



Regional water strategies

NSW DEPARTMENT OF PLANNING, INDUSTRY AND ENVIRONMENT
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Contents

- **Program overview**
- **Strategy development**
- **Better understanding of climate risk**
- **Engagement**
- **Public exhibition**

Program overview

Development of 12 regional water strategies:

- Improved understanding of climate variability and change.
- Increased knowledge of the current and future water needs in the regions.
- Opportunities to better respond to water management challenges and extreme events - through policy, regulatory, educational, technological and infrastructure options, including fish passage.

Staged roll-out:

- Completed: Greater Hunter (2018)
- Focus area: Lachlan, Macquarie-Castlereagh, Gwydir, Far North Coast
- Under development: Namoi, Border Rivers, Western, Murray, Murrumbidgee, North Coast and South Coast.



What we are trying to achieve

The regional water strategies aim to improve the resilience of our water resources and the resilience of our water users to changes in water availability, in line with the following objectives:

- Deliver and manage water for **local communities** - improve water security, water quality and flood management for regional towns and communities
- Enable **economic prosperity** - improve water access reliability for regional industries
- Recognise and protect **Aboriginal cultural values and rights** - including Indigenous heritage assets
- Protect and enhance the **environment** - improve the health and integrity of environmental systems and assets including by improving water quality
- **Affordability** - identify least cost policy and infrastructure options

Background and context

- Developed in response to recommendations from the NSW State Infrastructure Strategy:
 - Catchment needs assessment for each region
 - Assessment of current drought impacts
- NSW Government election commitment to fast-track the development of the regional water strategies.

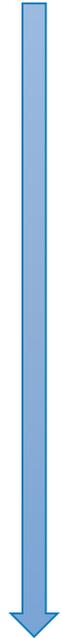
The strategies will:

- Be evidence-based and provide a better understanding of current and future water needs, issues, and risks to water resources.
- Draw on recent water reform, water planning and water security work undertaken by the department and WaterNSW.
- Chart a path for future water planning and management efforts in NSW.



