

Department of Planning and Environment

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Water industry induction handbook for decision-makers

January 2023





Acknowledgement of Country

The Department of Planning and Environment acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land and we show our respect for Elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

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How to use this document

This handbook is designed as a resource for decision-makers operating in a regional NSW Council owned local water utility, especially Councillors in councils and county councils.

The handbook is intended to support decision-makers' to understand and undertake their roles and responsibilities related to Council-owned local water utilities.

This a customisable document for Councils to add specific information about their:

- water products and services provided to their community
- water and sewerage assets
- water management systems and protocols
- relevant plans and strategies.

The **red text** in the document are the instructions for Councils to add additional information specific to their circumstances. The red text should be deleted prior to distribution.

Throughout the document general information about wide range of issues relevant to a local water utility is covered, with questions identified to prompt decision-makers to consider the operations of their local water utility.

If you have any suggestions about how we can improve the handbook contact regional.town.water@dpie.nsw.gov.au

Overview

Across regional NSW, there are 92 local water utilities providing water supply and/or sewerage services to local communities. Eighty-nine of these are either part of general-purpose councils, and operate financially separate to general council operations, or, special purpose water county councils. Other local water utilities operate as water supply authorities under the *Water Management Act 2000* and include the Cobar Water Board, Essential Energy for Broken Hill and WaterNSW for the Fish River Water Supply.

Purpose

The purpose of this induction handbook is to provide a resource for decision-makers operating in a regional NSW Council-owned local water utility, especially Councillors in councils and county councils. It maps out the:

- objectives for managing a local water utility
- strategic decision making
- key questions for decision makers
- legislative powers and responsibilities
- strategic planning and pricing
- drinking and recycled water management systems
- sewage management
- incident and emergency response planning
- asset management
- partnerships.

Objectives for managing a local water utility

Local water utilities, with the support of NSW Government agencies and regulators, will continue to ensure:

- Safe and secure water supply to protect public health and the environment, and to support economic development and liveability.
- Effective sewerage services to protect public health and the environment, and to support economic development and liveability.
- Services that meet customer needs, expectations and preferences.
- Financially sustainable water utilities with efficient and affordable pricing for services.

The water industry induction handbook is intended to complement the NSW Office of Local Government [Councillor Handbook](#), which is a reference guide for Councillors in NSW local government.

Your decisions count

During your tenure as a decision-maker, you will need to ensure that the essential services of safe drinking water supply and sewage management are maintained now and into the future. As a Councillor you will be called upon to make important and complex decisions about:

- pricing of water supply and sewerage services, and recovery of costs
- setting service levels in consultation with your community
- budgeting for the operation, maintenance and renewal of current water and sewerage services
- ensuring sufficient money is allocated to human resources for the staffing, safety, skills and training of employees for the water business
- ensuring asset and financial plans and systems are complete, up to date, effectively resourced and managed to assist with decision-making and reporting
- planning and budgeting for future water and sewerage services needs, including taking into account the future needs of your community and climate change
- adopting Local Approval Policies
- considering the impact of development applications on water and sewerage services, including trade waste
- efficient and prudent investment for water and sewerage services
- ensuring continued water and sewerage services during extreme events such as floods, bushfires and droughts
- issuing a boil water alert when drinking water quality is unsafe
- implementing water restrictions
- keeping the community informed about water and sewerage matters, including during water restrictions, boil water alerts or other incidents.

This handbook is designed to support you understand the services that your local water utility provides and the decisions that you may need to make during your tenure by guiding you through a series of questions and considerations. Case studies support this handbook and illustrate examples of how councils have managed water supply and sewerage incidents and events. The case studies include information about the relevant insights gained for all local water utilities.

[A video series](#) featuring interviews with Mayors and Councillors from regional NSW Council-owned local water utilities provide a valuable overview of a decision-maker's role in water management. They identify challenges and explain their strategies for making informed decisions to ensure that the essential services of safe drinking water supply and sewage management are maintained now and into the future.

Strategic decision making

Strategic decisions guide the direction of local water utilities. They typically involve ‘important and complex decisions’,¹ with the need to consider longer-term horizons and trade-offs that require balancing numerous objectives.

Making, implementing and monitoring strategic decisions is an adaptive process. This process requires effective, evidence-based input, analysis and planning and should also involve understanding the local water utility’s service needs, risks and resources.

Strategic decisions about water supply and sewerage services cover:

- setting optimal service levels that meet regulatory requirements as well as customers’ needs, values and preferences, including a customer’s ability and willingness to pay
- identifying and implementing solutions to deliver services at efficient cost, now and into the future
- determining revenue requirements and setting prices for services that send efficient signals to current and future users and developers, as well as recover the revenue required to deliver services and maintain financial sustainability of local water utilities.

Making, implementing, monitoring and adapting strategic decisions should follow a sound process, including:

- make strategic decisions framed by a clear set of problems and objectives
- make strategic decisions based on sound evidence (that is, based on the utility’s understanding of service needs and risks, along with the solutions and resources needed to address them) gathered by achieving the strategic planning outcomes set out in the Regulatory and Assurance Framework
- make, record and publish strategic decisions
- implement strategic decisions, monitor and report on performance and evaluate and adapt strategic decisions (including potentially re-making strategic decisions) in light of new information and/or analysis.

Water products and services

Contemporary water businesses are complex. You have an obligation to understand the products and services of the business you have been elected to govern.

These products and services are no longer limited to drinking water or sewerage services. Appendix A includes a list of example entities that provide a range of water products and services in NSW.

¹ NSW Department of Planning and Environment, Water industry induction handbook for decision-maker, February 2022, p11.

What products and services do you have?

Table 1 Record the services and products provided by your Council

Services and Products	Your notes
<p>Does your Council provide drinking water or is drinking water provided by a bulk water supplier?</p>	
<p>What are Council's sewage and liquid trade waste management services?</p>	
<p>Does Council provide recycled water?</p> <p>Who receives the recycled water? (e.g. industrial customers, parks or golf course)</p>	
<p>Does Council manage a dam?</p> <p>Is the water collected treated for use as drinking water?</p> <p>Is recreation allowed in the dam storage / reservoir?</p>	
<p>Is untreated water distributed in the Council area?</p> <p>What is this water used for?</p>	
<p>Does Council manage a dam?</p> <p>Is the water collected treated for use as drinking water?</p> <p>Is recreation allowed in the dam storage / reservoir?</p>	
<p>Is untreated water distributed in the Council area?</p> <p>What is this water used for?</p>	

Add pictures of your water infrastructure eg, water treatment plant, dams or sewage treatment plants.

Providing water services is unlike other council activities

Providing water supply and sewerage services have intrinsic public health, environmental health and supply risks that need to be managed.

Water services support economic growth, liveability and amenity for our communities. During the last drought many communities were confronted with the real possibility of running out of water and had to make tough decisions on restricting consumption.

Water is an essential service that needs to be up and running 24 hours per day, 7 days per week. This includes drinking water, sewerage services and recycled water.

Unlike other council infrastructure such as a town hall or library, water and sewerage infrastructure is usually out of sight, underground or far from town. Under business as usual, your community expect water to flow when they turn on the tap and they expect their waste to just disappear when they flush their toilet. It is often only when things don't look or smell right, when restrictions are imposed or when prices go up that you will hear from your community.

Current challenges facing regional NSW water utilities

There are numerous challenges currently facing local water utilities:

- climate variability and the need for resilient water supplies
- scale and ability to attract and retain skilled and specialist staff
- competing demands for attention in a local government environment, affecting the ability to focus on effective strategic planning, investment and service delivery for water services
- continued protection of public and environmental health
- financial sustainability of local water utilities serving small populations with large and particularly ageing assets
- planning, funding and project managing water and sewerage projects
- declining water supply and sewerage asset condition.

Ideally, good strategic planning combined with transparent and informed decision-making will ensure a proactive response to these challenges.

NSW water policies and strategic planning

The [NSW Water Strategy](#) takes a strategic and integrated approach to looking after the State's water. This strategy is the first 20-year water strategy for all of NSW to improve the security, reliability, quality and resilience of our water resources over the long term. It sets the priorities and outlines the implementation plan to delivering on these outcomes.

The NSW Water Strategy sets the overarching vision for 12 regional and two metropolitan water strategies, tailored to the individual needs of each region in NSW. Together, the strategies will improve the resilience of NSW's water services and resources.

Regional water strategies

The Department of Planning and Environment (DPE) are preparing 12 [Regional Water Strategies](#) to guide long term water resource planning.

Work is underway on the strategies and all strategies are expected to be complete by mid-2023.

Regional water strategies

List and link to the relevant regional water strategy/strategies for your council

Risk management framework

The *Local Government Act 1993* requires all Councils to appropriately manage its risks. The NSW Local Government (General) Regulation 2021 also requires each Council to implement a risk management framework and internal audit function to ensure that any risks facing the Council, including water risks, are being managed effectively.

The [Internal Audit Guidelines](#) recommend that the content of each Council's risk management framework be guided by Australian risk management standards. Water utilities can align their risk management approach with the [ISO 31000](#) risk management standard.

There are significant legislative requirements for Work Health and Safety as well as environmental protection which can be managed with systems that align with standards such as:

- [ISO 45001 OH&S Management Systems](#) for safety
- [ISO 14001 for environmental management](#) to assist with compliance.

Many water utilities align their asset management approach with standards such as [ISO 55000](#).

NSW Treasury has also issued a [Risk Management Toolkit](#) that provides useful guidance to Councils on how to implement its own risk management framework.

More information can be found at the Office of Local Government's website www.olg.nsw.gov.au.

Independent assurance

The NSW Local Government Act also requires each Council (including County Councils and Joint Organisations) to appoint an audit, risk and improvement committee (ARIC) from 1 July 2024 to review the Council's legislative compliance, risk management, service delivery and financial management and provide independent advice of the Council's performance.

This includes the Council's water management activities.

Audit, risk and improvement committee

Add the proposed water management activities or water risks will be listed for your councils' audit, risk and improvement committee

Key questions for decision-makers

The water industry in NSW is complex with numerous interacting pieces of legislation. Decision makers responsible for water utilities are often bombarded with information. So, how will you know if a water business is going well?

