was included in the strategy despite previous iterations of this proposal being opposed by the community. The concerns revolved around the uncertainty this created for landholders whose properties would be impacted, and the impact on the environment adjacent to the proposal, as well as downstream. • This option will deliver minimal benefit to the river system; it is not feasible in terms of stakeholder acceptance, implementation time and cost-efficiency. • Concern that there is no assured increase in water supply resulting from this action, in particular with regard to it being a shallow water storage asset, will be at significant expense and have adverse environmental impacts. • Adverse environmental outcomes including making long sections of the river less suitable for native fish and would be used to trap flows that have natural characteristics, further threatening species and ecosystems downstream that prefer natural flows to regulated flows. • This would increase constraints on the system which would be detrimental to the cultural necessities of Aboriginal communities and threaten the existence of the native environment.

Options	Summary of feedback received
3. **Reuse, recycling and stormwater projects** 4. **Reliable access to groundwater by towns** 5. **Reliable access to groundwater for the Moree Special Activation Precinct**	• There was some confusion arising from potentially conflicting advice from various government agencies; there needs to be clarity and consistency in government directions on water sources for town water use. • Support for these options as they enable communities to be healthy and resilient. • Some feedback favoured use of groundwater over recycled options, and vice-versa; but most focused on supporting reliability and alternatives to communities impacted by extreme weather events. • Concern that securing town water would not negatively impact other entitlement holders. • Over-reliance on groundwater was of concern given that some aquifers are already being used unsustainably and that lowering alluvial aquifers adversely affect groundwater-dependent ecosystems. • Many respondents indicated these should be priority options.
4. **Managed aquifer recharge investigations and policy**	• Support for the investigation of innovative options to enhance water security. • Managed aquifer recharge may have potential; however, further investigation was supported.
6. **Town water security planning and investment for Gwydir Shire** 7. **Town water security planning and investment for Uralla Shire**	• Concern that the current supplies do not meet the needs in extreme weather events and without significant investment would be unable to support additional or remote communities that may be connected to the water supplies in future.

Options 9-21: Protecting and enhancing natural systems

Feedback for the proposed options in this category was supportive of the preservation or restoration of the natural characteristics of the river system and actively seeking to increase knowledge and understanding of water sources, land and water management.

Options	Summary of feedback received
9. **Removal of system constraints in the Gwydir catchment to improve flows reaching the Gwydir Wetlands** 10. **Modification and/or removal of floodwork structures causing adverse impacts**	• Support for the removal of constraints to the delivery of environmental water in the Gwydir Wetlands. • Block releases from Copeton Dam, delivery to the Mehi and the patterns and variability of delivery of environmental water, were issues of concern, along with loss of connectivity between floodplains and rivers within the Gwydir system.
10. **NSW Fish Passage Strategy** 11. **Cold water pollution mitigation measures** 12. **Diversion screens to prevent fish extraction at pump offtakes**	• Improved outcomes for river health, native fish breeding, habitat and passage, waterbirds and wetlands. • Support for removal of assets that impede the river and are no longer in use or good repair, and the implementation of screening pumps to retain fish in the river system.
11. **Ability to direct excess supplementary flows** 12. **Active management to share flows between consumptive and other uses**	• Support was expressed for these actions, commending the commitment to these outcomes.
20. **Investigation of water quality mitigation measures**	• Support for this option and the restoration and maintenance of water quality throughout the system.

Options	Summary of feedback received
14. Improved understanding of groundwater processes **15. Sustainable access to groundwater by all users** **16. Improved clarity in managing groundwater resources sustainably**	• All of these options were supported in the feedback. • This work is long overdue and should be a focus for investment. There was concern that the current condition of the main productive aquifers in these catchments are demonstrating stress.
19. River Ranger Program **20. Secure flows for water-dependent cultural sites**	• Improving First Nation's capacity, engagement and employment in water management was supported. • Incorporation of Indigenous land management practices and cultural knowledge should be embraced as part of water management.

Options 22-26: Supporting water use efficiency and conservation

Feedback supported improving delivering options whilst maintaining positive environmental outcomes, and avoiding further environmental damage. Distinctions were made between town and industry or other water users, with regard to improving town water supplies. Connectivity and minimal losses were important to the respondents.

