Department of Planning and Environment

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Guidance on strategic planning outcome – Make and implement sound strategic decisions

Regulatory and assurance framework for local water utilities

November 2022

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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Contents

1.Introduction

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.

The NSW Department of Planning and Environment is committed that all local water utilities should have in place effective, evidence-based strategic planning. This will ensure utilities deliver safe, secure, accessible, and affordable water supply and sewerage services to customers. It will also ensure they can manage keys risks now and into the future, and in the event of significant shocks. Local water utilities remain responsible for conducting strategic planning.

The department gives assurance of effective, evidence-based strategic planning. Local water utilities not making dividend payments[1] are encouraged, but not compelled, to use the department's assurance framework, experience and capacity to support effective strategic planning.

Through the department's assurance role under section 3 of the Regulatory and assurance framework for local water utilities (PDF, 1613.11 KB) - Regulatory and Assurance Framework - we establish what outcomes we expect effective, evidence-based strategic planning to achieve (see section 3.2 of the Regulatory and Assurance Framework) and assess if a utility's strategic planning achieves these outcomes to a reasonable standard (see sections 3.3 and 3.4 of the Regulatory and Assurance Framework).

We give separate, optional guidance in the department's guidance Using the Integrated Planning and Reporting framework for local water utility strategic planning (PDF, 573.33 KB) to explain how utilities can achieve the strategic planning outcomes to a reasonable standard using the *Integrated Planning and Reporting Framework* for councils under the *Local Government Act 1993*.

1.1. Purpose of this document

This document supplements the Regulatory and Assurance Framework and gives guidance on achieving the outcome of make and implement sound strategic decisions to a reasonable standard.

This guidance is consistent with the objectives and principles established under the Regulatory and Assurance Framework, including being outcomes focused and risk-based.

This document sets out good practice for **all local water utilities** to apply when doing strategic planning to achieve the outcome of make and implement sound strategic decisions.

1.2. Structure of this document

This guidance is structured providing:

[1] Sections 3 and 4 of the Regulatory and Assurance Framework, are also the Guidelines for council dividend payments for water supply or sewerage services, under section 409(6) of the *Local Government Act 1993*. Before taking a dividend payment from a surplus of the council's water supply and/or sewerage business, a council must have in place effective, evidence-based strategic planning in accordance with section 3 of the Regulatory and Assurance Framework.

- the expectations for achieving this outcome to a reasonable standard
- an appendix with optional ‘how to’ guidance that helps utilities achieve assurance expectations
- an appendix providing templates, case studies and tools useful for utilities to achieve assurance expectations.

1.3. Review of this guidance

As part of our commitment to continuous improvement, we will review the performance of the Regulatory and Assurance Framework within 2 years from finalisation. There will also be periodic reviews of the full suite of relevant regulatory and assurance documents, which will happen at least every 5 years.

We welcome feedback on this guidance and will update it when needed based on feedback or a ‘lessons learned’ review following our assessment of strategic planning by local water utilities.

2. Oversight of local water utility strategic planning

Under section 3 of the Regulatory and assurance framework for local water utilities (PDF, 1613.11 KB), the department establishes what outcomes it expects effective, evidence-based strategic planning to achieve (see section 3.2) and assesses whether a local water utility's strategic planning achieves these outcomes to a reasonable standard (see sections 3.3 and 3.4).

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.[2] 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.

For effective, evidence-based strategic planning to occur, the department expects strategic planning to achieve the following outcomes to a reasonable standard:

- 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 **(this guidance)**
- Implement sound pricing and prudent financial management
- Promote integrated water cycle management

A **reasonable standard** is met if the utility considers and addresses an outcome in a way that is:

- **sufficient:** underpinned by evidence-based analysis that supports the conclusions reached
- **appropriate:** underpinned by relevant departmental guidance and industry standard approaches to conduct planning and reach conclusions

[2] Sections 3 and 4 of the Regulatory and Assurance Framework, are also the Guidelines for council dividend payments for water supply or sewerage services, under section 409(6) of the *Local Government Act 1993*. Before taking a dividend payment from a surplus of the council's water supply and/or sewerage business, a council must have in place effective, evidence-based strategic planning in accordance with section 3 of the Regulatory and Assurance Framework.

- **robust:** underpinned by evidence that draws on appropriate sources and recognises and rebuts potential alternative interpretations.