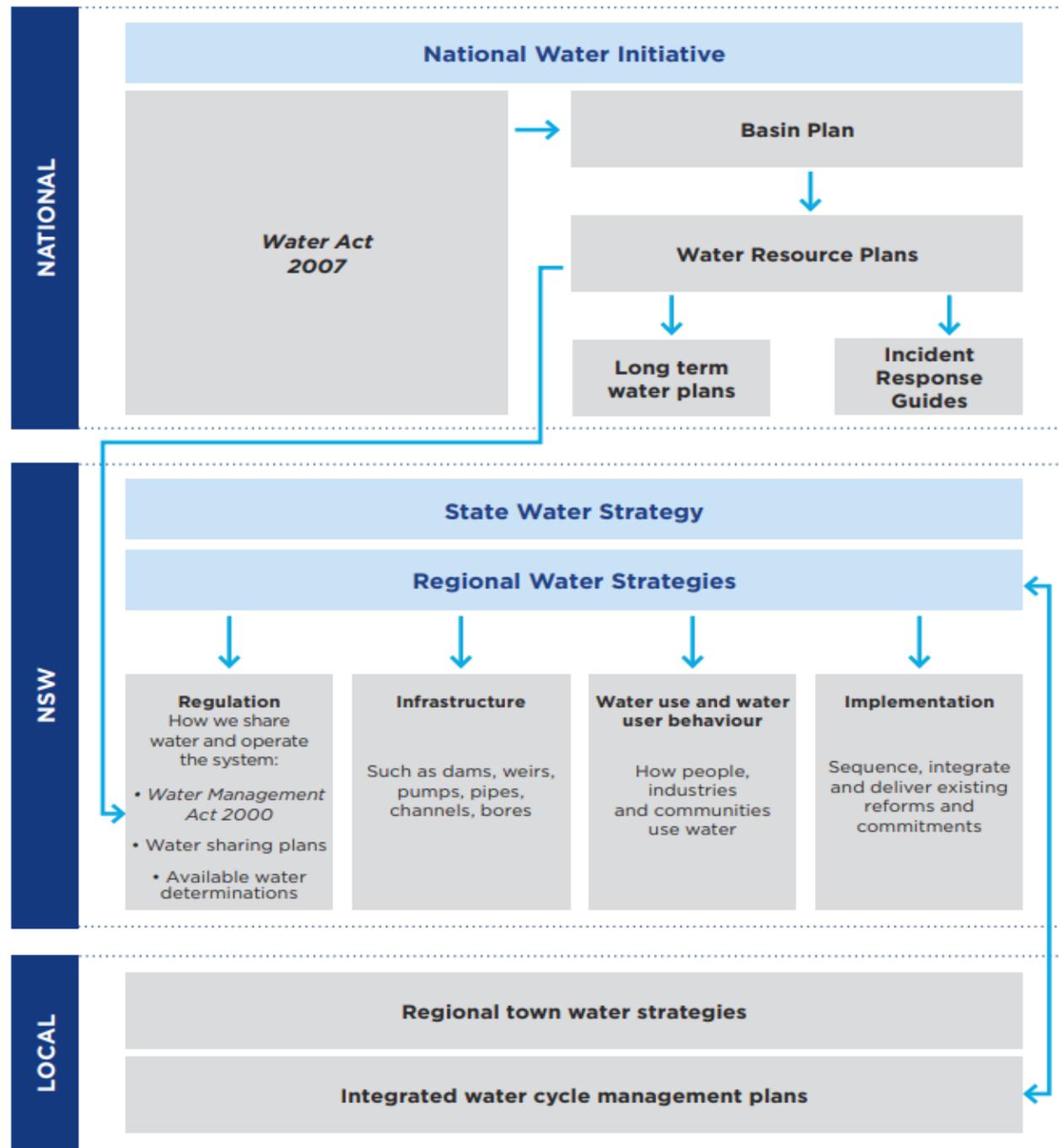
Strategy development

Stakeholder engagement



- Establish strategic vision and outcomes
- Identify current and future challenges
- Incorporate new data and modelling to understanding climate variability and change – [method reviewed by expert panel]
- Develop options - policy, regulatory, educational, technology and infrastructure
- Publish draft strategy with long list of options
- Prioritise options for further analysis and assessment
- Finalise strategy with recommended options (including implementation plan, monitoring, evaluation and review schedule)
- Review strategy regularly

How do RWSs fit with other policy instruments?



Better understanding of climate risk

Better understanding climate risk

The regional water strategies will be based on **improved data and knowledge** about the risk from climate variability and change, improving our ability to deal with extreme events.

Method has been peer reviewed by the Deputy Chief Scientist-convened expert panel.

Existing approach:

Current water management planning is based on historic climate data (i.e. since 1890s) which provides a limited understanding of risk and extreme event.

We know from global and regional studies that there have been more extreme droughts and floods than what we have recorded since the 1890s.

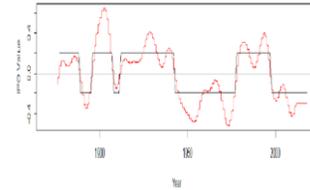


How we will improve our analysis?

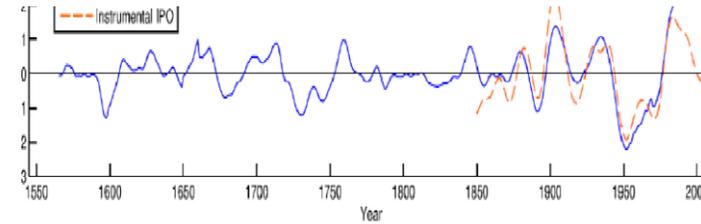
- Examine historical variability from the observed record (approximately 130 years)
- Extend observed climate sequences using statistical techniques (up to 10,000 years)
- Use indirect measures of climate conditions going back several centuries (paleo-climate data) to calibrate data
- Superimpose climate change signals (NARClIM)

Climate modelling

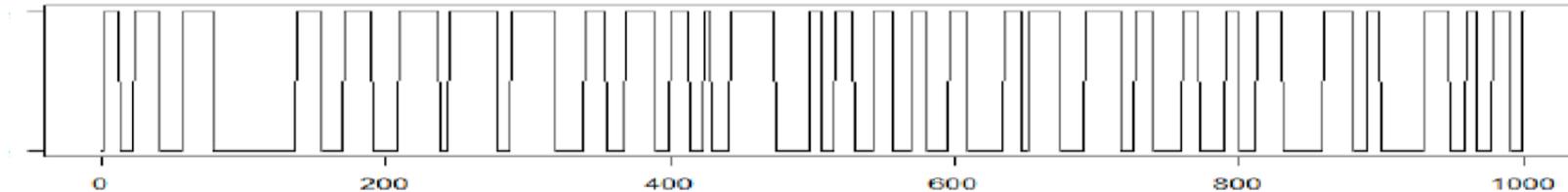
Observational (approx. 130 years)