Options	Summary of feedback received
22. Water efficiency projects (towns and industries) **23. Review urban water restriction policy**	• Adapting to climate change through behaviour change and better management of existing public and private infrastructure, in townships and industries, is supported and encouraged by the feedback. • Indications that farms have already implemented on-farm measures to improve water resilience and efficiencies. • Appetite exists to do more, yet opportunities seem to be limited. • Suggestions were made to focus on evaporation management, piping water underground to minimise transmission losses and to investigate floating solar panels, tree plantings and innovative products to contribute to minimising losses. • Restrictions for townships were supported although some comments contended that urban water supplies and usage are minor and benefits of conservation focused in this area would be minimal.
24. Connectivity with downstream systems	• This is essential, in combination with connectivity flows from other catchments to both people and ecosystems downstream. • Explore options to improve connectivity to downstream wetlands and important waterbird breeding habitat; should be considered as part of the suite of options to improve the environmental health of the Gwydir region. • Employ pragmatic mechanisms, taking into account channel capacity constraints, the nature of river systems and rainfall patterns, hydrology and changing climate patterns.
23. Review of water markets in the Gwydir region **24. Addressing inefficient delivery system management**	• Transparency in the water markets is important. • Support for efforts to minimise transmission losses, but only when it is not detrimental to the environment.

Options 27-32: Strengthening community preparedness for climate extremes

Feedback supported the prosed options and expressed an openness to new approaches, re-thinking, revising existing practices and innovating, to build resilient communities in the region.

Options	Summary of feedback received
27. New drought operational rules (Gwydir River) **28. Review of surface water accounting and allocation process** **29. Investigation of licence conversions**	• Some feedback questioned if it was necessary to manage reserves and allocations for the drought of record every year, or if a more adaptive approach would be more effective which would allow government to intervene as extreme events approach. • The benefits of maintaining a water level in storages to provide long term water security for critical human and industry needs is demonstrated in the protocols for managing Windamere Dam. • Support for informed drought management and decision-making, review of the drought of record and allocation process in water sharing plans to improve water use efficiency. • Suggestion that instead of increasing the amount of storage, better use could be made of Copeton Dam to keep more water in storage for droughts to use in accordance with the priorities set by the *NSW Water Management Act 2000*; this would likely require lower allocations in years when there is a moderate amount of water stored. • There was mixed feedback on licence conversions with support for when there are key environmental improvements to be realised, and caution for inadvertent impacts on managing the system of delivery.
30. Improved data collection and storage **31. Training and information sharing programs: new climate data/ modelling and managing groundwater resources sustainably** **32. Land use change impact on water resources**	• Feedback supported these options, with suggestions made to increase ground cover to combat erosion and reduce run-off from the system.

Options 33-40: Improving the recognition of Aboriginal people's water rights, interests and access to water

These proposed options to protect and strengthen cultural landscapes, practices, knowledge and traditions, as well as to support empowerment, self-determination and economic advancement of First Nations/Aboriginal People and communities, were well supported in the feedback.

Options	Summary of feedback received
33. Culturally appropriate water knowledge program **34. Water-dependent cultural practice and site identification project** **35. Shared benefit project (environment and cultural outcomes)** **36. Co-management investigation of Travelling Stock Reserves** **37. Regional cultural water officer employment program** **38. Co-management investigation of Travelling Stock Reserves**	• Support for all options that improve First Nations peoples' capacity, engagement and employment in water management; that recognise the significance of cultural knowledge; and improve cultural outcomes. • First Nations/Aboriginal People should be involved in setting priorities for these proposed options and programs. • Support for the involvement of First Nations/Aboriginal People in sharing and engaging their land and water management knowledge. • In the decision-making process relating to the implementation of options for each region, consider the broader benefits to the overall welfare of the Aboriginal community, not only water-related but those that through their implementation provide other social benefits.
37. Regional Aboriginal water advisory committee	• Support for this proposed option, with a focus on representation from the local First Nations/Aboriginal People.
40. Aboriginal cultural water access licence review	• Acknowledgement that accessing cultural licences can be difficult, and suggestions to support First Nations/ Aboriginal People in the application process, or simplify the process.

