

Regional Water Strategy

Namoi – Implementation Plan

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Acknowledging First Nations people

The NSW Government acknowledges First Nations people as the first Australian people and the traditional owners and custodians of the country's lands and water. First Nations people have lived in NSW for over 60,000 years and have formed significant spiritual, cultural, and economic connections with its lands and waters.

Today, they practise the oldest living culture on earth.

The NSW Government acknowledges the Gomeroi, Kamilaroi, Gamilaroi and Gamilaraay people as having an intrinsic connection with the lands and waters of the Namoi Regional Water Strategy area. The landscape and its waters provide the First Nations people with essential links to their history and help them maintain and practise their traditional culture and lifestyle.

We recognise Traditional Owners as the first managers of Country. Incorporating their culture and knowledge into management of water in the region is a significant step towards closing the gap.

Under this regional water strategy, we seek to establish meaningful and collaborative relationships with First Nations people. We seek to shift our focus to a Country-centred approach; respecting, recognising and empowering cultural and traditional Aboriginal knowledge in water management processes at a strategic level.

We show our respect for Elders past and present through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places where First Nations people are included socially, culturally and economically.

As we refine and implement the regional water strategy, we commit to helping support the health and wellbeing of waterways and Country by valuing, respecting and being guided by First Nations people, who know that if we care for Country, it will care for us.

We acknowledge that further work is required under this regional water strategy to inform how we care for Country and ensure First Nations people hold a strong voice in shaping the future for all communities.

Artwork by Nikita Ridgeway.

About this Implementation Plan

The Namoi Regional Water Strategy charts the long-term direction for delivering sustainable and resilient water services for the next 20 years. It sets out clear and accountable actions for the government, local water utilities and industries to tackle the challenges facing the Namoi region and maximising opportunities arising from the growing agricultural sector, other emerging and expanding industries, and new investments in transport and community infrastructure.

The Namoi Regional Water Strategy has a 20-year timeframe, and the prioritisation and implementation of its actions recognises this. Across the strategy's 20 years, the delivery of actions will span short, medium and longer-term time horizons.

We have already started work on many of the strategy's actions. For those actions that have not been commenced, some we intend to implement in the short term, and others we intend to implement in the medium to longer term. This recognises, that although all actions are important, we cannot implement all actions immediately.

The Namoi Regional Water Strategy has been designed to be adaptive. This means we will update the strategy and our implementation approach to respond to changing priorities. We will review and update the Namoi Regional Water Strategy at least every 5 years.

Immediate priorities for the Namoi Regional Water Strategy

Not all of the actions in the Namoi Regional Water Strategy will be implemented immediately. The focus of the first stage of implementation will be on:

- **Preparing for the next drought and making sure every person can have safe access to drinking water:**
 - Continuing to support small towns and local water utilities, such as Walgett, as they operate water infrastructure and fill gaps in skills (Action 1.7).
 - Addressing Tamworth's water security through considering investigations for an advanced water treatment facility for industry (Action 1.4). We will also work to identify cost-effective options to support Tamworth over the long term. Tamworth Regional Council is preparing a Tamworth Water Security Plan (Action 1.6).

- Fast tracking town water efficiency and demand management measures across multiple towns to make existing water sources go further (Action 1.3).
- Upgrading and developing models for groundwater and surface water systems to be able to support water management decisions (Actions 2.1 and 2.2).
- Providing clarity for critical environmental needs in droughts by updating the Extreme Events Policy and developing a WaterNSW Operational Drought Management Plan for the Namoi Valley (Action 3.1).
- **Improving flows across floodplains and downstream connected systems:**
 - Fully implementing the NSW Floodplain Harvesting Program (Action 2.13), Remediating unapproved floodplain structures (Action 3.4), and remediating fish barriers (Action 3.3).
 - Progressing water sharing plan changes to improve downstream flows and protect the first flush of water after a drought (Action 3.6).
 - Continuing to improve our understanding and modelling capability of return flows from floodplains (Action 2.4). This is an ongoing foundational action needed to support a range of actions in the Namoi.
- **Progressing foundational work for innovative water sources and future industries which will include:**
 - Fast tracking the development of regulatory frameworks for managed aquifer recharge (Action 2.11) and urban stormwater harvesting (Action 1.4) to enable communities to take advantage of innovative water sources.
 - Finalising the Vulnerability Assessment for crops in the Namoi Valley to support agricultural industries continue to adapt to climate change (Action 2.9).
 - Progressing an Aboriginal Water Strategy and a framework to better engage with, and support place-based initiatives to deliver cultural outcomes for Aboriginal people (Action 2.3 and 2.8).
 - Identify potential studies to support sustainable economic diversification (Action 2.12)

We have prioritised actions based on:

- results of our analyses
- discussions with local councils and government agencies
- community feedback
- available funding and funding opportunities.

Responsibilities

The implementation plan also outlines responsibilities for delivery. This will allow us to better:

- monitor the progress of actions
- assess the effectiveness of the strategy
- identify areas for improvement.

Key implementation partners

In order to effectively implement the actions, we will work with a diverse group of partners that will lead a range of the actions. These include the following government agencies, local government, community groups, industry groups and individuals:

- Department of Planning and Environment–Water (DPE–Water)
- Department of Planning and Environment–Environment and Heritage (DPE–Environment and Heritage)
- Department of Planning and Environment–Planning
- Department of Primary Industries–Agriculture (DPI–Agriculture)
- Department of Primary Industries–Fisheries (DPI–Fisheries)
- Department of Regional NSW
- Local Land Services
- Local councils – Tamworth Regional Council, Walcha Council, Walgett Shire Council, Narrabri Shire Council, Gunnedah Shire Council and Liverpool Plains Shire Council
- First Nations/Aboriginal peak groups and communities
- WaterNSW
- Commonwealth Environmental Water Office
- Local water utilities
- Training Services NSW
- NSW Water Directorate
- Local Government NSW
- Asset owners.

Monitoring, evaluation and progress reporting

An integrated monitoring and reporting framework has been developed for the various NSW water strategies. We will confirm and apply this to the Namoi Regional Water Strategy and regularly report on the progress of implementation.

These progress reports will provide transparency in and accountability for delivering the Namoi Regional Water Strategy to the NSW community.