The objectives and approach to strategic decision-making mentioned above can essentially be reduced to four key questions that every decision maker should ask:

Is our water safe to drink?

- Safe drinking water is your responsibility and civic duty.
- The *Public Health Act 2010* and the *Public Health Regulation 2012* require drinking water suppliers to have and comply with a 'quality assurance program' (or drinking water management system). See also the [Drinking water management systems](#) section.

Water utility data

Add drinking water your utility data here.

Our water utility provides XX people with YY drinking water every day through ZZ kms of pipes

Add any specific considerations or challenges on water quality for your area eg vulnerable to poor raw water quality during high rainfall

If drinking water treatment fails, the utility will issue a boil water alert – add your council's boil water protocol

Do we have enough water in drought and for the future?

- Water infrastructure takes years to plan and construct.
- You have a decision-making role in planning for and investing in future water needs for your community in consultation with your community and with neighbouring Councils through regional water strategies.

Relevant strategic planning

Add the specific regional water strategy that covers your region

Is our water business well managed?

- Reviewing your critical water supply and sewerage assets and ensuring risk is properly addressed is part of your oversight role.

- You have a role in financial management to ensure there is sufficient budget allocated to deliver essential services, including maintenance of assets and that adequate and appropriately skilled resources are available.
- Work with your General Manager/CEO and water staff to set up reporting that works for you.
- Proactive management is better than reacting to incidents or responding to regulators.

How are we strategically placed to continue to provide drinking water, recycled water and/or sewerage services?

- You need to understand current and future service needs, the risks and solutions for continued servicing.
- Financial sustainability, drought and emergency preparedness, resilience, and robust information systems are all essential for business continuity. This includes setting appropriate pricing for water services and maintaining adequate financial reserves to cover future operations, expansion, and unexpected incidents.
- Drinking water, recycled water and sewerage services must be affordable and must also meet community expectations.

Your decisions must be transparent and informed

Councillors are responsible to the community for the council's functions and services, including providing water supply and sewerage services.

During your tenure as a Councillor, you will be asked to make important decisions on the provision of water and sewerage services to your community. Being able to address the questions above will guide you in seeking the appropriate information to make informed decisions.

Section 8A(2)(e) of the Local Government Act states that:

Council decision-making should be transparent and decision-makers are to be accountable for decisions and omissions.

This important clause tells you that you need to satisfy yourself that for every decision you make in your role:

- has been made on a sound evidence base, and
- your reasoning and records should be available for anyone to see.

You will be held to account for your decisions as well as omissions of any evidence that you should have taken into account for your decision-making.

This is a principle that you should really focus your mind on in your role as an elected official.

It is also important to note that the Local Government Act only provides limited legal protection – protection from civil liability is only available if you have performed your duties in good faith and according to your Local Government Act obligations.

Before you make a decision, you must **satisfy yourself** that you have seen the **right information**, at the **right time**, from the **right part** of the water business and that you are **confident** that Council staff are doing the right things.

Making strategic decisions for your water utility

As a councillor or board member of a local water utility, you make strategic decisions covering water supply and sewerage services and their service levels. Councillors are ultimately responsible to the community for the council's functions and services including providing the safe, secure and efficient delivery of water supply and sewerage services.

Local water utilities' staff are responsible for implementing these strategic decisions and for making other operational decisions. They are also responsible for gathering information, including measuring performance, identifying risks and opportunities and assessing the potential strategic solutions. They provide this information and make recommendations to councillors to inform the strategic decision-making process

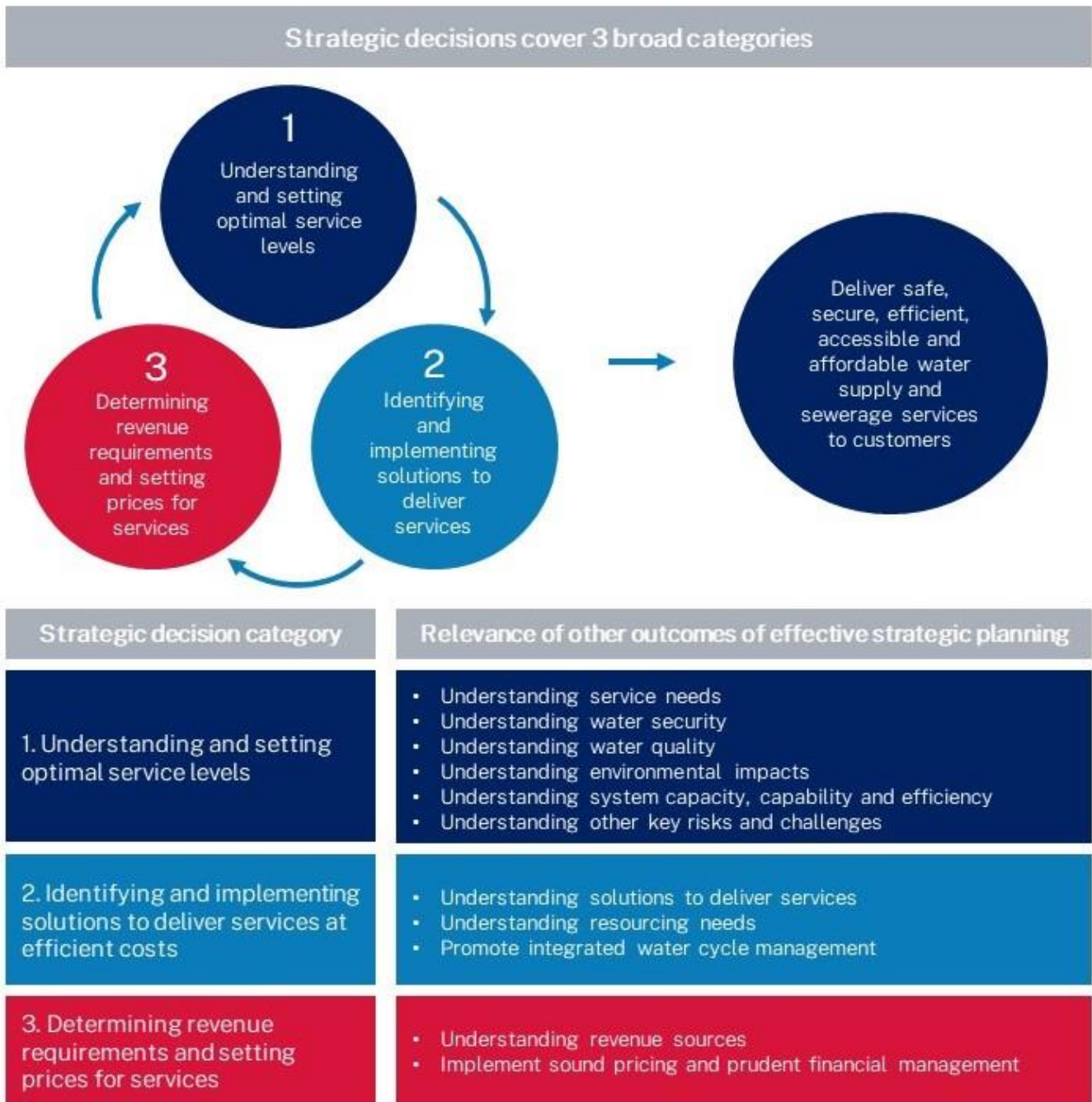
As highlighted in Figure 2, strategic decisions cover 3 sets of iterative decisions:

1. **Setting optimal service levels** that meet regulatory requirements as well as customers' needs, values and preferences, including a customer's ability and willingness to pay
2. **Identifying and implementing solutions to deliver services** at efficient cost, now and into the future
3. **Determining revenue requirements and setting prices for services** that send efficient signals to current and future users and developers as well as recover the revenue required to deliver services and maintain financial sustainability of local water utilities.

DPE has published detailed guidance in the strategic planning guidance document [Make and implement sound strategic decisions](#) for local water utilities:

Figure 2 also shows how the 12 strategic planning outcomes can support making sound decisions. A later section in this document about strategic planning gives more detail on the 12 strategic planning outcomes.

Figure 2: Sound strategic decision-making covers all the strategic planning outcomes



Legislative powers and responsibilities

Legislative powers and responsibilities for a NSW local water utility are found in numerous pieces of legislation. A list of key legislation that applies to local water utilities in NSW is provided in 2. A more comprehensive list of relevant regulatory and formal requirements is provided in Appendix B. These lists are not exhaustive and are intended as a summary only. In addition, formal obligations often include guidelines, standards and codes and it is your responsibility to understand what applies to your business at a high level.

Note that any Council that borders another State or Territory will also need to be aware of cross border issues.

Table 2 Summary of key legislation that apply to local water utilities

Instrument	Jurisdiction	Risk								
		Drinking water	Strategic planning	Water access	Environment	Sewerage services	Trade waste services	Infrastructure	Human resources	Recycled water
<i>Local Government Act 1993 and Local Government (General) Regulation 2021</i>	NSW	X	X			X	X	X		X
<i>Public Health Act 2010 and Public Health Regulation 2012</i>	NSW	X								X
<i>Fluoridation of Public Water Supplies Act 1957</i>	NSW	X								
<i>Protection of the Environment Operations Act 1997</i> <i>Protection of the Environment (General) Regulation 2021</i>	NSW				X	X	X			X
<i>Water Management Act 2000</i> <i>Water Management (General) Regulation 2008</i>	NSW		X	X			X			
<i>Environmental Planning and Assessment Act 1979</i>	NSW		X		X			X		
<i>Dams Safety Act 2015</i> <i>Dams Safety Regulation 2019</i>	NSW							X		
<i>Work Health and Safety Act 2011</i>	NSW								X	X
<i>Water Act 2007</i>	Commonwealth		X	X						

Strategic planning and pricing

Local water utilities are responsible for undertaking long-term strategic urban water services planning, setting service levels and investment priorities and associated revenue requirements, pricing, and the implementation of planning outcomes. This planning includes the consideration of the local water utility's service risks and emerging acute risks.

Urban land use planning

A local water utility will be responsible for providing water and sewerage services to urban land identified in Council's Local Environmental Plan.