Suggested additional options

Respondents suggested a range of new options that related to a variety of topics as set out in the following. A number of these suggestions will be integrated into existing options. In some cases, new options will be created and displayed in the next public exhibition.

Options	Summary of feedback received
Efficiencies and water saving initiatives	• Options for reducing evaporation from on-farm storages. • A floating solar farm that controls on-farm storage evaporation and provides the double benefit of a renewable energy source. • Consider establishing a dedicated research body to improve agricultural water productivity efficiency and management. • Investigation of a small capacity, in-stream mid-Gwydir River storage.
Water for discrete and remote communities	• Provision of stand-alone drinking water for remote or discrete communities through investment in SOURCE Hydro-panels.
Catchment management	• Encourage improved management of lands throughout the catchment to increase soil carbon, absorb more of the rain that falls, and release water more gradually to sustain stream flows and enabling better production from these soils. • Explore options for riparian, wetland and floodplain habitat restoration and re-establishing threatened species.
Demand management	• Incentivising water users to reduce demand. • Explore agricultural efficiencies and innovations. • Options around water use efficiency, water reuse and recycling and opportunities to reduce consumption that could have an equal or greater long-term benefit than supply-side options.
Water security and resilience building	• Expanding stock and domestic pipelines for emergency supplies. • Improving or expanding existing water storage assets such as Copeton Dam and more extensive support for water tank usage.

Response

Image courtesy of Jane Humphries

Response to feedback

Since the publication of the draft Gwydir Regional Water Strategy, the NSW Water Strategy has been developed. Some of the issues highlighted in the Gwydir Regional Water Strategy and from communities in the Gwydir region are consistent challenges across the State. These state-wide issues have been included as priority focus areas in the NSW Water Strategy and are outlined below.

Your feedback has been used to refine the key challenges that we need to focus on in the final Gwydir Regional Water Strategy, and the options that will be shortlisted for further investigation.

Further consultation

We have heard and accepted your feedback requesting more consultation on the regional water strategies, and a greater say in how options are shortlisted and prioritised.

As a result, we will be undertaking public consultation on a shortlist of actions before the Gwydir Regional Water Strategy is finalised.

New climate data

The new climate datasets and updated modelling that underpin the draft Gwydir Regional Water Strategy are an important advance on previous climate work. We can now better assess the likelihood of a range of drought conditions, and the impacts on surface water security and reliability over a much wider range of climate conditions. This is a major improvement from our previous reliance on the observed historical records only.

The key next step is to work with the community to detail how this climate data should be used. This may include establishing the risk appetite of the community and identifying which historical droughts should be used as the basis for water management.

Importantly there may not be a one size fits all approach to using the new climate data for different elements of water management. Consideration needs to be given to the length of time a policy, planning or infrastructure option will have and its 'functional life'. For a planning decision in a water sharing plan, this functional life is 10 years or less before an opportunity to review. As such, utilising climate data based on a climate change scenario 40 years into the future may not be necessary, or appropriate. However, the construction of a piece of infrastructure, with a lifespan of 100 or more years, should consider the full range of climatic conditions which may be experienced during the life of the project.

A priority action in the NSW Water Strategy is for the NSW Government to review water allocation frameworks and water sharing plan provisions in response to new extremes in water availability. This will include exploring risk management approaches for a more adaptive water allocation and accounting framework, and understanding how the new climate data can inform this work. Progressing this requires detailed and focused engagement with the community. It cannot happen overnight. It also depends on communities having a workable understanding of these risks, and conversations with communities about the level of risk they are willing to accept.

The new climate data is already being used in business cases to assess the impacts and benefits of proposed major state water infrastructure. This information will be useful for local water utilities and other stakeholders in assessing the long-term water security of individual towns. Making this data available in a useable format is a priority under the Town Water Risk Reduction Program.

As with all types of science, we need to continually improve the data. The next steps in continuing to improve the climate data and modelling method will be to apply it to assess climate impacts on groundwater and associated risks. This is being progressed through the Groundwater Strategy.