Palaeo (up to 2000 years)



Stochastically generated (sample from 10,000 years)



Greater Hunter RWS

- Droughts will be longer and more frequent than we have seen in historical records
 - Drought lasting for 15–20 years (as well as extended wet periods) may occur in the future
- The worst drought on record in the Greater Hunter was in 1936-48:
 - we assumed it to be a 1 in 100 year event,
 - modelling suggests this may occur 1 in 40 years
 - A repeat of this drought would see general security allocations reduced to zero for around 12 consecutive years.
- The GHRWS outlines policy, planning and infrastructure options to improve water security within the Greater Hunter. It recommends the following actions:
 - connect water supply infrastructure across the Greater Hunter, so that water can be transferred to areas of major growth and critical locations in times of drought
 - investigate water reuse schemes for industry to increase the amount of water available
 - give greater certainty to industries by preparing plans that sets out how water will be shared and managed during severe droughts
 - work with AGL to manage their water requirements as it transitions from thermal power stations to renewables and contributes to the region's economic diversification.
 - improve environmental outcomes by placing less stress on rivers and groundwater during times of drought.

Engagement

Engagement approach

Stage 1

- **Improve collaboration across NSW Government** – New Department of Planning, Industry and Environment Cluster, Regional NSW and WaterNSW.

Stage 2

- **Collaborate with local councils and joint organisations** – develop regional outcomes and long list of options in partnership.
- **Engage with First Nations and Aboriginal communities** – build on water resource plan engagement and Aboriginal Affairs work on economic development.

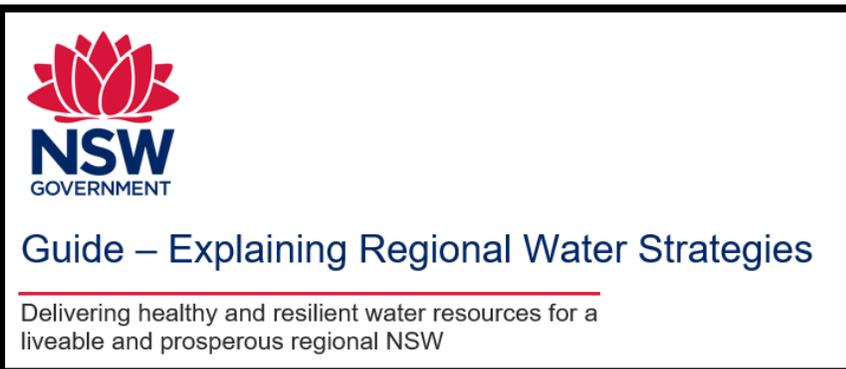
Stage 3

- **Seek broader community feedback** – through the public exhibition process and engagement with peak stakeholder bodies.

Regional water strategy “kit”

Each draft regional water strategy is divided into three different documents:

- **Kit 1:** Information about the regional water strategy program and key background information on hydrological modelling, option assessment process, water markets, licensing, water allocation frameworks and related reference material.
 - Reference document to the regional water strategies program and water management in NSW.
- **Kit 2:** Information and analysis on the regions - water sources, challenges and opportunities as well as a summary of the draft options.
 - Reference document for the region.
- **Kit 3:** Detailed information about the long-list of possible options proposed for the regional water strategy, including alignment with the regional water strategy objectives, inter-dependencies and potential benefits.
 - Technical document for the regional water strategy options.



Public exhibition

- We will actively seek feedback on the draft strategies during the public exhibition phase which will include public information sessions and targeted consultation.
- Feedback from the public exhibition and targeted consultation will be used to improve the draft strategies, including the list of possible solutions to the challenges.

Further information:

<https://www.industry.nsw.gov.au/water/plans-programs/regional-water-strategies>

Region Water Strategy	Consultation on draft strategy	Implementation of final strategy
Greater Hunter		Released in 2018
Macquarie-Castlereagh	Mid-2020	2021
Gwydir	Mid-2020	2021
Lachlan	Mid-2020	2021
South Coast	Late-2020	2021
Far North Coast	Mid-2020	2021
North Coast	Late-2020	2021
Namoi	Late-2020	2021
Border Rivers	Late-2020	2021
Western	Late-2020	2021
Murray	Late-2020	2021
Murrumbidgee	Late-2020	2021



Thank you