State Environmental Planning Policy (Infrastructure) 2007 specifies where water and sewerage projects can proceed either with or without development consent.

For many water and sewerage projects, where development consent is not required, Council is a public authority proponent and the determining authority under Part 5 of the Environmental Planning and Assessment Act 1979, and can prepare and determine a Review of Environmental Factors.

Local Environmental Plans limit what can be done or undertaken in a particular location and in this instance, what may be occurring in the water catchments.

Integrated planning and reporting

The Integrated Planning and Reporting (IP&R) framework (Figure 3), administered by the Office of Local Government (OLG), sets out a comprehensive, mandatory framework for councils to plan for, deliver and report on all activities including their urban water functions.

The IP&R framework consists of the following key components:

- community strategic plan
- delivery program
- resourcing strategy
- operational plan
- annual report.

Local water utilities may choose to use the IP&R framework to support their strategic planning for water supply and sewerage services within the wider functions of council.

DPE have published guidance Using the Integrated Planning and Reporting framework for local water utility strategic planning to explain how utilities can achieve the strategic planning outcomes to a reasonable standard using the IP&R framework.

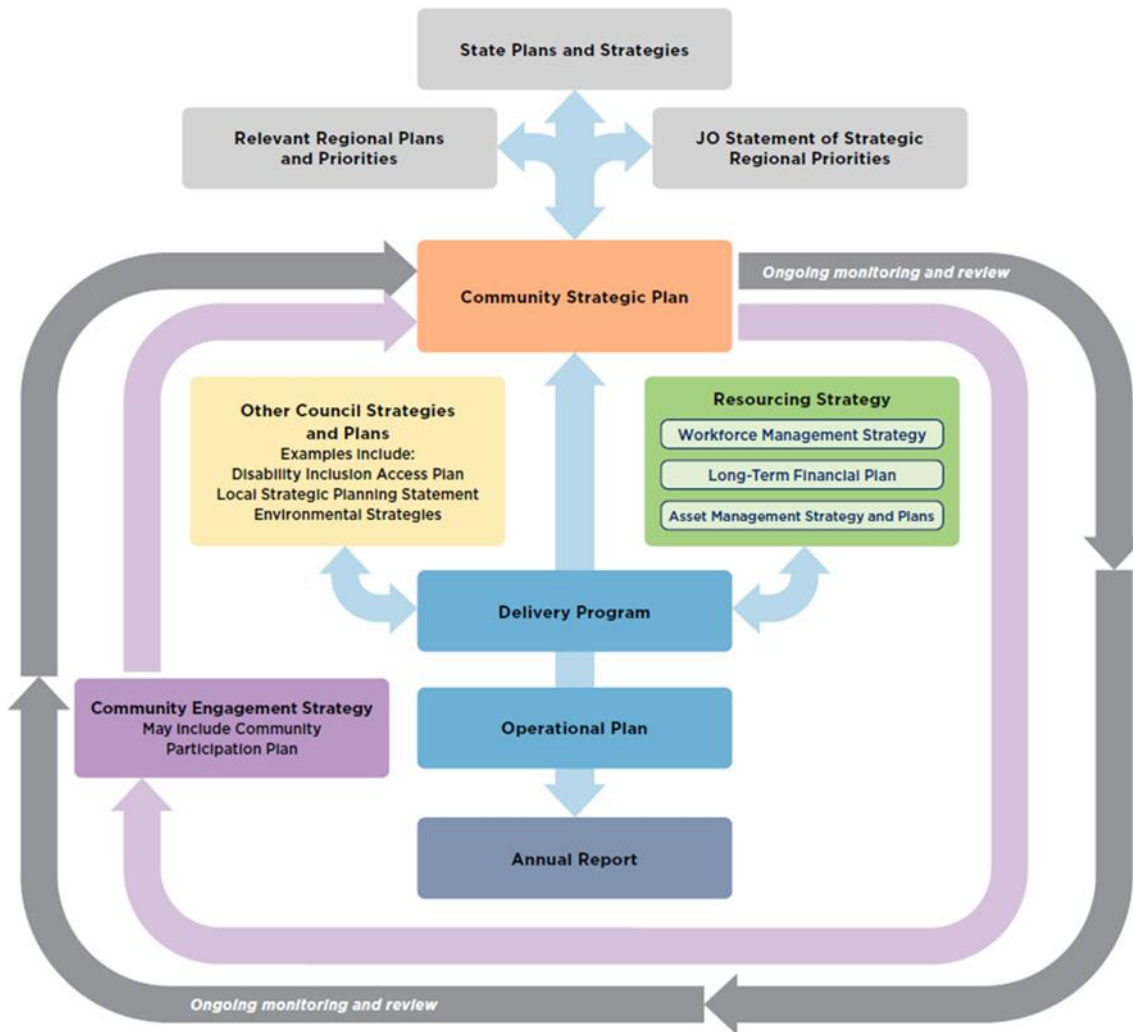


Figure 3. Office of Local Government Integrated Planning and Reporting (IP&R) flowchart, 2021

Strategic planning for water supply and sewerage services

Local water utilities can best meet the needs of their customers, and manage key risks, when their decisions and activities are based on effective, evidence-based strategic planning. Local water utilities are responsible for conducting strategic planning.

Strategic planning is crucial to identifying and managing key risks to:

- water security
- water quality
- the environment
- assets and infrastructure
- customers
- their financial sustainability.

DPE is responsible for overseeing local water utilities in their delivery of safe, secure, sustainable and affordable services and management of water service risks which is outlined in section 3 of the Regulatory and assurance framework for local water utilities.

Councils making a dividend payment from a surplus of their water and/or sewerage business must meet the expectations set out in section 3 and section 4 of the Regulatory and assurance framework. Local water utilities not making dividend payments are encouraged, but not compelled, to utilise the department's assurance framework, experience and capacity to support effective strategic planning.

The framework sets out 12 strategic planning outcomes that local water utilities are expected to achieve to a reasonable standard.

The outcomes are:

- Understanding service needs
- Understanding water security
- Understanding water quality
- Understanding environmental impacts
- Understanding system capacity, capability and efficiency
- Understanding other key risks and challenges
- Understanding solutions to deliver services
- Understanding resourcing needs
- Understanding revenue sources
- Make and implement sound strategic decisions
- Implement sound pricing and prudent financial management
- Promote integrated water cycle management.

For each of these outcome areas, DPE have published guidance that gives:

- more detail on the expectations for achieving strategic planning outcome to a reasonable standard
- optional templates, case studies and tools to support utilities in achieving the strategic planning outcomes to a reasonable standard.

All guidance documents can be accessed on DPE's website.

Figure 2 (above) shows how these outcomes are categorised under 3 broad areas to support strategic decision making:

1. Understanding and setting optimal levels of service
2. Identifying and implementing solutions to deliver services at efficient costs
3. Determine revenue requirements and setting prices for services.

There is no single best-practice way for this strategic planning to be delivered. DPE sets expectations for the outcomes that strategic planning needs to achieve to be effective and evidence-based, utilities decide what approach to take to meet them..

Local water utilities that are not making dividend payments (see Financial management section) are encouraged, but not compelled, to use DPE's assurance framework, experience and capacity to support effective strategic planning. DPE does not have authority to impose enforcement or compliance measures for the outcomes of the assessment of strategic planning. However, an assessment by DPE provides assurance to the local water utility, decision makers, councillors and their communities that effective, evidence-based strategic planning for water servicing has been undertaken and is of a reasonable standard.

In the case of local water utilities making dividend payments, they must meet the expectations set out in section 3 and section 4 of the Regulatory and assurance framework.

How does your Council undertake strategic planning?

Does your Council achieve the 12 strategic planning outcomes?

Do you know what is required for your water utility to pay a dividend?

Strategic planning instruments and systems

List your council specific water strategic planning documents and how they may fit into your IP&R framework

Financial management

Separate business unit

Local water utilities operate as stand-alone or separate business units from councils' general-purpose activities. Water supply and sewerage services are a major part of most regional councils' operations often making up a quarter or more of councils' annual budget and employing a significant number of their workforce.

Expenditure and income streams are ring-fenced from councils' general fund. Ring-fencing involves separating the costs and revenues of the local water utility from the council. That is, 'fencing off' the utility's assets and accounts from the council's other operations. Ring fencing is a requirement of section 409(3) of the *Local Government Act 1993*, which requires utilities to use revenue from water and sewerage charges only for providing water and sewerage services.

This means that internal transfers between the water utility and other business units of Council is not allowed unless by way of declared yearly dividend.

Your water utility may pay an annual dividend from its water supply and sewerage business surplus to its owner council (section 409 (5) of the *Local Government Act 1993*). A dividend is a 'return on investment' paid to the 'shareholder', which in this case is council's general business, responsible for managing and investing in the water supply and sewerage functions.

As a pre-requisite to the payment of a dividend from the surplus, your utility business must meet the eligibility criteria that are set out in section 409 (6-8) of the LG Act and meets Guidelines for council dividend payments for water supply or sewerage services, published in section 4 of the Regulatory and assurance framework. Under these guidelines, DPE will access the local water utility's current strategic planning assessment and pricing outcomes to confirm the council has in place effective, evidence-based local water utility strategic planning.

How does your Council maintain separation between the local water utility and Council's general-purpose activities?

Separate business unit

Describe the governance, organisational, operational and other approaches Council uses to maintain separation between the local water utility and Council's general-purpose activities.

Long-term financial plan

A financial plan for water and sewerage businesses will indicate how they will finance the provision of services to the identified level of service. The principal indicator of the cost of services is the typical residential bill, which is the annual bill paid by a residential customer.

An long-term financial plan needs to demonstrate long term financial sustainability and compliance with National Competition Policy/National Water Initiative principles, including full cost recovery:

- operation, maintenance and administration costs
- capital renewal costs
- capital works program costs
- revenue from residential and non-residential customers
- capital grants and other forms of subsidy.

A long-term financial plan can be used as supporting evidence to demonstrate that Council has achieved the strategic planning outcome implementing sound pricing and prudent financial management, to a reasonable standard.

Does your Council have long-term financial plan?

Long-term financial plan

Add details of your local water utility's current and long-term financial plan.