Aboriginal water rights

One of the primary objectives of the draft Gwydir Regional Water Strategy is to recognise and protect Aboriginal water rights, interests and access to water. It is also priority number 2 in the NSW Water Strategy.

Unlike many other challenges in the region, the fundamental water rights of First Nations/Aboriginal People is still a major gap in water management across NSW and the Basin. Addressing this issue will set up a framework for addressing the Aboriginal community options identified in the draft regional water strategies. These options will be progressed through a State Aboriginal Water Strategy. Opportunities to progress region-specific Aboriginal community options, in parallel with this state-level action, will be explored in the final Gwydir Regional Water Strategy.

Water infrastructure

We acknowledge the extensive feedback and strong opposition we received regarding the new Lower Gravesend on the Gwydir River downstream of Warialda Creek (Option 2) and the mixed sentiments expressed regarding the enlargement of Tareelaroi Weir (Option 1). Each infrastructure option has been assessed as part of the rapid cost benefit analysis when shortlisting the options and has separate benefits, costs and impacts localised to the area and the catchment.

Environment and ecosystem health

The feedback on the draft Gwydir Regional Water Strategy showed strong support for options that improve environmental and ecosystem health and increase the connectivity throughout the Gwydir catchment. We have supplemented our existing long list of options to pick up ideas that were raised by stakeholders during the public exhibition.

Integrating land-use and water management

There is an important link between land use and water management. How land is used determines water management needs – whether water is servicing urban developments or being provided to other uses (including industry, environmental, cultural or recreational needs). Land use planning decisions and development control also have a key role to play in protecting water sources for supply, on the health and stability of waterbodies, and on receiving water quality.

Future water reliability and security in a changing climate will be critical to land use, urban development planning decisions and industry development initiatives in regional NSW. In particular, there is an opportunity to consider water availability and impacts much earlier and more strategically through the planning system. We have begun this work by using the evidence in the regional water strategies to inform:

- The next generation of regional plans, including the New England North West Regional Plan 2036
- Special activation precincts – including the Moree Special Activation Precinct.
- Regional job precincts.

The NSW Water Strategy has committed to better integrate land use planning, development approvals and water management (NSW Water Strategy Action 4.4) across the state. In addition, the NSW Water Strategy commits to adopting a more intense, state-wide focus on improving water quality (NSW Water Strategy Action 3.5) through the definition of clear roles, accountabilities and frameworks for monitoring, assessing and addressing water quality risks across the state.

The Department of Primary Industries – Agriculture is undertaking a three-year program to identify and map important agricultural land. Knowing where this land is situated and understanding value and contribution to the state's economy and food security will assist in making decisions about current and future land uses and their water needs. A comprehensive and consistent approach to collecting water statistics and related information will greatly help this process.

Groundwater

The NSW government has placed an enhanced state-wide focus on sustainable groundwater management and a draft Groundwater Strategy will be publicly available for comment mid-2022.

Opportunities to progress region-specific groundwater options in addition to state-level actions will be explored in the final Gwydir Regional Water Strategy.

Economic prosperity and resilience

We are also working on additional options to address feedback we received during the public exhibition about ways we can support economic growth and resilient industries within a capped system (NSW Water Strategy Action 5.4) and align with the commitments made under the Future Ready Regions Strategy.

Next steps

Your feedback during the public exhibition will now help us to refine the key challenges that the strategy needs to focus on improving, and which of the 40 options listed in the draft Gwydir Regional Water Strategy should be shortlisted to help address these challenges. Your feedback has also suggested a number of new options that will now be assessed.

The next steps in our engagement will be to seek your views on the shortlisted actions before the Gwydir Regional Water Strategy is finalised. Your ongoing engagement is important to ensure we are identifying the right solutions for the Gwydir region that meets the vision and needs of communities, the environment and industries.

A final package of actions will be presented as part of the final Gwydir Regional Water Strategy and associated implementation plan which is scheduled for release in 2022.

More information:

www.dpie.nsw.gov.au/regional-water-strategies

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