The assessment considerations the department will apply and how these may be addressed are set out in more detail in the Regulatory and Assurance Framework.

3. Guidance on making and implementing sound strategic decisions

Under section 3.2 of the Regulation and Assurance Framework, the department expects utilities to achieve to a reasonable standard the strategic planning outcome **make and implement sound strategic decisions**. This includes considering:

- Based on its understanding of, and adequate consideration of, service needs, risks, and resources, how does the local water utility set service levels and efficient revenue requirements for providing services over an adequate forward period to capture asset lifecycle?
- How are customers engaged in decision-making and informed of choices between service levels, risks, and costs?
- How does the local water utility ensure its long-term financial sustainability, including managing unexpected financial shocks in future periods without having to introduce substantial or socially destabilising revenue or expenditure adjustments?
- How does the local water utility implement service levels and monitor, and report on, performance to understand if it is meeting service levels and managing risks?

3.1. Make and implement sound strategic decisions

The role of local water utilities is to deliver safe, secure, sustainable and affordable water supply and sewerage services to customers and communities, providing public health outcomes, and supporting economic development, liveability, and the environment.

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. Strategic planning and sound strategic decision-making are crucial to identifying and managing key risks to water security, water quality, the environment, and the utility's infrastructure, customers and financial sustainability.

Gaps in utilities' strategic decision-making processes can put existing and future services and assets and ultimately customer services at risk. This may impose significant economic, social, and environmental costs on customers and the broader community.

A sound process to make, implement, adapt, and monitor the success of strategic decisions is critical to managing these needs and risks and ultimately to delivering safe, secure, efficient, and affordable water supply and sewerage services to customers.

Strategic decisions guide the direction of local water utilities. They typically involve 'important and complex decisions',[3] with the need to consider longer-term horizons and trade-offs that require balancing numerous service and broader objectives. There is often a high degree of uncertainty requiring evidence-based strategic planning and the need for engagement with customers and key stakeholders. As highlighted in Figure 1, for the purposes of this guidance, 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, having regard to customer 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.

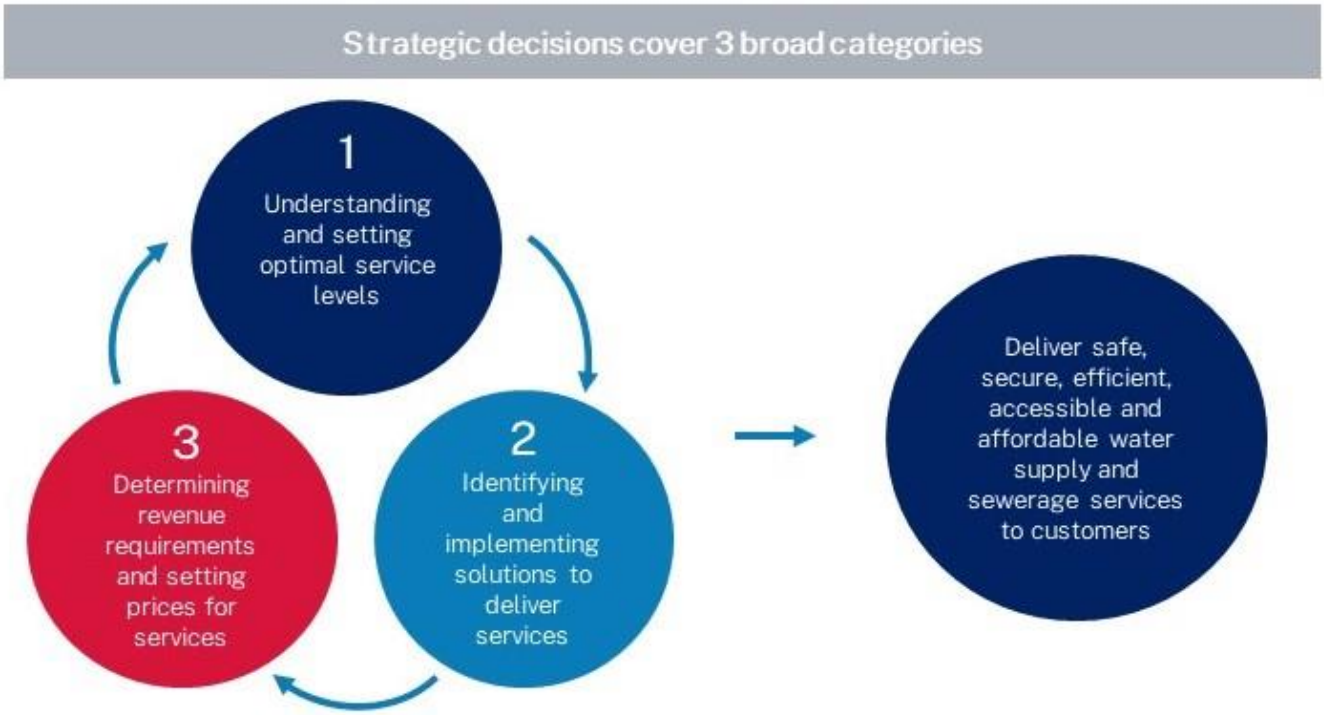
Making, implementing, and monitoring strategic decisions is an adaptive process that requires effective, evidence-based input, analysis, and planning including understanding the local water utility's service needs, risks, and resources. (That is, achieving the other strategic planning outcomes set out in section 3.2 of the Regulatory and Assurance Framework.)