Contingency and unexpected events

Council budgets are signed off by Councillors who have overall responsibility for the Council operations, including water and sewerage services. Budgets should allow some contingency for unexpected events.

Is there sufficient contingency in your budget to enable emergency works in the event of major asset failure?

Pricing of drinking water and recycled water supply, sewerage services and trade waste

One of the most contested decisions that Councils makes is the pricing for providing safe and affordable water services, and to recover the required revenue to remain financially sustainable. It is important to understand how pricing affects the way Councils are able to provide services now and into the future to meet the expectations of their customers and the community.

Unlike most other council services water revenues are not included in the rate cap set by the Independent Pricing and Regulatory Tribunal of NSW (IPART). Councils set the prices for drinking water, recycled water, sewerage and trade waste services. The exception are the Water Supply Authorities, which includes Central Coast Council, where prices are set by IPART.

A standard residential water bill is made up of two main items: availability charges and water usage charges. Availability charges contribute to the cost of providing and maintaining the water and sewerage systems. Water usage charges reflect the amount of water that has been used.

DPE has published guidance on the strategic planning outcome of [Implement sound pricing and prudent financial management](#).

A local water utility should set water and sewerage prices that:

1. recover its efficient costs of providing water and sewerage services to customers
2. are cost reflective, fair and equitable, and structured to promote efficient investment and consumption decisions, including the efficient and sustainable provision and use of water and sewerage services, and that:
 - recycled water prices should be set consistent with NWI recycled water pricing principles
 - trade waste charges are set consistent with DPE's guidelines, Liquid Trade Waste Regulation Guidelines
 - developer charges are set consistent with DPE's guidelines, Developer Charges Guidelines for Water Supply, Sewerage and Stormwater
3. are reasonably stable over time and consider affordability and impact on customers.

When is your Council next reviewing their prices for their water products and services?

Does your Council have enough revenue to cover the full cost of water and sewage services?

Water and sewer charges

Add details of your local water utility's current charges or a link to water and sewer charges if accessible online

Add details of pensioner rebates if offered

Water security

Councils are responsible for water supply to regional cities, country towns and villages including imposing restrictions to maintain essential supplies during droughts. During the last drought several NSW regional towns had to impose severe restrictions with some towns facing the real possibility of running out of water

Understanding water security is important to ensure long-term continuous access to reliable water supply. Uninterrupted long-term access to water contributes to public health, economic development opportunities, social amenity and liveability, allowing communities to grow and thrive.

This includes considering:

- what is the local water utility's access to current and potential water supply sources?
- how will the local water utility address current and future risks around continuity and reliability of access to water supply sources?

Achieving the outcome of understanding water security is critical to adequately considering any current and future water security risks and water security service levels for water supply services.

This should help the utility:

- consider any options/solutions for service delivery it develops and evaluates as part of the strategic planning outcomes of understanding solutions to deliver services and understanding resourcing needs
- make strategic decisions under the strategic planning outcome of make and implement sound strategic decisions, especially when setting water security service levels and contingency and emergency measures.

DPE has published guidance to support local water utilities to achieve the strategic planning outcome [Understanding water security](#).

Drought is a part of the Australian landscape. With one of the most variable rainfall climates in the world, severe drought affects some part of Australia about once every 18 years. Time between severe droughts have varied from four to 38 years and the impacts of climate change will mean longer dry periods, particularly in inland areas of NSW.

DPE works in partnership with local water utilities to manage supplies during drought, including financial assistance with [emergency relief](#) or contingency water measures. When a town's supplies are threatened by drought or extreme water quality outbreaks, such as blue-green algae, the NSW Government will help local water utilities maintain a basic supply to their customers and consumers. DPE will provide technical assistance to local water utilities and will assist them in applying for financial assistance from the NSW Government.

How does your council understand their water security risks?

Do you know if your Council has plans or options for responding to a severe drought?

Water security

Add any specific programs that the Council or water utility is undertaking here eg water transfers, recycling projects, investigations for groundwater to increase their water security

Water conservation

The efficient use of water will contribute to the sustainability of long-term supplies as population increases, build resilience to drought and support readiness to respond to future extremes in weather. Water conservation can save the community and council money.

Ongoing water conservation practices are part of managing the ongoing water needs of NSW communities.

DPE is developing the [Water Efficiency framework](#) and associated programs that will enable government, water utilities and the NSW community to use water more efficiently. This will help councils and NSW Government make sustainable water infrastructure decisions.

Commitment to water conservation includes activities such as:

- Water loss management program to reduce leakage from water distribution systems.
- Education on water efficiency and water auditing such as available through [Smart Approved WaterMark](#). The NSW Government and Smart Approved WaterMark are partnering with local water utilities and councils to provide subsidised subscriptions to the [Smart Water Advice Program](#).
- Pursuing fit for purpose alternative water supplies such as rainwater tanks, stormwater harvesting and recycled water
- Where necessary, implement water restrictions to preserve water for essential human needs.

Do you know what is the per person consumption of water is in your Council and how does that compare with similar Councils in your area?

Is your Council doing enough to conserve water?

Water conservation activities

Add any specific water conservation programs that the Council is currently undertaking eg replacing pipes, replacing shower heads or community awareness programs.

Performance monitoring

Local water utilities in NSW report to DPE on a large range of performance indicators through a [performance monitoring](#) database on an annual basis. Performance monitoring provides data that enables a local water utility to review, improve and benchmark its performance.

The *Water Act 2007* (Cth) and *Water Regulations 2008* (Cth) specify water information which water utilities with more than 10,000 connected properties must provide to the Bureau of Meteorology for the [National Performance Report](#). This national information is a sub-set of those provided by local

water utilities to the department. To avoid duplicate reporting, DPE provides the data annually to the Bureau of Meteorology and to the Australian Bureau of Statistics requested under the Census and *Statistics Act 1905* (Cth) and the Census and Statistics Regulation 2016 (Cth).

DPE is reviewing NSW utilities approach to performance monitoring data collection, to streamline reporting obligations while ensuring there is a comprehensive spread of data to determine performance and operations. Monthly operational and project/activity reporting to Council is recommended for good governance of local water utilities and proactive management of performance.

Do you know how your local water utility performs compared to a similar water utility?

Performance data summary

Add performance data that is pertinent for your utility or community eg % leakage or % of sewage effluent that is recycled

Human resourcing for water operations

Worker health and safety

Worker health and safety, including risk of injury and fatal risks, are some of the most serious issues confronting local water utility staff.

The *Work Health and Safety Act 2011* (NSW) has numerous responsibilities for the protection of workers. [Section 5](#) of the Act states an elected member does not carry the statutory duties.

Nevertheless, there are a number of high-risk activities in the operation of a local water utility for all decision-makers to be aware of and be familiar with the need for safe systems of work. The following is list of typical activities that may pose high risks for water operators and supervisors:

- excavation works
- working in confined spaces, in isolation, at heights and over water
- exposure to sewage and trade waste
- hazardous chemicals, e.g. chlorine, fluoride
- managing asbestos
- electrical hazards
- construction work
- manual handling and ergonomics
- noise in the workplace
- traffic management around worksites
- operating mobile and fixed plant
- driving and loading heavy vehicles
- supervising contractors
- managing accidents and emergencies
- fitness for work.

Training and operator competency

The training and competency of water treatment operators in local water utilities is critical to reducing water quality risks and ensuring safe water supplies for the community. Research by

Water Research Australia in 2019,² showed that human error plays a significant role in water quality safety incidents – it was a factor in 78% of the 62 overseas incidents reviewed in the research. The research linked those errors to competency deficiencies on the part of frontline operators.

Qualifications for water operators are part of the National Water Training Package (NWP), which provides a framework for nationally recognised vocational qualifications in water industry operations.

Funding for vocational qualifications is available via the NSW Department of Education Smart and Skilled program. For more information on funding visit: nsw.gov.au/education-and-training/vocational/funding

In addition, DPE offers non-accredited training courses in water, sewerage and liquid trade waste for local water utilities.

Operators can also achieve Water Industry Operator Registration in drinking water, wastewater and recycled water under a framework developed by the Water Industry Operator Certification Taskforce (WIOCT), hosted by qldwater.

Maintaining currency

It is not sufficient to simply provide training once and assume that everyone knows what to do. The industry is constantly evolving and it is crucial to maintain adequate knowledge and awareness of new technologies and requirements for operations. Currency should be tested at a frequency that is adequate for the role and refresher training provided as required.

How can you be confident your Council has allocated enough resources to ensure that all water staff are trained to perform their duties?

Does your Council have a succession plan for key water utility management and operational staff?

² Value of Operator Competency: A study to demonstrate the value of developing, building and continually growing a competent operator workforce

Drinking and recycled water quality management

Drinking water management systems

NSW Health and DPE have published the [NSW Guidelines for drinking water management systems](#), which advises local water utilities on addressing the requirements of the *Public Health Act 2010* and the [Australian Drinking Water Guidelines](#).

Historically, the management of water quality relied on end point testing to confirm the quality of water supplied. However, since results are received after the water has been supplied to the customer, it could be days before a local water utility is aware that water has not met appropriate water quality requirements or act to fix problems to ensure safe water. In 2004, the Framework for Management of Drinking Water Quality, introduced the preventive risk management approach currently used by the water industry to ensure risks are adequately managed *prior* to supply.

This is quality assurance approach like that used by the food industry, moving away from only relying on end point testing to understanding and monitoring the processes necessary to prevent supply of unsafe water.

The [Public Health Act 2010](#) and the [Public Health Regulation 2012](#) require all drinking water suppliers, including local water utilities, to:

- have a quality assurance program (QAP) that complies with the Regulation
- comply with (i.e. implement) its QAP
- provide a copy of the QAP to the local Public Health Unit
- keep records relating to managing the safety of its drinking water supply.

Penalties apply if these requirements are not followed.

A quality assurance program for the provision of drinking water can be recorded in a drinking water management system (DWMS) that comprises of documents, procedures, and other supporting information for the safe supply of drinking water. The DWMS must address the elements of the Framework for Management of Drinking Water Quality (Australian Drinking Water Guidelines) relevant to the operations of the local water utility.