Reading the Plan

The Namoi Regional Water Strategy is the result of significant analysis and community engagement and builds on a range of existing commitments and work already underway. This work and community feedback is the rationale for how implementation of the actions have been prioritised and is recorded under the heading **‘Our starting point’**.

There is some work that can commence very soon. Programs planned to start in the next 12 months are recorded under the heading **‘What we will do next’**.

There is some work that will take more time or rely on other actions to be completed first before they can begin. Programs that are not due to commence for more than 12 months are recorded under the heading **‘What we will do later’**. These programs may also be subject to funding approval.

There may be some instances where a column is blank. This is because we cannot begin implementing every action at once. The monitoring framework will help the department and the community assess the progression of implementing the strategy in full.

The NSW Government agency or partner identified as responsible for delivering each program in the strategy is listed as **‘Lead’** under each sub-action.

Agencies or partners who play a supporting role in delivering the program are listed as **‘Supported by’** under each sub-action.

Priority 1

Supporting the long-term water needs of towns across the region

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|---|--|--|--|---------------------------|--------------|
| Action 1.1: Move towards an enduring level of supply to support water security for regional cities and large towns | <p>Existing NSW Government guidelines suggest town water supplies meet a minimum service level. The current approach is to manage water security for towns based on an 'acceptable risk' of running out of water. Metropolitan water utilities have moved away from the concept of an 'acceptable level of risk of running out of water' recognising that running out of water is not a risk that governments and communities will tolerate, to an enduring level of supply framework.</p> | <p>Department of Planning and Environment–Water will establish common principles for the concept of enduring supply.</p> | <p>Where relevant, local and state governments will use the guidelines as a basis for water security assessments and analysis on when to trigger additional water supply investments in the future.</p> | DPE–Water | |
| | <p>Progressing the concept of an enduring level of supply is an immediate priority for Tamworth Regional Council. For other councils, work on this will be triggered over the medium term when town water demand grows.</p> | <p>Tamworth Regional Council will establish water security criteria and explore the minimum level of demand needed.</p> | <p>Tamworth Regional Council will test the level of water security its customers are willing to accept and customer's willingness to pay to reduce times under restrictions and risk of running out of water. This will be progressed as part of the Tamworth Water Security Plan.</p> | Tamworth Regional Council | DPE–Water |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|--|---|---|---|--|--------------|
| Action 1.2: Improve drought management planning for towns | Local and state governments have invested in a raft of emergency drought measures during the last drought, including investment in bores, pipelines and water treatment facilities. | Tamworth Regional Council, Walgett Shire Council, Walcha Council and Narrabri Shire Council will update drought and emergency response contingency plans. | | Tamworth Regional Council Walcha Council Narrabri Shire Council Walgett Shire Council | DPE-Water |
| | The NSW Government supports local water utilities in the development of drought and emergency response contingency plans as part of local strategic planning processes. | Liverpool Plains Shire Council will update its drought management plan. This will be triggered once the Quipolly Water Project is complete towards the end of 2023. | | Liverpool Plains Shire Council | DPE-Water |
| | Tamworth Regional Council and Walcha Council are jointly developing a Drought Resilience Plan to include measures to support the community during drought. | | Walgett Shire Council will investigate and progress drought mitigation measures subject to funding. This will include: <ul style="list-style-type: none"> • installation of additional groundwater bore(s) to support town demand during drought • installation of new pipeline from the Barwon-Darling River to the township of Walgett. | Walgett Shire Council | DPE-Water |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|--|--------------------|----------------------|---|------------------------|-----------------------|
| Action 1.2: Improve drought management planning for towns (continued) | | | <p>Gunnedah Shire Council will update its drought management plan. This will be triggered when there is a forecast in growth of water demand by new industries connecting to town water supply and once additional investment is completed by the state government on groundwater recharge rates, which will influence town water restriction regimes (see Action 1.5).</p> | Gunnedah Shire Council | DPE-Water |
| | | | <p>The NSW Government will support the implementation of actions identified in local water utility drought and emergency response contingency plans.</p> | DPE-Water | Local water utilities |



Image courtesy of Gerhard Koertner, Department of Planning and Environment. Rocky creek, Warrabah National Park.