There are clear linkages between the outcome of make and implement sound strategic decisions and other strategic planning outcomes set out in section 3.2 of the Regulatory and Assurance Framework. Figure 1 highlights these linkages. The other strategic planning outcomes (predominantly 'understanding' outcomes) primarily relate to developing the 'right information and analysis, at the right time, from the right part of the water utility business'[4]. These inform the making of strategic decisions, the monitoring of their implementation, and their evaluation and adaptation (including potentially re-making strategic decisions in light of new information and analysis). In this sense, making, implementing, and monitoring strategic decisions follows an iterative process.

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

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

Figure 1: Sound strategic decision-making covers all the strategic planning outcomes



Strategic decision category	Relevance of other outcomes of effective strategic planning
1. Understanding and setting optimal service levels	• Understanding service needs • Understanding water security • Understanding water quality • Understanding environmental impacts • Understanding system capacity, capability and efficiency • Understanding other key risks and challenges
2. Identifying and implementing solutions to deliver services at efficient costs	• Understanding solutions to deliver services • Understanding resourcing needs • Promote integrated water cycle management
3. Determining revenue requirements and setting prices for services	• Understanding revenue sources • Implement sound pricing and prudent financial management

Source: NSW DPE

In the following sections we set out **what** the department's expectations are for **making and implementing sound strategic decisions** to a reasonable standard. In Appendix A and Appendix B, we provide optional guidance and case-studies and tools on **how** some of these expectations could be met.

3.2. Expectations of local water utilities when making and implementing sound strategic decisions

This section sets out the department's assurance expectations for achieving the outcome of make and implement sound strategic decisions to a reasonable standard.

The local water utility's strategic decisions should be made by councillors

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

Councillors, or the board of a local water utility[5], should make strategic decisions covering water supply and sewerage services, and their service levels. This includes the solutions to deliver these services and the prices that recover – part or all – of the costs of delivering services from current and future users and developers. Councillors should also consider potential risks and mitigation actions when making strategic decisions. Finally, councillors are responsible for monitoring performance to ensure accountability in implementation and to ensure strategic decisions remain fit for purpose, manage relevant risks, and ensure safe, secure, efficient, and affordable services for customers of local water utilities.

Staff within local water utilities are responsible for implementing these strategic decisions and for making other operational decisions. Staff 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 adaptive strategic decision-making process.[6]

The local water utility should make, implement, monitor, and adapt strategic decisions following a sound process

As Figure 2 highlights, a sound strategic decision-making process is adaptive and should never really 'end'. Rather, the local water utility should use a circular process of regular iteration in response to new and emerging information in its operating environment to make, implement, monitor, and adopt strategic decisions. This is critical to managing the numerous risks and challenges facing local water utilities, which in part result from changes and uncertainty in their operating environment.