At the heart of the Framework are Critical Control Points (CCPs). A [CCP](#) is an activity, procedure or process that is critical to control a water quality hazard (for example chlorination, is a process where disinfectant is added to kill viruses and bacteria).

Implementing a drinking water management system

The DWMS must be kept current and regularly reviewed to ensure that it has been properly implemented and risks are effectively addressed. The DWMS must be internally reviewed by the

local water utility at least annually and a report provided to the local Public Health Unit. A complete review should be conducted in consultation with relevant stakeholders including the Public Health Unit and DPE. NSW Health recommends the use of an external facilitator for the risk assessment workshop.

The utility should assess risks, and if necessary, test for possible contamination or indicators in their sources of drinking water. The local Public Health Unit can help with technical support for risks assessments and, where applicable, project monitoring. The NSW Health Drinking Water Monitoring Program booklet also provides information on minimum requirements for testing to verify risk are being managed.

These case studies describe how 3 councils responded to a range of drinking water quality incidents and illustrates some their key learnings and considerations for the management of drinking water:

- [Managing discoloured water – Bathurst Regional Council](#)
- [Managing a chemical overdose incident – MidCoast Council](#)
- [Managing coinciding events to manage water quality – Tenterfield Shire Council.](#)

Drinking water management system review and audit

Evaluation and audit of how drinking water quality is being managed is an element of the Framework. Water utilities should plan for both an internal and external review or audit to demonstrate how they satisfy requirements of the *Public Health Act 2010* and Public Health Regulation 2012. Regardless of the audits commissioned by the water utility, NSW Health has the authority to commission a comprehensive review of utilities' DWMS.

Internal review

The DWMS must be reviewed by the local water utility at least annually to ensure that it is being properly implemented and risks are effectively addressed. The DWMS must be kept current.

External review/audit

Local water utilities should consult with their local Public Health Unit to develop an external review/audit frequency. Some utilities have effectively had an audit of their DWMS with recent support projects and therefore may not require an audit in the near future.

More information is available in the [NSW DWMS review and audit fact sheet.](#)

How can you be confident safe drinking water is supplied to your community?

Is the Drinking Water Management System endorsed by Council?

What are the critical control points in your Council's drinking water supplies?

How are councillors kept informed about the quality of water supplied to the public?

Your Drinking Water Management System

Add any audit reports or reviews of your DWMS and follow up actions

Recycled water management systems

Some local water utilities recycle the discharge from their sewage treatment plants for beneficial reuse that support economic activities, reduce pollution to waterways and decrease the demand for drinking water. Such uses include:

- agricultural irrigation
- industrial uses
- irrigation of public open spaces (e.g. golf courses, sports fields and wetlands)
- providing recycled water to homes in new developments for gardening, laundry and toilet flushing.

DPE and NSW Health have published the [NSW Guidelines for recycled water management systems](#) (RWMS) which advises local water utilities on meeting the requirements for an approval for under section 60 of the *Local Government Act 1993* and addressing the requirements of the Australian Guidelines for Water Recycling.

DPE also provides [guidance for local water utilities](#) to ensure that their recycled water is suitable for the intended uses, NSW Health provides guidance on the public health aspects of recycled water, including incident response.

The [Environmental Guidelines: Use of effluent by irrigation](#) provides guidance on the beneficial use of effluent and outlines how this can be accomplished in an ecologically sustainable and socially responsible way. This guideline is educational and advisory, not a mandatory or regulatory tool, and does not introduce new environmental requirements.

The EPA has completed a review of effluent reuse management practices to help improve environmental performance. This review focused on requirements for effluent reuse in environment protection licences across various industry types within NSW. For more information see [Effluent reuse management: Strategic environmental compliance and performance review](#).

This case study describes how a Council responded to a recycled water incident and illustrates some their key leanings and considerations for the management of water recycling:

- [Managing a recycled water cross contamination event – Port Macquarie-Hastings Council](#)

Your Recycled Water Management System

Add any audit reports or reviews of your RWMS and follow up actions

Sewage management

Understanding sewage

Sewage is wastewater from residential toilets, kitchens, bathrooms or laundries. Sewage is infectious, a pollutant and a risk to human health and the environment. When managed properly and carefully through sewage treatment processes sewage can be managed in a relatively safe and environmentally sustainable way. Sewage can also be treated for utilisation by recycling and reuse.

Sewage may be disposed of in three ways:

- **Centralised** through pipes called sewers into a sewerage system and treated in a single large sewage treatment plant where it can be recycled for use in car washing, outdoor household garden watering, toilet flushing, golf course watering and irrigation of crops (see Recycled Water Management Systems above). The treated effluent may also be discharged to rivers and oceans.
- **De-centralised** through pipes into a local community small sewage treatment plant for local community reuse. A number of these local systems make up de-centralised sewage management.
- On-site single domestic wastewater management where the sewage or components such as greywater must be partially or fully treated for utilisation or reuse within the property boundaries. On-site single domestic wastewater management is regulated jointly by local councils and NSW Health. On-site systems may not be installed unless approved by the local council. NSW Health accredits on-site sewage management facilities under the provisions of the Local Government (Approvals) Regulation, as a pre-requisite to local council approval.

Licensing for sewage treatment plants

Under the *Protection of the Environment Operations Act 1997* (NSW), sewage treatment above a processing capacity threshold that includes the discharge of wastes or by-products to land or waters requires an Environmental Protection Licence.

Where water pollution causes or threatens material harm to the environment, there is a duty to report pollution incidents under Section 148 of the Act.

All licence holders also need to prepare and implement Pollution Incident Response Management Plans.

The EPA regulates discharges to water and land using conditions it places in Environmental Protection Licences. The EPA works closely with water utilities to ensure appropriate safeguards are in place to protect human health and the environment. Under the Act there is a duty to notify the relevant authorities if a pollution incident is occurring that causes or threatens material harm to the environment. When requirements are not met the EPA will consider a range of regulatory

approaches to suit the particular circumstances. These can range from providing further information and support on meeting requirements to formal warnings, fines or prosecution.

Licences for sewage treatment plants cover entire sewage treatment systems, including overflows from pumping stations and reticulation systems. This licensing approach aims to minimise the potential harm to human health and the environment from the release of sewage into the environment. Sewer overflows are one of the most significant diffuse sources of water pollution in urban areas.

Changes to sewage treatment system infrastructure or operation that are likely to result in changes in environmental impact may require planning consent and/or a variation to an Environment Protection Licence. The EPA should be included early in any consideration of change to sewage treatment systems to ensure that the information necessary to vary a licence is considered and addressed.

The EPA's [Licensing Guidelines for Sewage Treatment Systems](#) help licensees in non-metropolitan areas, generally local councils and other water authorities, understand the process for licensing whole sewage treatment systems.

The guidelines explain:

- what sewage treatment system licences are
- the potential impacts of sewer overflows on human health and the environment
- the EPA's approach to sewer overflow management
- licensing techniques to minimise sewer overflows.

How can you be confident sewage is being managed safely and effectively by Council?

How can you be confident Environmental Protection Licence requirements are being met?

Liquid trade waste management

Liquid trade waste includes non-domestic liquid waste discharges to council's sewerage system from:

- industrial premises
- business/commercial premises (such as beautician, florist, hairdresser, hotel, motel, restaurant, butcher, supermarket, etc.)
- community/public premises (including clubs, schools, colleges, universities, hospitals and nursing homes)
- any commercial activities carried out at a residential premises
- saleyards, racecourses, stables and kennels that are not associated with domestic households
- tankered human waste, ship-to-shore waste from marina pump-out facilities, portable toilet waste and established sites for the discharge of pan contents from mobile homes/caravans

- any other waste tankered to the sewerage facilities, such as commercial or industrial waste from areas that are not sewered.

Liquid trade waste excludes:

- toilet, hand wash basin (used for personal hygiene only), shower and bath wastes derived from all the premises and activities mentioned above
- wastewater from residential toilets, kitchens, bathrooms or laundries (i.e. domestic sewage)
- wastewater from common laundry facilities in caravan parks (discharges from common kitchen facilities in caravan parks are liquid trade waste)
- residential pool backwash.

Sewerage systems are designed to safely collect, transfer and treat wastewater that is mostly of domestic origin. However, sewerage systems may also accept liquid trade waste discharges provided they are planned and controlled within acceptable limits.

Without proper management trade waste may cause extensive damage to council assets and create worker health and safety risks for operators that undertake work on sewerage infrastructure.

Councils control trade waste risks by developing and implementing a trade waste policy.

To assist councils in regional NSW with regulation trade waste, the department develops and updates [Trade Waste Management Guidelines](#) and [related documents](#). The Guidelines are consistent with the Australian [Wastewater Source Management Guideline](#) published by the Water Services Association of Australia.

This case study describes how a Council responded to a trade waste incident and illustrates some their key leanings and considerations for the management of trade waste.

- [Managing a contamination incident – Kempsey Shire Council](#)

Trade waste approvals

Businesses or government agencies proposing to discharge liquid trade waste to a council's sewerage system must have prior approval from the council responsible for providing sewerage services. Such approvals need DPE concurrence. DPE has provided assumed concurrence to all councils for low-risk discharges.

DPE also provides its concurrence to the council's approval of high risk and medium risk discharges, as well as authorising suitably qualified councils to 'assume concurrence' for medium risk discharges.

How can you be confident trade waste is being managed safely and effectively by Council?

Biosolids

Biosolids are derived from wastewater sludge, mainly a mix of water and organic materials that are a by-product of the sewage treatment processes. Treatment processes produce a stabilised product suitable for beneficial use.

The NSW Government encourages the beneficial use of biosolids where it is safe and practicable and where it provides the best environmental outcome. In cases where beneficial use is not possible, biosolids must be disposed of safely and lawfully. In NSW the land application of biosolids and any material mixed with or produced with biosolids is regulated by the EPA under the following guidelines

- Environmental Guidelines: Use and Disposal of Biosolids Products: The Biosolids Guidelines help planners, designers and operators of sewerage systems, and those involved with the processing and end-use of biosolids, by establishing requirements for the beneficial use and disposal of biosolids to land in NSW.
- Biosolids Order and Biosolids Exemption: Where biosolids are managed in accordance with the Biosolids Guidelines, the land application of that material is exempted from certain requirements of the waste regulatory framework. For more information about exemptions, see Resource recovery orders and exemptions.
- Waste Classification Guidelines: Biosolids are preclassified for the purposes of disposal under Part 1: Classifying waste of the Waste Classification Guidelines.