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|---|---|--|---|-----------|--------------|
| Action 1.3: Adopt a stronger focus on water efficiency and demand management for towns | <p>NSW has developed a Water Efficiency Program. This includes publication of the NSW Water Efficiency Framework.</p> <p>Under the program, the department:</p> <ul style="list-style-type: none"> partnered with The Water Conservancy to subsidise the cost of a Smart Water Advice subscription for local water utilities partnered with NABERS to subsidise the cost of a first time water rating, with further subsidies for regional areas partnered with Department of Education to trial a water efficiency incursion for primary school students across NSW and provide education resources to teachers is reviewing statewide regulations such as BASIX. <p>The Department of Planning and Environment–Water is working with Tamworth Regional Council and Liverpool Plains Council to align pilot projects to their water loss management maturity. Projects will reduce water supply system leakage and improve water efficiency.</p> | <p>Finalise the NSW Water Efficiency Program outline and make it available on the Department of Planning and Environment–Water website.</p> <p>Develop tools and resources to support local water utilities using the NSW Water Efficiency Framework, including a non-residential project handbook.</p> <p>Collaborate with local water utilities on research projects that will inform water efficiency planning.</p> | <p>The Department of Planning and Environment–Water will continue to identify water efficiency projects and initiatives across all sectors in line with the NSW Water Efficiency Program and Framework.</p> | DPE–Water | |
| | <p>Tamworth Regional Council will review its current demand management plan and prepare a water efficiency plan that identifies further opportunities for long-term demand reduction initiatives.</p> <p>Tamworth Regional Council and the department will implement 8 pilot projects to improve water efficiency that have been agreed on between the NSW Government and council.</p> | Implement identified actions from the study. | Tamworth Regional Council | DPE–Water | |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|---|--|---|---|---------------------------------------|------------------|
| Action 1.3: Adopt a stronger focus on water efficiency and demand management for towns (continued) | <p>Councils in the region have been investing in water efficiency and demand management measures including:</p> <ul style="list-style-type: none"> Tamworth Regional Council has been implementing demand management over the last decade and in 2022 repaired all 25 network leaks found in the system, representing a volume of 115 ML/year. Gunnedah Shire Council has implemented pricing signals and has installed smart water meters to help manage losses and efficiency in the system. | <p>Narrabri Shire Council will commence investigations into water efficiency actions for town users.</p> | <p>Implement identified actions from the study.</p> | <p>Narrabri Shire Council</p> | <p>DPE-Water</p> |
| | | <p>Walcha Council will support investigations of projects to improve water efficiency, subject to funding.</p> | | <p>Walcha Council</p> | <p>DPE-Water</p> |
| | | <p>Walgett Shire Council will support investigations of projects to improve water efficiency, subject to funding.</p> | <p>Upgrade sewer treatment facility in Walgett to improve groundwater treatment capacity and improve efficiency of town water reuse/supply.</p> | <p>Walgett Shire Council</p> | <p>DPE-Water</p> |
| | | <p>Gunnedah Shire Council will continue to maintain and upgrade smart water meters.</p> | <p>Develop a demand management and water efficiency program.</p> | <p>Gunnedah Shire Council</p> | <p>DPE-Water</p> |
| | | <p>Liverpool Plains Shire Council will implement pilot water efficiency programs. This will be co-funded and supported by the NSW Government.</p> <p>Council is investigating the implementation of automatic meter reading capabilities to their system. This will help to inform water consumers and improve water use behaviour.</p> | | <p>Liverpool Plains Shire Council</p> | <p>DPE-Water</p> |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|---|---|---|--|--|----------------------------|
| Action 1.4: Progress advanced water treatment facilities for industries reliant on town water supplies | <p>Tamworth Regional Council has completed a strategic business case for a proposed advanced water treatment facility to recycle wastewater from large commercial/industrial users to meet a large part of their water needs. The NSW Government is investigating next steps for the advanced water treatment facility in partnership with Tamworth Regional Council.</p> | <p>Develop a framework to enable stormwater harvesting to occur by water utilities to support growth in major urban centres and reduce the impact of stormwater runoff.</p> <p>Note this will be a multi-year program.</p> | <p>Address water-related policy and regulatory barriers around supporting new and diverse industries setting up in the Namoi region.</p> | DPE-Water | |
| | <p>Narrabri Shire Council currently undertakes a water reuse project in Narrabri and is expanding this in other towns.</p> | <p>Tamworth Regional Council will investigate a final business case for a water treatment facility for industrial users in Tamworth to support industrial growth without increasing water demand.</p> | <p>Seek an investment decision around constructing a water treatment facility for industrial users in Tamworth to support industrial growth without increasing water demand.</p> | DPE-Water Tamworth Regional Council | Department of Regional NSW |
| | <p>Gunnedah Shire council has completed the development of a groundwater treatment facility to support the future needs of Gunnedah township. Previous studies of advanced water treatment for non-potable uses in Gunnedah has found it to be uneconomical for the size of the town's demand. New industries entering the town will be the trigger to relook at advanced water treatment facilities.</p> | <p>Narrabri Shire Council will construct a water reuse dam in Boggabri.</p> <p>Council will investigate using alternative sources of water such as stormwater harvesting through council's strategic planning process.</p> | | Narrabri Shire Council | DPE-Water |
| | | <p>Liverpool Plains Shire Council will investigate options for a water treatment plant and other options for water reuse and recycling.</p> | | Liverpool Plains Shire Council | DPE-Water |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|--|--|---|---|-----------|------------------------------|
| Action 1.5: Reduce uncertainty in groundwater security for regional towns | The NSW Groundwater Strategy identifies statewide priority actions for how groundwater resources can be managed sustainably into the future. | | Review how critical needs and high priority uses such as local water utility licences are considered when assessing the impacts on the aquifer and other users. | DPE-Water | DPE-Environment and Heritage |
| | <p>Understanding water security for groundwater dependant towns is an iterative process.</p> <p>Namoi Unlimited commissioned a detailed investigation of current and future water supply risks at town bores for the local water utilities that are members of the joint organisation.</p> <p>The groundwater study has been finalised and a key finding from the study was that further science and evidence is needed on groundwater recharge rates to be able to confirm the level of water security for groundwater dependent towns. As such, the next stage of this work will be triggered once Action 3.3 of the NSW Groundwater Strategy is further advanced. Action 3.3 includes undertaking new research to understand groundwater processes in NSW including recharge and infiltration processes.</p> <p>This evidence will inform the next stage of local level groundwater security assessments for these towns.</p> | Once Action 3.3 of the NSW Groundwater Strategy is further advanced, the science will help inform future iterations of town water security for groundwater dependant towns in the region. | | DPE-Water | |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
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| Action 1.5: Reduce uncertainty in groundwater security for regional towns (continued) | Narrabri Shire Council is undertaking a groundwater study as part of their strategic planning. | Narrabri Shire Council will finalise the groundwater study and determine any future work to be undertaken. | Department of Planning and Environment–Water will support councils in the Namoi region to plan and implement long-term security measures through current funding programs. | Narrabri Shire Council | DPE–Water |
| | | Liverpool Plains Shire Council will investigate the need for additional monitoring bores to support better town water management decisions. Council will investigate ways to improve groundwater quality for potable use. | | Liverpool Plains Shire Council | DPE–Water |
| | | Walgett Shire Council has recently switched back to surface water. Council and the NSW Government will continue to work together to improve water quality, install reverse osmosis plants to treat groundwater and consider the need for additional bores for the township of Walgett. | | Walgett Shire Council | DPE–Water |
| | | Review the regulation of basic landholder rights (including stock and domestic). This will extend beyond financial year 2022–23. | | DPE–Water | |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|---|--|--|---|---------------------------|--------------|
| Action 1.6: Plan for long term water supply augmentation as Tamworth grows | <p>Demand management alone may not prevent Tamworth’s augmented water system from running out of water in a severe drought.</p> <p>To support longer-term growth, additional investment will be needed to maintain security of the water supply and provide confidence for people and businesses to live and work in the region.</p> | <p>Department of Planning and Environment–Water will undertake preparatory studies including updating the Namoi model in Action 2.1 which will inform further investigations of this action.</p> <p>Over the next 5 years, the NSW Water Strategy commits to progressing regulatory reform, guidelines and community acceptance campaigns to make the development and use of advanced water treatment facilities easier. This includes the development of a draft Recycled Water Roadmap for consultation. No decision on purified recycled water will be taken without extensive community consultation and stringent government approvals.</p> | <p>Finalise a Recycled Water Roadmap.</p> | DPE–Water | |
| | | <p>Tamworth Regional Council will develop a Tamworth Water Security Plan and undertake more detailed investigations of the best long-term actions to support Tamworth’s water security needs.</p> <p>Department of Planning and Environment–Water will continue to work with Tamworth Regional Council to finalise a preferred option(s) and seek funding to secure Tamworth’s drinking water supply.</p> | | Tamworth Regional Council | DPE–Water |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|---|---|---|--|-----------|---|
| <p>Action 1.7:</p> <p>Addressing water related skills shortages in small councils</p> | <p>The NSW Government provides support to ensure the provision of safe and secure water and sewerage services to towns and communities. These include:</p> <ul style="list-style-type: none"> capital funding for water treatment infrastructure where this has been identified as high risk the provision of statewide technical support and training to operate and maintain water treatment works for councils across NSW through the Town Water Risk Reduction Program Training Services NSW is in the process of creating 200 fully funded trainee places to support local water utilities across NSW. 158 places have been filled between December 2021 and December 2022. Under phase 2 of the program there is expected to be over 500 full qualification training opportunities for water and sewerage operators over 2 years and additional funding for upskilling and obtaining part-qualifications | <p>Department of Planning and Environment–Water will continue to provide local water utilities with technical assistance.</p> <p>Continue to implement the draft skills and training action plan.</p> <p>Consider linking with Aboriginal initiatives to train and employ local Aboriginal staff.</p> | <p>Support councils to address key training and skills gaps that can support delivery of water to communities.</p> | DPE–Water | <p>Tamworth Regional Council</p> <p>Walcha Council</p> <p>Narrabri Shire Council</p> <p>Gunnedah Shire Council</p> <p>Liverpool Plains Shire Council</p> <p>Walgett Shire Council</p> <p>NSW Water Directorate</p> <p>Local Government NSW</p> <p>Training Services NSW</p> |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|--|--|----------------------|-----------------------|------|--------------|
| Action 1.7: Addressing water related skills shortages in small councils (continued) | <ul style="list-style-type: none"> the NSW Government is investing \$32.8 million into a suite of new initiatives to provide greater support for local councils and local water utilities under phase 2 of the Town Water Risk Reduction Program. <p>The department's draft water industry skills and training action plan has commenced implementation, supporting previous work identifying what skills are in shortage and opportunities for potential economies of scale to reduce shortages.</p> | | | | |