[5] Under Chapter 9, Part 2 of the Local Government Act, elected representatives, called 'councillors', comprise the governing body of the council. The following local water utilities that are not covered by the Local Government Act and exercise water service functions under the Water Management Act 2000 have a board as their governing body: Cobar Water Board, Essential Energy, and WaterNSW for the Fish River Water Supply. A county councils established under Chapter 12, Part 5 of the Local Government Act with the function of providing water supply and/or sewerage service has a governing body from among the councillors of the constituent councils elected by its constituent councils. In the following section the term 'councillors' refers to members of all these governing bodies.

[6] Section 335 of the Local Government Act set outs the function of the general manager of a councils, including to conduct the day-to-day management of the council in accordance with the strategic plans, programs, strategies and policies of the council; implement, without undue delay, lawful decisions of the council; advise the mayor and the governing body on the development and implementation of the strategic plans, programs, strategies and policies of the council; and ensure that the mayor and other councillors are given timely information and advice and the administrative and professional support necessary to effectively discharge their functions.

Water supply and sewerage service investments usually involve large and irreversible investments with long asset lives and can take years to plan and construct. Decisions made today on service levels, servicing solutions and pricing will influence future system capacity, the available solutions, and resourcing for an extended period. A proactive approach to responding to potential changes in local water utilities' operating environments, revealed by data and information, 'is better than reacting to incidents or responding to regulators.'[7]

A sound strategic decision-making process should consider the following iterative steps:

- 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, and solutions and resources needed to address them)
- 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.

Figure 2: Sound strategic decision-making is an iterative and adaptive process

Source: NSW DPE

[7] NSW Department of Planning and Environment, Water industry induction handbook for decision-maker, February 2022, p10

The following section sets out further expectations on the iterative steps of a sound decision-making process, including for the specific strategic decision categories set out in Section 3.1.

The local water utility should make strategic decisions framed by a clear set of problems and objectives

A clear problem and objective should frame a sound strategic decision-making process. This could be in relation to service objectives (including water security, quality, environmental, and amenity outcomes), price outcomes for customers, or safety, operational or financial outcomes for the local water utility. As a first step in the decision-making process, it is critical councillors have a clear understanding of why they are making a strategic decision, the context or relevant background to the decision, and the outcome the decision seeks.

In clarifying the problem and objectives, councillors should clearly understand and articulate the following.

- The **problem** in terms of identifying any unmet need, regulatory requirement, risk, challenge, or opportunity that may (or may not) require action to manage the positive and negative impact on its customers (including the consequences of deferral).
- The **context** of the decision in terms of service needs, risks, and resources (as gathered through achieving the other outcomes set out in section 3.2 of the Regulatory and Assurance Framework) and any broader policy or strategic alignment related to the services the local water utility provides.
- The **objective** councillors seek to achieve and how they measure success. As much as possible, the objectives should focus on service levels, needs, risks, and priorities, rather than outputs or activities, and promote an integrated approach to water cycle management.[8] This enables councillors to assess all options or solutions to achieve the objectives, and to manage key risks subject to the local water utility's operational, resourcing, and financial constraints.
- The **timeframe** for the decision in terms of what and when key strategic decisions are required to support which objective.

In Appendix B, we give an example of this approach in the 'problem definition' stage in the development of a business case undertaken before developing the 'options analysis' stage.

The local water utility should base strategic decisions on sound evidence - that is, based on its understanding of service needs, risks, solutions, and resources to address needs and risks as gathered by achieving the strategic planning outcomes set out in the Regulatory and Assurance Framework.

A sound strategic decision-making process requires effective, evidence-based input and analysis, including understanding the utility's service needs and risks, and the solutions and resources required to manage them. It gathers this understanding through achieving to a reasonable standard the strategic planning outcomes set out in section 3.2 of the Regulatory and Assurance Framework (see Figure 1: **Sound strategic decision-making covers all the strategic planning outcomes**).

Importantly, a sound evidence base should consider:

[8] See guidance on the outcome of promote integrated water cycle management

- benefits and costs to customers and the community as assessed under the outcomes of understanding solutions to deliver services and understanding resourcing needs
- customers' needs, values, and preferences as assessed under the outcome of understanding service needs and through engagement with customers and key stakeholders, including on trade-offs between service levels and cost/prices
- recovery of efficient costs and funding sources available for cost recovery; cost reflective, fair and equitable pricing; and price stability and affordability. This is assessed under the outcomes of implement sound pricing and prudent financial management and understanding revenue sources
- resilience and adaptability of the solutions, including considering key risks. This is assessed under the outcomes of understanding solutions to deliver services.