How are biosolids used or disposed of by Council?

Incident and emergency response planning

Business continuity and emergency management

Water and sewerage services are essential for public health and environmental protection. Business continuity management is a process that ensures resilience against disruption. It covers stages from risk prevention, contingency planning, emergency and incident management through to response and recovery.

The NSW Water Directorate has business continuity guidelines available on its [website](#).

How can you be confident your council has considered business continuity and emergency management?

Water quality incident and emergency management

Occasionally incidents affect drinking water quality. These may include changing source water, conditions such as flooding, operational problems, detection of *Escherichia coli* bacteria or blooms of cyanobacteria (blue green algae).

The NSW Health response protocols provide guidance on managing [physical, chemical and microbiological](#) quality of drinking water and/or [treatment failure](#). Local water utilities in consultation with their local Public Health Unit may issue a boil water alert or other warnings to protect the health of consumers.

Water suppliers are responsible for ensuring that consumers are aware of any warnings regarding the safety of drinking water. This can be achieved using a variety of media such as newspapers, radio and social media. Letter drops, warning signs and direct contact with vulnerable populations may also be required.

The [NSW Health website](#) provides the following additional resources for drinking water quality incidents:

- Response protocol for the management of [physical and chemical quality](#)
- Response protocol for [managing pathogen risks](#) in drinking water and/or treatment failure including an [incident response flowchart](#) and [boil water alert guidance](#).

Has your drinking water emergency management plan been developed in consultation with NSW Health?

Have there been any boil water alerts in the last five years?

When was the last time scenario training was conducted at your Council?

Boil water protocol

Add information when and how Councillors are advised when the local water utility issues a boil water alert.

Incidents can also occur with recycled water. An incident notification and response protocol should be developed in consultation with NSW Health. The protocol should define potential incidents that are specific to the recycled water system and include sufficient detail to determine an incident. The roles, responsibilities and contact details of all involved parties need to be clearly defined and kept up to date.

Incident notification to NSW Health should occur immediately and be followed up in writing as agreed with the appropriate regulatory agency. NSW Health has general powers under the *Public Health Act 2010* to issue orders and direct suppliers of water (including recycled water) to prevent public health risks.

Case studies for incidents and events

DPE has developed 6 case studies with local councils from across NSW about managing local water utility incidents and events. These case studies provide insights into the risks and opportunities facing local water utility decision-makers. They cover a wide range of the water supply and sewage services provided by local water utilities.

- [Managing discoloured water - Bathurst Regional Council](#)
- [Managing a contamination incident - Kempsey Shire Council](#)
- [Managing a chemical overdose incident – MidCoast Council](#)
- [Managing a recycled water cross contamination event - Port Macquarie-Hastings Council](#)
- [Managing coinciding events to manage water quality - Tenterfield Shire Council](#)
- [Managing a dam safety event - Upper Lachlan Shire Council.](#)

Asset management

Asset management involves achieving the needed level of service at the lowest cost and least risk. Asset management for water utilities is more complex than for most other sectors due to the magnitude of investment, the difficulty in inspecting and maintaining buried assets and the need for a multi-disciplinary engineering approach integrating civil, environmental, chemical, electrical, mechanical and information technology engineering disciplines.

Long term (20-30 years) asset management planning is important because of the long life cycle of many infrastructure assets, and the 'lumpy' nature of water and sewerage infrastructure investments.

There are also requirements to ensure that all water and sewage assets are captured in an asset register, with asset value appropriately established and documented, as well as annually reported in financial statements.

Many water utilities align their asset management approach with standards such as [ISO 55000](#).

Knowledge sharing on asset management practices is essential. Water utilities benefit from association knowledge sharing through the Institute of Public Works Engineering Australia (IPWEA), Engineers Australia, the Australian Water Association (AWA) and the Water Services Association of Australia (WSAA). A short video is available via the AWA's asset management specialist network committee [AWA - Asset management, the video](#).

Asset type

Depending on the specifics of the Council and its infrastructure, there are many different types of assets that councils may be responsible for, including:

- Dams and/or weirs
- Groundwater supply bores
- Water treatment plants
- Sewage treatment plants
- Water recycling plants
- Pumping stations
- Reservoirs
- Underground infrastructure such as pipes
- Communication and control systems.

How can you be confident the right risks are being considered for asset management?

Are funds available to allow long term asset management to occur?

Are the funds appropriate to achieve the desired asset management?

Water assets

Add photos/diagrams of some different types of assets eg treatment plants or network diagrams

Add photos of any major infrastructure projects currently under construction

Approvals for water and sewerage infrastructure

Under section 60 of the *Local Government Act 1993*, local water utilities are required to obtain Ministerial approval for major water supply and sewerage works including water recycling schemes. This approval is delegated to DPE and provides an independent assessment of the proposed works to ensure they are fit for purpose and provide robust, safe and sound solutions that meet public health and environmental requirements.

DPE encourages local water utilities to engage with them early about works approvals and has published guidance for [Applying for water treatment and sewerage works approvals](#).

Asset inspection and site induction

Water industry decision makers are strongly encouraged to undertake site visits with water managers and operators to become familiar with the assets they are governing and to maintain an awareness of current activities, issues and projects being managed by their local water utility.

This case study describes how a Council responded to an incident resulting from a dam inspection, illustrates their key leanings and considerations for their asset management.

- [Managing a dam safety event – Upper Lachlan Shire Council](#)

Have you visited your water source? It could be sourced from a dam, off river storage or from groundwater.

Have you visited your treatment plant(s) recently?

Project and program management

A commitment to good project management technique ensures that capital works and change projects are properly delivered. In addition, good program management ensures that the right projects are prioritised in a portfolio of projects. Projects and programs should be aligned with the water utilities' strategic plans.

These principles are essential regardless of whether a local water utility uses in house resources or has an outsourced relationship.

Technical support

DPE has divided regional NSW into 3 regions – North, South and West – with a Regional Manager responsible for technical support in each region, including Section 60 approval for water or sewage treatment works.

DPE's Water and Sewage Treatment Officers (also referred to as regional inspectors) undertake regular inspections and report on the operation and condition of water and sewage treatment works.

DPE provides funding and support to local water utilities in emergencies. Emergency relief for regional town water supplies is available to local water utilities towards the cost of water carting or water supply works during periods of emergency. Technical assistance is available to local water utilities to manage risks town drinking water following bushfires.

Partnerships

Urban water management has a range of partners and stakeholders at the regional and national scale in Australia, with a range of resources available for local water utilities.

Joint organisations and water alliances

A number of NSW local water utilities are working together in local water utility development, including [Central NSW Joint Organisation](#), [Orana Water Utilities Alliance](#), [Namoi Unlimited](#) and [Canberra Region Joint Organisation](#).

The Queensland Water Directorate, [qldwater](#), has also facilitated a number of regional water alliances through its Queensland Water Regional Alliance Program ([QWRAP](#)) in collaboration with Local Government Association of Queensland and the Queensland Government.

Joint organisations and water alliances

Add details if your council is a member of a joint organisation or a water alliance, including the other member councils

NSW Government Agencies

NSW regulating agencies have a range of guidance material available in water policy:

- [NSW Department of Planning and Environment](#)
- [NSW Health](#)
- [NSW Environment Protection Authority](#)
- [NSW Office of Local Government](#)
- [Natural Resources Access Regulator](#)
- [Dams Safety NSW](#)
- [Independent Pricing and Regulatory Tribunal of New South Wales](#).

Regulators of local water utilities are collaborating to improve how we work together and with local water utilities.

Local water utility regulators have committed to the [Local Water Utility Collaboration Framework](#) focused on how regulators work together and with local water utilities. The Collaboration Framework is expected to increase transparency and accountability by clearly identifying:

- Shared values and behaviours for working together and with local water utilities.
- Roles and responsibilities of regulators, including lead regulatory roles.

- Arrangements for communication and coordination between regulators.
- Resolving disagreements and disputes between regulators.
- How local water utilities can provide feedback on the Collaboration Framework and to regulators.

Cross agency liaison committees

Local Government NSW, the NSW Water Directorate and DPE have regular (5 per year) liaison meetings to discuss local government water supply and sewerage services, covering issues such as water security and other policies and regulatory issues.

The [Aboriginal Communities Water and Sewerage Program](#) is led by Aboriginal Affairs NSW and managed by DPE with the support and involvement of NSW Health, NSW Aboriginal Land Council and councils. The program aims to improve services in eligible Aboriginal communities in NSW.

NSW Health convenes its quarterly Regional Water Supplies Advisory Committee to discuss regional water and health with regional Public Health representatives with the department, the Office of Local Government. Local Government NSW and NSW Water Directorate as invitees.

Commonwealth agencies

Although the Commonwealth does not regulate NSW water utilities, it is important to stay abreast of national issues in water, especially funding and water reform policies. Further information is available at:

- [Australian Government Department of Agriculture](#)
- [Productivity Commission - National Water Reform](#)
- Infrastructure Australia:
 - [Reforming urban water](#)
- [National Water Grid Authority](#)
- [Murray Darling Basin Authority](#)
 - The Murray Darling Basin Plan is the instrument guiding water sharing in the Murray Darling Basin, one million square kilometres of watershed across New South Wales, Queensland, South Australia and the ACT.

Associations

There are several associations that member councils can access for resources or support. A summary is provided in Table 3.