Image courtesy of Destination NSW. Countryside, Tamworth.

Priority 2

Supporting regional communities under a more variable and uncertain future climate

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|--|--|---|---|------------------|--|
| <p>Action 2.1:</p> <p>Invest in continuous improvement in surface water system modelling in the Namoi region</p> | <p>The Namoi surface water system modelling comprises of 2 Integrated Quality and Quantity Models:</p> <ul style="list-style-type: none"> • Peel Regulated River model • Namoi Regulated River model. <p>Recent improvements to the Namoi system model include a major review to better represent the take and use of water, including floodplain harvesting, and updating the model to the Source hydrological modelling platform.</p> <p>We have incorporated newly developed long-term climate datasets into the Namoi and Peel surface water models.</p> | <p>Upgrade the Namoi Regulated River system model into a Source platform.</p> | <p>Recalibrate the Namoi water system model to account for different components of continuous water take once sufficient floodplain harvesting and water take measurement data are available.</p> <p>Publish reports on how models have been built and peer reviewed to build community confidence in the models.</p> | <p>DPE-Water</p> | <p>DPE-Environment and Heritage</p> <p>DPI-Fisheries</p> <p>WaterNSW</p> |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|---|--|---|---|-----------|--------------|
| Action 2.2: Accelerate investment in groundwater modelling in the Namoi region | <p>We have developed a numerical model for the Upper Namoi Alluvial groundwater system.</p> <p>We are developing numerical groundwater models for the Peel and Lower Namoi Alluvial groundwater systems.</p> | <p>Finalise numerical groundwater models for Peel and Lower Namoi Alluvial groundwater systems.</p> <p>This may extend beyond the current financial year.</p> | <p>Publish peer-reviewed documentation for Peel, Upper and Lower Namoi numerical groundwater models.</p> <p>Investigate the potential of expanding the monitoring bore network to fill in data gaps to improve our models.</p> <p>Research the need for multi-disciplinary models incorporating socio-economic and physical data as well as groundwater volume, level and quality data.</p> | DPE-Water | WaterNSW |



Image courtesy of John Spencer, Department of Planning and Environment. Freshwater and reeds, Werrikimbe National Park.