As councillors are accountable for decisions and omissions, they are responsible for satisfying themselves that they have received, considered, and consulted on the 'right information, at the right time, from the right part of the water business'[9] to inform their strategic decisions.

For the specific strategic decision categories of setting optimal service levels, identifying and implementing solutions to deliver services, and determining revenue requirements and setting prices for service (see Figure 1), making a decision based on sound evidence includes the following.

Setting optimal service levels

The strategic decision on setting optimal service levels should be informed by an understanding of service needs, risks, solutions and resourcing needs.

Councillors should have a sound understanding of the following.

- Minimum service levels consistent with the requirements and expectations of the utility's regulators as reflected in legislation, regulation, regulatory instruments (such as licences) and guidance material. These are non-discretionary service levels and outcomes that should form part of the utility's strategic planning (for example, complying with minimum water quality and environmental requirements). The guidance on the outcomes of understanding service needs, understanding environmental impacts, and understanding water quality covers this in more detail.
- Where the utility has discretion to choose a higher or lower level of service, its customers' preferences and willingness and capacity to pay in relation to these potential levels of service. The guidance on the outcomes of understanding service needs and understanding revenue sources covers this in more detail.
- Any operational constraints, risks or opportunities that may emerge (including in relation to environmental factors, access to natural resources, asset capacity, technology, skills, and available operational and financial resources) that could impact the service levels local water utilities can provide. See guidance on the planning outcomes of understanding system capacity, capability and efficiency; understanding solutions to deliver services; and understanding resourcing needs.

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

- Other key risks and challenges in the provision of services to customers. See guidance on the planning outcome understanding other key risks and challenges.

Identifying and implementing solutions to deliver service

The strategic decision on identifying and implementing solutions to deliver services should be informed by an understanding of solutions to deliver services, resourcing needs and should consider promoting integrated water cycle management.

Councillors should have a sound understanding of the following.

- The broad range of build and non-build solutions to achieving the service objective.
- The economic, social, and environmental costs and benefits to the community of potential solutions to achieve the service level objective, relative to the 'base case' scenario. This includes quantifying theses costs and benefits as much as practicable. In cases where monetisation is not feasible, the utility should carry out a qualitative assessment of these impacts. The guidance on the outcomes of understanding solutions to deliver services covers this in more detail.
- The financial impact on the utility of the solutions. The guidance on the outcomes of understanding solutions to deliver services and understanding resourcing needs covers this in more detail. This involves considering whether:
    - the solutions represent a least-cost or higher-cost result to achieving the objective
    - there is a sustainable source of funding available to support the delivery of the solutions.
- How the solutions may perform, including barriers to delivery, under alternative states of the world or scenarios (for example, climate change, demand, costs). This includes considering opportunities for 'low regret' or staged decision-making options. The guidance on the outcome of understanding solutions to deliver services covers this in more detail.
- Other considerations beyond financial, distributional, or economic performance. This includes, but is not limited to, considering community acceptability, other environmental impacts and/or regulatory barriers. The guidance on the outcome of understanding service needs cover this in more detail.

Determining revenue requirements and setting prices for service

The strategic decision on determining revenue requirements and setting prices for services should be informed by an understanding of revenues sources and implement sound pricing and prudent financial management.

Councillors should have a sound understanding of the following.

- The revenue required to provide services in a way that recovers efficient costs and maintains the financial sustainability of the local water utility over the medium to longer term as well as factors that may materially affect revenue requirements.
- The potential revenue sources available to contribute to the costs of providing the services.
- Setting prices to recover the utility's revenue requirement, and to send efficient signals to developers and users regarding the cost of providing services.
- Customers' ability to pay for services, including understanding the impacts on customers now and in the future of changes to price levels and price structures.

- The impacts on services to customers and/or the financial performance of the utility if prices are set at levels that do not achieve full-cost recovery (for example, where there is a shortfall between expected revenue to be recovered from customers and the revenue required to recover the cost of delivering services).

We give further details in the guidance on the outcomes of understanding revenue sources and implement sound pricing and prudent financial management.