Table 3. Relevant associations

Association	Potential Benefits to Councils
Local Government NSW	LGNSW provides advice to Councils on government policy and industry best practice relating to water policy and represents the views of NSW Councils to NSW State and Australian Governments as well as other stakeholders.
NSW Water Directorate	The Water Directorate represents 89 Council-owned local water utilities in regional NSW. The Water Directorate has produced 80 publications to support its member utilities, providing a valuable forum for information, idea sharing and operational advice between councils. The Water Directorate has developed a Strategic Plan 2019-2024 to review and reform its activities.
Water Services Association of Australia	WSSA is the peak industry body representing the urban water industry in Australia and New Zealand. WSAA's activities focus on collaboration and knowledge sharing.
Water Industry Operators Association	WIOA is the peak industry body for people in operational roles in the water industry. WIOA facilitates the collection, development and exchange of quality information between people undertaking operational roles in the water, wastewater and recycled water industries.
Australian Water Association	AWA is Australia's biggest water network for individuals and organisations in water related sectors including engineering, science, research and agriculture.
Institute of Public Works Engineers Australasia	IPWEA is the peak association for public works professionals that serve communities in Australia and New Zealand. IPWEA provides members with opportunities to network at branch, state and national level, and is also a Technical Society of Engineers Australia.
Engineers Australia	Engineers Australia is Australia's principal engineering association, carrying the expertise to accredit and assess engineering programs and practitioners. Engineers Australia also host the National Committee on Water Engineering (NCWE) which deals with water resource engineering and water sensitive urban design (WSUD) as well as design guides such as <i>Australian Rainfall and Runoff</i> and <i>Australian Runoff Quality</i> .
Local Government Engineers Association	LGEA is the association for local government engineers and technical professionals in NSW. LGEA assists its members to achieve accreditation to Registered Professional Engineer (RPEng) status.
Water Research Australia	WaterRA is a hub for collaboration and innovation on scientific water issues.

Appendix A. Products and services

The following table contains a list of example local water utilities that provide a range of water products and services in NSW to give an understanding of the range of products and services provided.

Table 4. Products and Services of Water Utilities – Examples

Entity	Sewerage services	Drinking water services	Asset management / Dams safety	Recycled water – Internal customers	Recycled water – External customers	Trade waste services	Dam recreation management	Catchment management	Untreated water distribution
Lithgow City Council (General Purpose Council)	One sewage treatment plant	One water treatment plant	Yes, Farmers Creek Dam	Yes, at the sewage treatment plant	Capable of supplying significant quantities via an off-site distribution system	Yes	Yes	Yes	No
Bathurst Regional Council (General Purpose Council)	One sewage treatment plant	2 water treatment plants	Chifley Dam Weir on Macquarie River	Yes	No	Yes	Yes, and cabin management at Chifley Dam	Catchment protection for water supply gazetted in LEP but not responsible for whole of catchment	Yes

Entity	Sewerage services	Drinking water services	Asset management / Dams safety	Recycled water – Internal customers	Recycled water – External customers	Trade waste services	Dam recreation management	Catchment management	Untreated water distribution
Rous Water (County Council)	No	3 Water treatment plants	Rocky Creek Dam and Emigrant Creek Dam	No	No	No	Yes, off-water activities only permitted	Yes	No
MidCoast Council (General Purpose Council)	15 sewage treatment plants	6 Water Treatment plants Also receives treated water from Hunter Water	Bootawa Dam	Yes	Yes	Yes	No	Yes	No
Riverina Water (County Council)	No	14 Water treatment plants	No	No	No	No	No	No	No

Appendix B. Regulatory and formal requirements

The following table contains a list of regulatory and formal requirements relevant to water utilities in NSW.

Note that identification of regulatory and formal requirements is a component under Element 1 of both the Framework for Management of Drinking Water Quality and the Framework for Management of Recycled Water Quality and Use, demonstrating commitment.

Table 5. List of Regulatory and Formal Requirements

Regulatory or Formal Requirement	Type	Jurisdiction	Relevance to Councils	The importance for you
<p><u>Local Government Act 1993 (NSW) & Local Government (General) Regulation 2005</u></p>	Legislation	State	<p>The <u>NSW Local Government Act 1993</u> is the enabling legislation for a local water utility in regional NSW, which excludes Sydney Water Corporation and Hunter Water Corporation..</p> <p>Section 60 approvals</p> <p>A Council requires the approval of the Minister for Lands and Water under <u>Section 60</u> to construct or modify water or sewage treatment plants, or recycled water schemes.</p> <p>Further <u>guidance</u> on the approval process can be obtained from DPE</p> <p>Section 61 and 62 directions by the Minister for Lands and Water</p> <p>The Minister for Lands and Water may <u>direct</u> a council to take specified measures for safety, maintenance, operational or emergency reasons in regards to dams, water treatment works or sewage treatment works.</p> <p>Section 64 Construction of works for developers</p>	<p>Provides a legal framework for the system of local government in NSW.</p> <p>Sets out responsibilities and powers of Councils and Councillors.</p> <p>Sets out the requirements for on-site sewage management systems. Relevant particularly for those systems in the catchment areas for drinking water supplies.</p>

Regulatory or Formal Requirement	Type	Jurisdiction	Relevance to Councils	The importance for you
			<p>This Section gives Council powers under Division 5 of Part 2 of Chapter 6 of the Water Management Act to require developers to pay contributions and/or construct works as a condition of development. Further information is provided - Developer Charges Guidelines for Water Supply, Sewerage and Stormwater.</p> <p>Section 610A & B – Pricing of Service and Methodology</p> <p>This section in Division 2 sets out the need for having a pricing methodology and the process required for its adoption. Further information is provided in Section 4 of Regulatory and assurance framework</p> <p>Power of entry on to land</p> <p>Chapter 8 Part 2 of the Act gives a water utility powers of entry onto land. In particular Section 191A gives a Council authority to enter land and construct water supply or sewerage work by giving a notice of entry.</p> <p>Section 409 The consolidated fund, water/sewer funds and dividends</p> <p>Water and sewerage charges must be spent for the purpose for which they were levied. Section 409 (5) allows Council to pay a dividend from its water and sewerage fund into Council’s consolidated fund with the concurrence of the Minister for Water provided Council meets the Guidelines for council dividend payments for water supply or sewerage services..</p> <p>Section 501 Annual charges and Section 502 Usage charges</p>	

Regulatory or Formal Requirement	Type	Jurisdiction	Relevance to Councils	The importance for you
			<p>These sections provide Council the power to levy annual water and sewerage charges and usage charges.</p> <p>Approvals for water and sewerage connections</p> <p><u>Part 2 Division 3</u> of the Local Government Regulation covers applications for connection, standards and requirements for approvals.</p> <p>Other water services functions and requirements</p> <p><u>Part 6 Water services</u> of the Local Government Regulation covers a range of functions including <u>water restrictions, fire hydrants, connection and disconnection of services, keeping of plans, and water meters.</u></p> <p><u>Clause 151</u> of the Regulation requires plumbing and drainage work to comply with the <u>Plumbing and Drainage Act 2011</u> and regulation.</p>	
<p><u>Water Management Act 2000 (NSW) & Water Management (General) Regulation 2018</u></p>	Legislation	State	<p>The <u>Water Management Act 2000</u> provides for sustainable water use in NSW, as well as providing some powers for water utilities such as developer contributions. Central Coast Council and Essential Energy obtain their water utility authorities under the Act.</p> <p>The Natural Resource Access Regulator issues <u>water access licences</u> to local water utilities. Local water utility and major utility access licences have the highest priority for extracting water under <u>Section 58</u> of the Act. <u>Water Sharing Plans</u> specify the rules for water allocation. In inland NSW these rules must be consistent with the Commonwealth's <u>Murray Darling Basin Plan</u>.</p>	Provides a framework for management of water resources for environmental health and use by licence holders.

Regulatory or Formal Requirement	Type	Jurisdiction	Relevance to Councils	The importance for you
<p><u>Public Health Act 2010 (NSW) & Public Health Regulation 2012</u></p>	Legislation	State	<p>The <u>Public Health Act 2010</u> and <u>Public Health Regulation 2012</u> require water utilities to have and comply with a Drinking Water Management System. This approach to managing drinking water quality is consistent with the Australian Drinking Water Guidelines, and incorporates risk assessment, implementation of operational procedures with Critical Control Points, water quality monitoring, reporting and internal and external review and audit.</p> <p>NSW Health provides a range of support and <u>guidance for water utilities</u>.</p>	<p>Part 3 Clause 25: Sets out need for quality assurance programs and notes the Australian Drinking Water Guidelines Framework that provides the point of reference.</p> <p>Part 3 Clause 13-25: Requires water utilities to notify NSW Health if there is a reason to suspect that drinking water quality may pose a risk to public health.</p> <p>Part 5 Division 2 Section 34B(a)(i) of the Regulation includes the requirement of a commitment by the supplier to drinking water quality management.</p>
<p>Current version of the <u>Australian Drinking Water Guidelines (ADWG)</u></p>	Guideline	National	<p>The ADWG is the Australia's national guidance on drinking water, which includes:</p> <ul style="list-style-type: none"> • Guideline values for safe and aesthetically acceptable drinking water, based on World Health Organisation recommendations. • The framework for management of drinking water quality which includes 12 elements, 32 components and 76 actions. • Specific guidance on drinking water quality monitoring. • Information sheets on disinfection, sampling and statistics. 	<p>Sets out expectations in terms of practice for drinking water quality management and values (noting that while the ADWG are guidelines, they may be called up by regulators under various instruments and may therefore become legally binding, depending on the context).</p>

Regulatory or Formal Requirement	Type	Jurisdiction	Relevance to Councils	The importance for you
			<ul style="list-style-type: none"> • Fact sheets on microorganisms, physical and chemical characteristics of drinking water. • Fact sheets drinking water treatment chemicals. <p>The ADWG are produced by the National Health and Medical Research Council (NHMRC) and Natural Resource Management Ministerial Council (NRMMC).</p>	
<p>Current versions of the <u>Australian Guidelines for Water Recycling (AGWR)</u></p>	<p>Guideline</p>	<p>National</p>	<p>The AGWR is the Australia’s national guidance on water recycling, which includes:</p> <ul style="list-style-type: none"> • The framework for management of recycled water quality and use which includes 12 elements, 36 components and 85 actions. • Specific guidance on the use of treated sewage and greywater for purposes other than drinking and environmental flows. • Specific guidance on the planned use of recycled water to augment drinking water supplies. • Specific guidance on managed aquifer recharge. • Specific guidance on the harvesting and reuse of stormwater. <p>The AGWR are produced by the Environment Protection and Heritage Council (EPHC), the Natural Resource Management Ministerial Council</p>	<p>Sets out expectations in terms of practice for recycled water quality and use (noting that while the AGWR are guidelines, they may be called up by regulators under various instruments and may therefore become legally binding, depending on the context).</p>