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|---|--|--|---|-----------|---|
| Action 2.3: Improve the participation of Aboriginal people in water management in the Namoi region | <p>Priority 2 of the NSW Water Strategy provides actions to strengthen the role of First Nations/Aboriginal people in water planning and management.</p> <p>The NSW Government has put in place guidelines to ensure fair remuneration for sharing of knowledge from Aboriginal people/First Nations stakeholders. This will help implement priority 2 of the NSW Water Strategy.</p> <p>The NSW Government is investing \$15 million to set up an Aboriginal Water Program and progress an Aboriginal Water Strategy.</p> | <p>Finalise NSW Aboriginal Water Strategy and the Aboriginal water engagement framework.</p> <p>Establish regional Aboriginal water committee based on local protocol and governance specific for First Nations communities in the Namoi region.</p> | <p>Progress priorities identified by the regional committees and local communities.</p> | DPE-Water | First Nations/ Aboriginal peak groups and communities |
| | <p>The NSW Government has developed Environmental Water Advisory Groups which provide advice on watering priorities for Environmental Water and include representation from a range of stakeholders including the local Aboriginal community.</p> | <p>Establish an Environmental Water Advisory Group in the Namoi-Peel and ensure it includes representation from local Aboriginal communities.</p> | | | DPE-Environment and Heritage |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|---|--|---|---|-----------|--------------|
| <p>Action 2.4:</p> <p>Improve public access to climate information and water availability forecasts</p> | <p>The NSW Government is providing continued or expanded access to a range of online resources including:</p> <ul style="list-style-type: none"> WaterInsights portal, a powerful interactive tool that will provide meaningful data on how water is shared, allocated and managed in a way that is easy to understand. NSW SEED – the state’s central resource for sharing and enabling environmental data, which now includes the stochastic climate datasets for the Namoi Regional Water Strategy. <p>For some valleys, including the Namoi, the Department of Planning and Environment provide information on the seasonal inflow probabilities, and therefore the likelihood in the months ahead of allocation improvements. This work was developed in partnership with the Bureau of Meteorology and is updated and housed on their website.</p> | <p>Improve understanding and modelling capability of return flows from floodplains, as a first step to improving in-event forecasting capabilities. This includes looking at methods and data to identify and undertake pilot projects that will test the methodology and suitability for valley-wide application.</p> <p>This will be a multi-year program.</p> | <p>Develop the Drought Flood Risk Index (DFRI) to provide early warning to water users on whether a regulated valley is at a higher risk of heading into drought, or floods. The DFRI will be made available on the WaterInsights portal.</p> | DPE-Water | WaterNSW |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|--|---|--|--|-----------|--------------|
| <p>Action 2.5:</p> <p>Undertake research to inform reviews of groundwater extraction and condition limits</p> | <p>Department of Planning and Environment–Water is developing models in the Lower and Upper Namoi and Peel Alluvium.</p> <p>We ensure compliance with the existing extraction limits set out in water sharing plans and the sustainable diversion limits in the Basin Plan.</p> | <p>Review the government’s approach to setting long term average annual extraction limits in the Namoi region, including how we can better consider climate change and an improved understanding of resource sustainability and social-economic factors.</p> <p>See also Action 3.7.</p> | <p>Establish what groundwater extraction limits will need to be set in the Namoi in the future to ensure sustainable access to groundwater by consumptive users and the environment, whilst considering the Basin Plan review in 2026.</p> <p>Review the resource condition limits such as acceptable water levels and quality parameters.</p> | DPE–Water | |
| <p>Action 2.6:</p> <p>Investigate the level of connectivity between the Peel Alluvium and Peel River to inform allocation and access rules</p> | <p>The NSW Government is developing an enhanced model of the Peel Alluvium that includes a much better representation of the interchange of water between the alluvium and the river.</p> | <p>Finalise the Peel Alluvium model to inform this action (see Action 2.2).</p> | <p>Undertake a review of the water allocation and access rules for aquifer licences in the Peel Alluvium once the Peel Alluvium groundwater model is complete.</p> <p>If changes to water allocation or access rules are recommended, they will be considered through the review of the water sharing plan in 2030.</p> <p>Review the results of the study carried out in the Cockburn River Alluvium Management Zone.</p> | DPE–Water | |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|--|---|--|---|-----------|--|
| <p>Action 2.7:</p> <p>Support the development of new water-related Aboriginal business opportunities in the Namoi region</p> | <p>Priority 2 of the NSW Water Strategy commits to provide Aboriginal ownership of and access to water for cultural and economic purposes.</p> <p>The NSW Government is supporting Aboriginal business developing opportunities through a range of programs including the Aboriginal Partnership Program.</p> | <p>The draft Aboriginal Water Strategy will explore market and non-market mechanisms available for obtaining water to meet the inland waters target. These mechanisms will be examined as part of developing the draft Aboriginal Water Strategy cultural and economic outcomes for Aboriginal people.</p> <p>This is a multi-year program.</p> | <p>In August 2022, the NSW Government endorsed in-principle a new inland waters target under the National Agreement on Closing the Gap. This target commits 3% of the total volume of water access entitlements nationally to be held by Aboriginal corporations by 2031. NSW will undertake activities to progress outcomes under the National Closing the Gap Agreement in consultation with First Nations/Aboriginal people.</p> | DPE-Water | <p>Department of Regional NSW</p> <p>First Nations/ Aboriginal peak groups and communities</p> |



Image courtesy of Jessica Stokes, Department of Planning and Environment. Yellow flower branch, Salt Caves dam walking track.