The local water utility should make, record and publish strategic decisions

Making a strategic decision involves considering the best available information and the exercise of informed discretion. It requires filtering a large amount of complex information and making trade-offs that impact local water utilities, customers and the community. This requires councillors to use decision-making criteria and ultimately judgment on which criteria may be more or less important as well as apply qualitative considerations and sound business judgement (see example in Appendix B on considering different solutions to manage levels of water security).

Importantly, there is no one-size-fits-all decision-making criteria that indicates a utility should always select one option or solution regardless of other considerations and implications.

While it is not possible to quality check strategic decisions in the same manner as physical products, the process of making strategic decisions can minimise the risk of errors in judgment. This includes transparency around the decision-making process.[10]

Transparently publishing and communicating strategic decisions is a key element in ensuring:

- customers and the broader community understand the services they should expect and/or prices levied
- councillors are held accountable for strategic decisions and the inherent trade-offs made in making these decisions
- staff within local water utilities are held accountable for implementing these strategic decisions.

Accordingly, local water utilities should record and publish:

- their strategic decisions and the objectives they seek to achieve
- how the strategic decision achieves the objective and relates to other strategic planning or processes, where relevant
- the process for making the decision, including
    - the information and analysis considered (for example, evidence on the performance of options)
    - the decision-making criteria and other considerations applied to select one option over another (for example, ease of implementation, benefits, costs, risk levels, financial impacts on specific customers or parts of the community)

[10] 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.

- implementation implications (including actions and timeframes) for staff within local water utilities, and for customers and broader community.

Recording and publishing requirements include (but are not limited to) obligations under the *State Records Act 1998*, the Integrated Planning and Reporting framework, other requirements of the *Local Government Act 1993*, Local Government (General) Regulation 2021, the *Government Information (Public Access) (GIPA) Act 2009* and the GIPA Regulation 2009, which require councils to publish certain documents, free of charge, on their website.[11]

For the specific strategic decision category of determining revenue requirements and setting prices for service (see Figure 1), making, recording, and publishing strategic decisions includes the following.

Determining revenue requirements and setting prices for services

The strategic decision on determining revenue requirements and setting prices should be made, recorded, and published with reasoning available for anyone to see.

Councillors should record and publish:

- the revenue requirement for each service for the utility to remain financially sustainable
- prices to be levied on all customer groups for services the local water utility provides
- the process for making the decision and the decision's compliance with various guidelines and pricing principles, including guidance on strategic planning outcome of implement sound pricing and prudent financial management
- the expected revenue to be recovered from the prices, and management of any revenue shortfall from prices (relative to the local water utility's revenue requirement)
- pricing impacts on key customer groups
- any dividends to be paid to the council(s)
- adjustments to prices, including the revisiting of any strategic decision on prices in terms of timeframe and/or in response to certain events.

The local water utility should implement strategic decisions, monitor performance, and then evaluate and adapt them (including potentially re-making them)

Once councillors have made strategic decisions, staff within local water utilities are responsible for implementing them, reporting on performance, and gathering information to evaluate whether they remain fit for purpose as new information becomes available. If necessary, strategic decisions should be adapted or remade (that is, 'restarting' the circular process in Figure 2).

Sound strategic decision-making should be adaptive and flexible to changing circumstance and/or the inherent uncertainties in providing water and sewerage services, consistent with the principle of

[11] Office of Local Government, Integrated planning and reporting framework Guidelines for Local Government in NSW, September 2021, p3.

continuous refinement and evolution as part of proactive risk management.[12] This is to manage the changes that occur over time in the:

- service objective and other, broader strategic objectives of the local water utility
- regulatory requirements
- characteristics of the customer base and the customers' needs, values, and preferences and ability and willingness to pay for services (for example, levels of service for water security, water reuse)
- risks, operational constraints or opportunities that may emerge in relation to environmental factors (climate, natural disaster risks), access to natural resources, asset capacity, capability and efficiency and technology, skills, and available operational and financial resources. For example, the level of services the utility can (or cannot) provide to some or all customers may evolve in response to climate and natural disaster risks (see case study in Appendix B), changes in population or customer preferences. As a result, strategic decisions should be adaptive to these uncertainties as well as external disruptors, including technological advances.