Regulatory or Formal Requirement	Type	Jurisdiction	Relevance to Councils	The importance for you
			(NRMMC) and the Australian Health Ministers' Conference (AHMC). The AGWR are also supported by the Australian Sewage Quality Management Guidelines .	
<u>NSW Health Drinking Water Monitoring Program</u>	Guideline	State	<p>Water utilities are expected to satisfy themselves of the safety of the drinking water supply, including microbial, chemical, pesticide and radiological quality.</p> <p>NSW Health Drinking Water Monitoring Program has relevance to:</p> <ul style="list-style-type: none"> • NSW Health's powers to deal with the provision of safe drinking water under the Public Health Act 2010 (NSW) • Monitoring and reporting requirements under the Fluoridation of Public Water Supplies Act 1957 (NSW), Fluoridation of Public Water Supplies Regulation 2017 and New South Wales Code of Practice for Fluoridation of Public Water Supplies. • The program supports drinking water suppliers to meet the requirements of the Public Health Regulation. 	<p>The program provides an independent and certified testing of treated drinking water samples by NSW Health based upon the sample allocation provided to the different council-owned local water utilities based on ADWG minimum recommendations.</p> <p>Drinking water suppliers are required to verify the quality of their treated drinking water under Part 5 Division 2 Section 34B(d) of the Public Health Regulation.</p>
<u>Fluoridation of Public Water Supplies Act 1957 (NSW) & Fluoridation of Public</u>	Legislation	State	Water fluoridation is strongly supported by NSW Health for protection of public health. The Fluoridation of Public Water Supplies Act 1957 (NSW) gives NSW Health the power to approve fluoridation of public water supplies.	<p>Requirements to add fluoride to drinking water supplies.</p> <p>Includes separate reporting requirements.</p>

Regulatory or Formal Requirement	Type	Jurisdiction	Relevance to Councils	The importance for you
<u>Water Supplies Regulation 2017</u>				
<u>New South Wales Code of Practice for Fluoridation of Public Water Supplies</u>	Code	State	<p>Local water utilities that add fluoride to water supplies must comply with the <u>NSW Code of Practice for Fluoridation of Public Water Supplies</u> to ensure appropriate operation with trained and qualified operators.</p> <p>NSW Health provides a range of support for water utilities for the <u>Fluoridation of drinking water</u>.</p>	Includes generally technical material, which has not been specified in the Act or Regulation. The material in the Code therefore either forms part of the regulatory framework which water supply authorities that fluoridate are required to follow.
<u>Plumbing Code of Australia, which is part of the National Construction Code.</u>	Code	National	<ul style="list-style-type: none"> • The Plumbing Code of Australia, Volume 3 of the National Construction Code, contains technical provisions for design, construction, installation, replacement, repair, alteration and maintenance of: <ul style="list-style-type: none"> • Water services • Sanitary plumbing and drainage systems • Stormwater drainage systems • On-site wastewater management systems • On-site liquid trade waste management systems. 	Sets out the industry standards for plumbing work.
<u>Protection of the Environment Operations Act 1997 (NSW)</u>	Legislation	State	Under the <u>Protection of the Environment Operations Act 1997 (NSW)</u> , sewage treatment above a processing capacity threshold that includes the discharge of wastes or by-products to land or waters requires an <u>Environmental Protection Licence</u> .	The Act provides the statutory framework for managing water pollution in NSW. The EPA regulates discharges to water and land using conditions it places in licences issued under the Act.

Regulatory or Formal Requirement	Type	Jurisdiction	Relevance to Councils	The importance for you
			<p>Where pollution causes or threatens material harm to the environment, there is a <u>duty to report</u> pollution incidents under <u>Section 148</u> of the Act.</p> <p>All licence holders also need to prepare and implement <u>Pollution Incident Response Management Plans</u>.</p>	<p>Councils have the same powers as the EPA for non-licenced activities as Council is the Appropriate Regulator Authority (ARA) for such activities and can issue legally binding notices similar to EPA.</p> <p>The EPA works closely with water utilities to ensure appropriate safeguards are in place to protect human health and the environment. Under the Act there is a duty to notify the relevant authorities if a pollution incident is occurring that causes or threatens material harm to the environment.</p>
<p><u><i>Environmental Planning and Assessment Act 1979 (NSW)</i></u></p>	<p>Legislative Instrument</p>	<p>State</p>	<p>A local water utility will be responsible for providing water and sewerage services to urban land identified in Council’s Local Environmental Plan.</p> <p><u>State Environmental Planning Policy (Infrastructure) 2007</u> specifies where water and sewerage projects can proceed either with or without development consent.</p> <p>For many water and sewerage projects, where development consent is not required, Council is a public authority proponent and the determining authority under <u>Part 5 of the Environmental Planning and Assessment Act 1979</u>, and can prepare and determine a Review of Environmental Factors in accordance with <u>Clause 228 of the EP&A Regulation</u>.</p>	<p>Local Environmental Plans limit what can be done or undertaken in a particular location and in this instance, what may be occurring in the water catchments.</p>

Regulatory or Formal Requirement	Type	Jurisdiction	Relevance to Councils	The importance for you
<u>Competition and Consumer Act 2010</u> (Cth)	Legislation	National	The Australian Competition and Consumer Commission enforces the Competition and Consumer Act and Australian Competition Law in water markets (including enforcement, price setting, monitoring and reporting).	Includes provisions on fitness for purpose of goods.
<u>State Records Act 1998</u> (NSW)	Legislation	State	The <u>State Records Act 1998</u> (NSW) covers the management, protection, control, recovery, public access and archiving of records of public sector bodies including local government.	Sets out record keeping obligations of a public office.
<u>AS/NZS 4020</u> Testing of products for use in contact with drinking water	Standard	National	The Standard requires that products intended for use in contact with drinking water be tested by exposure to test water in order to determine their effect on the quality of water. These products include pipes, fittings, components, and materials used to coat, protect, line, joint, seal and lubricate water supply and plumbing infrastructure.	Standard to test any product coming into contact with drinking water.
<u>Dams Safety Act 2015</u> (NSW)	Legislation	State	<p>Councils that own and operate dams which fit a set of failure consequence criteria must comply with the <u>Dams Safety Act 2015</u>. These dams are referred to as declared dams under the Act. Generally, a dam would be declared if it was to cause loss of life should it fail.</p> <p>The Act and <u>Dams Safety Regulation 2019</u> requires dam owners to have robust safety management systems and risk controls in place. The dams safety management system is based on the asset management system standard, ISO 55001, so aligns</p>	<p>Requirement for dam owners to have robust safety management systems and risk controls in place.</p> <p>Annual reporting requirements.</p>

Regulatory or Formal Requirement	Type	Jurisdiction	Relevance to Councils	The importance for you
			<p>with the asset management approach for water utilities.</p> <p>Every year Councils need to publish a report demonstrating the Council's compliance with the regulation's dams safety standards.</p> <p>Guidance is available from Dams Safety NSW.</p>	
<u>Work Health & Safety Act 2011 (NSW)</u>	Legislation	State	<p>The <u>Work Health and Safety Act 2011</u> (NSW) has numerous responsibilities for the protection of workers. <u>Section 5</u> of the Act states an elected member does not carry the statutory duties.</p> <p>Nevertheless, there are a number of high-risk activities in the operation of a local water utility for all decision makers to be aware of and be familiar with the need for safe systems of work.</p>	Requirement to take reasonable care to avoid acts or omissions which may adversely affect the health and safety of others in Council workplaces.
<u>Water Act 2007 (Cth)</u>	Legislation	National	<p>Under Part 7 of the Commonwealth <u>Water Act 2007</u>, the Bureau of Meteorology is required to collect, hold, manage, interpret and disseminate Australia's water information. Section 126 of the Act places an obligation on persons specified in the Regulations to give certain water information to the Bureau.</p> <p>Council-owned local water utilities that serve more than 10,000 connected properties are required to supply information annually for the <u>National Performance Report</u>. This is normally done through the department's <u>performance monitoring framework</u> so data is only submitted once.</p>	Reporting requirements including annual reporting for council-owned local water utilities that serve more than 10,000 connections.
<u>NSW -Queensland Border Rivers Act 1947 (NSW)</u>	Legislation	State	<p>The 2008 NSW-Queensland Border Rivers Intergovernmental Agreement, as ratified by the <u>Act</u>, contains water sharing arrangements for rivers and certain water storages located on the NSW-Queensland state borders.</p>	Councils located near State borders need to be aware of specific cross border issues.

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<u>ACT-NSW Cross Border Water Resources 2006</u>	Agreement	State/National	This ACT-NSW Cross Border Resources Memorandum of Understanding contains provisions for water sharing between ACT and NSW border regions.	Councils located near State and Territory borders need to be aware of specific cross border issues.

Appendix C. Systems and plans

The following table contains a list of plans that water utilities in NSW need to develop and maintain.

Table 6 List of local water utility systems and plans

Plan	Applicable Legislation or Requirement	Relevant Agencies
Drinking Water Management System	<i>Public Health Act 2010</i> (NSW) (Part 3 Clause 25) Current version of the Australian Drinking Water Guidelines	NSW Health DPE
Recycled Water Management System	Current versions of the Australian Guidelines for Water Recycling	NSW Health DPE
Dams Safety Management System including: <ul style="list-style-type: none"> • Operations & Maintenance Plan • Emergency Management Plan 	<i>Dams Safety Act 2015</i> (NSW) Dams Safety Regulation 2019	Dams Safety NSW
Pollution Incident Response Management Plan	<i>Protection of the Environment Operations Act 1997</i> (NSW)	NSW EPA
Water Sharing Plans	<i>Water Management Act 2000</i> (NSW) & <i>Water Management (General) Regulation 2018</i>	DPE
Local Environmental Plan	<i>Environmental Planning and Assessment Act 1979</i> (NSW)	DPE
Records management system	<i>State Records Act 1998</i> (NSW)	NSW State Archives and Records