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|--|---|---|--|------------------|---|
| <p>Action 2.8:</p> <p>Improve outcomes for Aboriginal people through place-based initiatives</p> | <p>Priority 2 of the NSW Water Strategy commits to working with First Nations/Aboriginal people to maintain and preserve water-related cultural sites and landscapes.</p> <p>The Australian Government’s Closing the Gap report and <i>Local and Regional Voice program</i> have highlighted that Aboriginal people have expressed the desire for strong and inclusive partnerships, in which local communities set their own priorities and tailor services and projects to their unique situations.</p> | <p>Department of Planning and Environment–Water will investigate a framework to support local level place-based initiatives in the Namoi. This will involve developing fit-for-purpose programs that align with community values developed through engagement with regional Aboriginal water committees and local Aboriginal communities (see Action 2.3).</p> <p>Investigate cultural watering plans.</p> <p>The NSW Government has committed to developing a statewide draft Aboriginal Water Strategy in partnership with Aboriginal/First Nations people which will identify a program of measures to deliver on First Nations’ water rights and interests in water management.</p> | <p>Continue to investigate opportunities to deliver cultural outcomes from improved access to water.</p> | <p>DPE–Water</p> | <p>First Nations/ Aboriginal peak groups and communities</p> <p>Local Land Services</p> |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|---|---|--|--|-----------------|--------------|
| Action 2.9: Support increased investment and research into industry climate adaptation | The Department of Primary Industries–Agriculture is undertaking a detailed analysis of the risks and opportunities of a changing climate to support resilience and adaptation in the broadacre cropping sector. | Complete stage 1 of the Department of Primary Industries Vulnerability Assessment which will include publishing summaries of the assessments of climate risk and opportunities for the Namoi agricultural commodities including cotton, and extensive livestock. | Implement stage 2 of the Department of Primary Industries Vulnerability Assessment which will include integrating water data from the regional water strategies into the analysis and investigating adaptation responses for cotton. | DPI–Agriculture | DPE–Water |
| | The NSW Government has funded an expanded Farms of the Future program to support on-farm connectivity and encourage farmers to adopt AgTech to boost productivity, including water efficiency and drought preparedness. | Continue to roll-out the Farms for the Future pilots (funded until 2025). | Monitor outcomes of adoption of digital technologies under Farms for the Future program to see if any further gaps remain that may support regional adaptation. | DPI–Agriculture | |
| | Department of Primary Industries–Agriculture holds data and knowledge of past and current water balances occurring under irrigated and rainfed land uses. | Measure water productivity and water sustainability indices for cotton production systems. | Identify potential change to water use, productivity and sustainability and engage with industry to monitor actual changes occurring. | DPI–Agriculture | |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|--|--|--|--|-----------|--------------|
| Action 2.10: Increase transparency in the management of groundwater resources in the Namoi region | Department of Planning and Environment–Water has published a NSW Groundwater Strategy. | Review risks associated with inactive licences with the view to provide clarity to water users about how fully committed groundwater systems will be managed if licence activation and use further increases. | Develop a groundwater level management framework with a series of escalating management actions corresponding to stages of localised water level decline. | DPE–Water | WaterNSW |
| Action 2.11: Investigate managed aquifer recharge in the Namoi region | The NSW Water Strategy aims to investigate and enable managed aquifer recharge. This will be done by developing a new policy and regulatory framework in NSW and identify where it is technically and economically viable. Before managed aquifer recharge is adopted in NSW we will undertake further analysis, testing and community consultation. | Commence the development of a policy framework for managed groundwater recharge covering all activities that purposefully put water into aquifers, including managed aquifer recharge. Produce managed aquifer recharge feasibility maps for aquifers across NSW. | Implement the managed groundwater recharge policy framework, which includes the rules and requirements under which managed aquifer recharge can operate in NSW. Explore the feasibility potential of managed aquifer recharge, including its cost effectiveness and how efficiently the stored water can be accessed. Determine public acceptance, particularly the impacts on and benefits for Aboriginal cultural heritage and environmental flows – including specific pilot schemes. | DPE–Water | |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|---|---|--|--|--------------------------------------|-----------------------------------|
| <p>Action 2.12:</p> <p>Ensure the water management framework can support sustainable economic diversification and transitioning economies</p> | <p>The NSW Government is making significant place-based investments in the region and surrounding areas to build strong communities and support industry development and diversification.</p> <p>We need to begin work now to make sure our water management framework can cater to these new industries by supporting sustainable access to water.</p> | <p>Use evidence from this regional water strategy to inform future industrial and land use planning strategies to ensure there are sustainable water sources available to support new industries.</p> <p>This will include consulting with the North West Regional Expert Panel, established under the Royalties for Rejuvenation Fund, on ways to support sustainable economic diversification for coal mining communities.¹</p> | <p>Address water-related policy and regulatory barriers around supporting new and diverse industries setting up in the Namoi region.</p> | <p>DPE-Water</p> <p>DPE-Planning</p> | <p>Department of Regional NSW</p> |

1. The North West Regional Expert Panel covers the local government areas of Gunnedah, Narrabri and Liverpool Plains.

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|--|---|--|-----------------------|-----------|--------------|
| <p>Action 2.13:</p> <p>Fully implement the NSW Floodplain Harvesting Program</p> | <p>The NSW Government is progressing work on regulating floodplain harvesting in the Namoi catchment.</p> | <p>Upgrade the Namoi Regulated River system model into the new Source platform, ready for use in 2023 (Action 2.1).</p> <p>Amend the water sharing plans for the Namoi regulated and unregulated river water sources to include new rules for managing floodplain harvesting licences, including strengthened downstream protections, during 2023.</p> <p>Issue floodplain harvesting licences with mandatory measurement requirements that restrict and control take within extraction limits, during 2023.</p> <p>Continue the program to bring high-priority unapproved floodplain structures into compliance across the northern Basin (Action 3.4).</p> <p>This includes remediation and removal of unapproved floodplain works (Action 3.4).</p> | | DPE-Water | |

Priority 3

Improving the health and resilience of water dependent ecosystems

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|---|---|--|---|---|--|
| Action 3.1: Assess gaps in the flow regime and identify cooperative actions to improve ecological outcomes | Implementing actions to improve connectivity with the Barwon–Darling (Action 3.7) will change the base case analysis for this action and may address some of the current gaps in the flow regime. | | Develop governance framework for this action to clarify roles, responsibilities and expectations for agencies and set priorities. Identify options for improving water deliveries to achieve environmental outcomes where possible. Work with water managers and technical experts to scope and commence work to improve understanding of impacts of climate change on frequency and adequacy of different flow types required to maintain and protect important ecological assets. | DPE–Water DPE–Environment and Heritage | WaterNSW DPI–Fisheries Commonwealth Environmental Water Office |
| | Preparing for drought conditions are high priority to ensure we are better prepared before we go into the next drought. | Publish the Extreme Events Policy for surface water and groundwater. Develop procedures for the delivery of block releases. Develop and deliver the Namoi Regulated River Drought Management Plan. | | DPE–Water WaterNSW | WaterNSW DPI–Fisheries DPE–Environment and Heritage |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|--|---|--|--|--------------------------------|---|
| Action 3.2: Identify regionally significant riparian, wetland and floodplain areas to protect or rehabilitate | Local Land Services is implementing a Fencing Northern Basin Riverbanks Program, which includes fencing riparian areas in the northern Murray–Darling Basin to enhance native fish outcomes and improve water quality. | Continue to implement the Fencing Northern Basin Riverbanks Program. Private landholders have been contracted to implement the on-ground works. | This program is due for completion in June 2023. Reporting and monitoring will conclude at that time and will be communicated through the Australian Government. | Local Land Services | Five Local Land Services regions: Central Tablelands, Central West, Northern Tablelands, North West and Western |
| | Local Land Services is implementing the Check Ready Grow project to focus on investing in improving practices to promote positive condition trends for land and soil condition in the North West region. This can include working in riparian areas and catchment rehydration projects. | Private landholders have been contracted to implement the on-ground works. | Practice change evaluations are undertaken by participants prior to implementation. These will be revisited at the completion of each project to ascertain contributions made towards outcome achievement. | North West Local Land Services | |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|---|--|--|--|--------------------------------------|--------------|
| Action 3.3: Mitigate the impact of water infrastructure on native fish | Native fish passage | | | | |
| | <p>The Australian Government has provided funding for fish passage (on-ground works), cold water pollution (pre-feasibility) and diversion screening (on-ground works projects in targeted valleys as part of the Northern Basin Toolkit. Currently this does not include the Namoi Valley.</p> <p>The temporary town weir on the Lower Namoi has been removed as a part of the infrastructure work requirement offset program of the 1 m raising of Walgett Weir on the Barwon River.</p> | <p>WaterNSW will remediate Gunidgera Weir with technical advice from Department of Primary Industries–Fisheries.</p> | <p>Gunidgera Weir – Department of Primary Industries–Fisheries to provide technical advice to WaterNSW, concept and detailed design and construction to be finalised over the next 5 years.</p> <p>Water Gauge Site 4 – investigating alternative sites to move the water gauge to a more appropriate location and remove existing sill. Identify funding sources for remediation of Water Gauge Site 4, near the township of Pilliga.</p> <p>Secure funding to support remediation of an additional 6 fish barriers with medium to high priority status across the Namoi and Peel rivers and Halls Creek.</p> | <p>WaterNSW</p> <p>DPI–Fisheries</p> | |
| | Cold water pollution | | | | |
| | <p>The NSW Government is updating the Cold Water Pollution Strategy aimed to be completed in 2023.</p> | | <p>Undertake options assessment based on the Northern Basin Toolkit pre-feasibility work and planned demonstration trial, currently happening in the Border Rivers for Pindari Dam.</p> <p>Seek funding for implementation of best solution.</p> | <p>DPI–Fisheries</p> <p>WaterNSW</p> | |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|---|--|--|---|---------------------------|---|
| Action 3.3: Mitigate the impact of water infrastructure on native fish (continued) | Fish diversion screens Investigations are ongoing as part of the offset requirements associated with the Chaffey Dam Pipeline infrastructure works – 6 potential sites have been identified in the Namoi Valley. | Implementation of potential 6 sites in the Namoi Valley. | Investigate and draft strategic long-term program to identify additional critical pump sites in the Namoi region that could benefit from fish diversion screens. Build a business case for these sites to be considered in future funding opportunities. | WaterNSW DPI–Fisheries | Asset owners |
| Action 3.4: Remediate unapproved floodplain structures | The Australian Government has funded the ‘Improving Floodplain Connections Program’. | Commence implementation of the Improving Floodplain Connections Program in the Namoi. This will include: <ul style="list-style-type: none"> • field assessments • landholder engagement • functional design • remediation works • evaluation. | | DPE–Water WaterNSW | DPE–Environment and Heritage DPI–Fisheries |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|---|---|--|--|-----------|-----------------------|
| Action 3.5: Improve understanding of water use and water quality at priority locations in the Namoi region | Department of Planning and Environment–Water has developed a Hydrometric Network Review and Hydrometric Improvement Plan. | Invest in technologies and monitoring that can provide additional information about water quality and water use at priority locations that could be used to inform planning and management for these systems. This may include replacing or upgrading gauges at locations such as: <ul style="list-style-type: none"> • Namoi River between Goangra and Walgett (connectivity, water sharing, environmental water) • Lake Goran at Hokey Pokey (water sharing, environmental water) • Namoi River at Bugilbone (monitoring) • Narrabri Creek at Narrabri (monitoring) • Namoi River at Boggabri (monitoring). | Continue routine water quality monitoring under the statewide water quality monitoring and assessment program to gather information in the Namoi region. | DPE–Water | DPE–Water WaterNSW |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|---|--|--|--|-----------|--|
| Action 3.6: Investigate ways to improve connectivity with the Barwon–Darling River on a multi-valley scale | <p>NSW has published the Western Regional Water Strategy which identifies actions around improving connectivity through a more coordinated, system-scale approach.</p> | <p>Finalise the review of the targets in the North West Unregulated Flow Management Plan.</p> <p>Publish flow targets for the Barwon–Darling to guide embargoes on upstream extraction under drought conditions and investigate implementing relevant targets in the Namoi region water sharing plans.</p> <p>Review statutory provisions in water sharing plans to ensure first flush flows are prioritised to meet downstream critical human needs.</p> <p>Continue to implement the recommendations of the Independent Panel Assessment of the Management of the 2020 Northern Basin First Flush Event, as outlined in the NSW Government response and report on implementation annually.</p> <p>Re-make the Barwon–Darling Water Sharing Plan.</p> <p>Upgrade the Namoi Regulated River system model into the new Source platform, ready for use in 2023 (Action 2.1).</p> | <p>Continue to look for opportunities to improve connectivity and strengthen protections for the environment and high-priority needs through the review of the Basin Plan.</p> | DPE–Water | <p>DPE–Environment and Heritage</p> <p>DPI–Fisheries</p> <p>DPE–Water</p> <p>DPI–Agriculture</p> |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|---|--------------------|--|-----------------------|------|--------------|
| Action 3.6: Investigate ways to improve connectivity with the Barwon–Darling River on a multi-valley scale (continued) | | <p>Amend the water sharing plans for the Namoi regulated and unregulated river water sources to include new rules for managing floodplain harvesting licences, including strengthened downstream protections, during 2023.</p> <p>Issue floodplain harvesting licences with mandatory measurement requirements that restrict and control take within extraction limits, during 2023.</p> <p>Continue the program to bring high-priority unapproved floodplain structures into compliance across the northern Basin (Action 3.4).</p> | | | |

| Action | Our starting point | What we will do next | What we will do later | Lead | Supported by |
|--|--|---|---|-----------|---|
| <p>Action 3.7:</p> <p>Continue investment in groundwater science in the Namoi region</p> | <p>Baseline conditions of vegetation, wetland and subterranean GDEs have been established.</p> <p>Datasets for the identification and assigning of ecological value for vegetation and wetland GDEs are available on the Sharing and Enabling Environmental Data (SEED) website.</p> <p>Water sharing plans and water resource plans set objectives and rules for monitoring, evaluating, reporting and management of GDEs.</p> <p>The NSW Government undertakes groundwater quality projects of the current bore network in the Namoi region.</p> <p>Groundwater level monitoring is undertaken regularly by the NSW Government in the Namoi region.</p> <p>The NSW Government and CSIRO have undertaken a study to assess and quantify land subsidence and its relation to groundwater in the Lower Namoi.</p> | <p>Scope a program to identify a risk-based program to improve GDE data, information products, and adaptive management decisions for the benefit of social-cultural and environmental outcomes.</p> <p>Continue groundwater level monitoring and reporting of data in the Namoi region.</p> <p>Develop a regional water quality monitoring program, subject to funding.</p> | <p>To be informed by the NSW Groundwater Strategy implementation plan.</p> <p>Continue investigations to determine if further work is required to assess and quantify land subsidence and its relation to groundwater in the Namoi, subject to funding.</p> | DPE-Water | <p>DPE-Environment and Heritage</p> <p>WaterNSW</p> |

Ongoing monitoring, adaptation and reporting

The Namoi Regional Water Strategy is designed to respond to changing circumstances. We will undertake a formal review of the strategy at least every 5 years or in response to significant changing conditions and government priorities. The formal review will ensure that the key assumptions, such as population and demographics, have not significantly changed.

Amendments may be made in response to key changes in water demand, social preferences, science and technology, economic conditions, or other events,

including how climate change assumptions and responses evolve. These amendments may result in a shift in priorities, and the implementation plan will be updated to reflect this.

We will report every year against actions in the implementation plan, so that the community can track our progress and we can demonstrate which actions have been delivered, or continue to be delivered, in that year.

Figure 1. Regional water strategies process

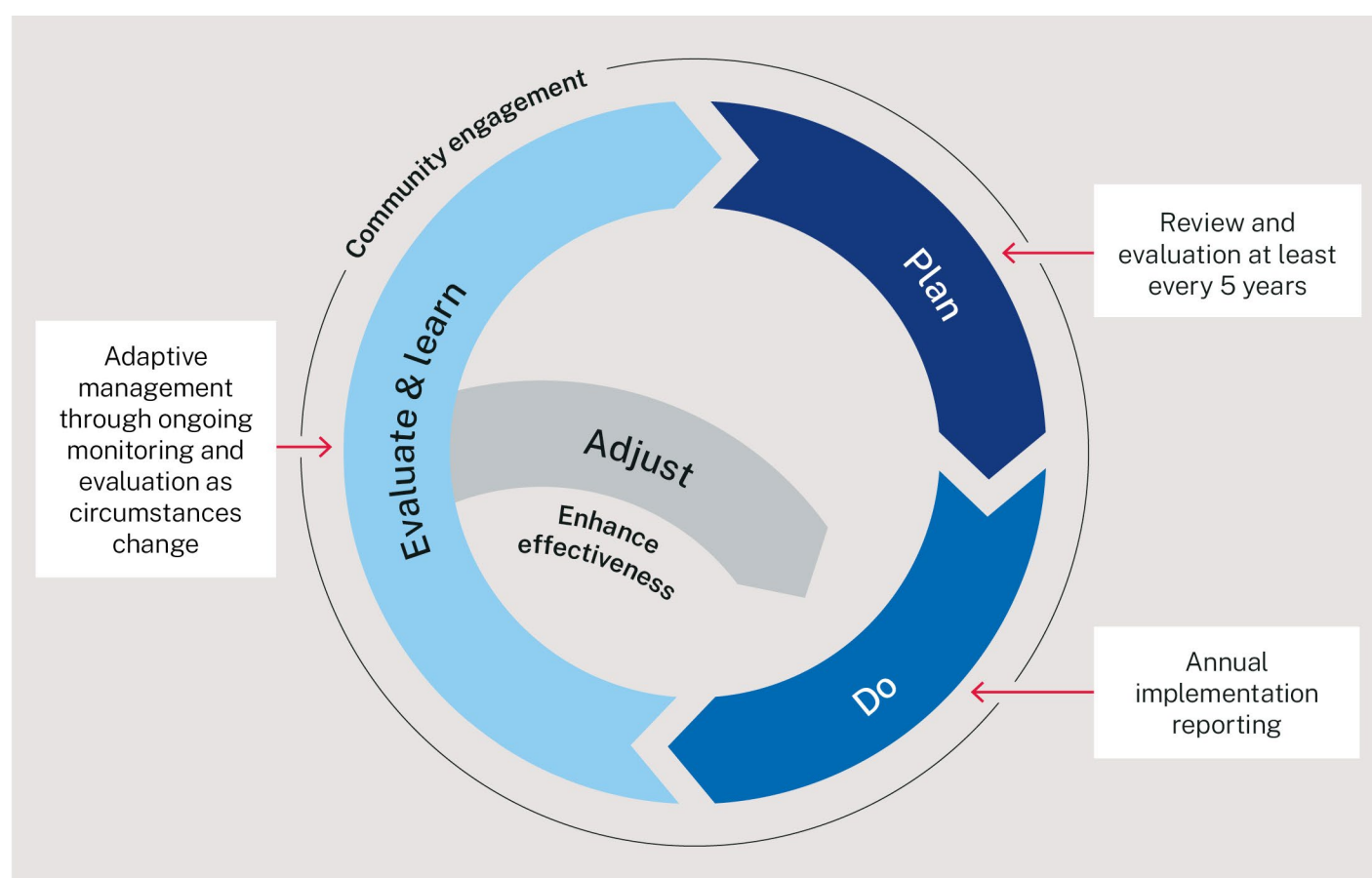


Table 1. Supporting activities

| Action | Lead agency | What we'll deliver in the next 5 years |
|---------------------------|-------------|--|
| Reporting | DPE-Water | Publish an annual progress update on delivery of the actions in the Namoi Regional Water Strategy Implementation Plan so that the community can track progress. |
| Monitoring and evaluation | DPE-Water | Apply the framework developed for the NSW Water Strategy to monitor, review and report against the actions in the Namoi Regional Water Strategy. |
| Review | DPE-Water | Undertake a formal review of the strategy at least every 5 years, or in response to changing circumstances. The formal review will ensure that the key assumptions, such as population and demographics, have not significantly changed. |