As such, strategic decisions should be reviewed, recorded, and published in response to material changes in measured performance and/or material changes in the operating environment (see below).[13]

A sound process for monitoring, investigating, and reporting performance ensures:

- councillors are accountable for strategic decisions and omissions
- councillors can hold staff within local water utilities accountable for implementation or execution of strategic decisions
- the strategic planning process is iterative and where necessary adaptive to the changing operating environment (that is, 'restart' the circular process in Figure 2 to test whether the strategic decisions driving the direction of the local water utility are still appropriate).

Local water utilities should:

- have a sound ongoing process of monitoring performance, investigating the drivers of performance, and evaluating the 'success' of the strategic decisions. This process should consider the challenges in assessing the effectiveness of adaptation action where there can be large time lags between an intervention and any measurable impacts. This can make it difficult to attribute outcomes to a particular adaptation action alongside other changes that may be occurring. Regular operational and project/activity reporting to the council is important for good governance of local water utilities and the proactive management of performance.[14]
- identify and report a range of metrics to assess expected and actual performance

[12] The Office of Local Government, Integrated Planning and Reporting Framework, Guidelines for Local Government in NSW, September 2021 note on page 10 that councils should make appropriate evidence-based adaptations to meet changing needs and circumstances.

[13] This is broadly consistent with previous guidance. For instance, the NSW Office of Water's *NSW Water and Sewerage Strategic Planning Guidelines*, 2011 (p 47), suggest a customer attitude survey at least once every 2 to 4 years. It is also consistent with timeframes in the IP&R process, for example to review Community Strategic Plans and Community Engagement Strategies about once every 4 years.

[14] NSW Department of Planning and Environment, Water industry induction handbook for decision-maker, February 2022, p18.

- identify key triggers or signposts that would prompt review of strategic decisions (such as optimal service levels, solutions and prices), to ensure the best value and outcomes for customers and the community and minimise the need for destabilising expenditure adjustments or revenue and pricing adjustments. See Appendix A for how-to guidance.

For the specific strategic decision categories of identifying and implementing solutions to deliver services, determining revenue requirements, and setting prices for service (see Figure 1), implementing strategic decisions, monitoring performance and then evaluating and adapting strategic decisions includes the following.

Identifying and implementing solutions to deliver services

The strategic decision on identifying and implementing solutions should be monitored, reported and evaluated to support accountability and adaptive decision-making.

Councillors should include monitoring and reporting of:

- comparison of expected and actual service levels covering a range of outcomes that matter most to customers and regulators, which could include:
    - availability and reliability of services/supply
    - response to system faults or supply interruptions
    - water pressure
    - customer complaints
    - the needs of customers that are vulnerable or have special needs
    - water quality
    - environmental performance/impact
- explanation of key temporary and ongoing factors responsible for any under-performance
- description of the ongoing process to rectify any under-performance and address future risks including:
    - further monitoring, investigating and reporting
    - considering additional interventions (for example, investment) or compensation arrangements (for example, rebates or credits)
- opportunities to 'reset' or remake strategic decisions on servicing solutions by considering:
    - impacts on service performance of the local water utility and service levels it could provide
    - impacts on financial performance of the local water utility
    - price and bill impact on customers from potential changes to the efficient costs of providing services.

Determining revenue requirements and setting prices for services

The strategic decision on determining revenue requirements and setting prices should be monitored, reported and evaluated to support accountability and adaptive decision-making.

Councillors should include monitoring and reporting of:

- financial performance, covering
    - costs incurred in delivering solutions relative to expected costs
    - revenue received from prices levied on customers and other parties relative to expected revenue
    - relevant financeability[15] metrics, and any dividends paid to the councils (or constituent councils in the case of county councils)
- opportunities to 'reset' or remake strategic decisions on setting prices, such as changes to the utility's revenue requirements, the proportion of the revenue requirement to be recovered from the customer base as a whole and/or the proportion of the revenue requirement to be recovered from specific customer groups, considering factors such as:
    - the financial performance of the utility
    - the utility's operational performance, including its scope for further efficiency gains and its performance in delivering services to agreed/required standards
    - the 'impactors' and 'beneficiaries' of the utility's expenditure
    - price and bill impact on customers.

[15] Financeability refers to the ability of a business to gain enough cash flow to be financially sustainable and to raise funds to manage its activities and provide its water and sewerage services over the pricing period.

Appendix A: Optional how-to guidance for making and implementing sound strategic decisions

To support utilities in achieving the strategic planning outcome **make and implement sound strategic decisions** to a reasonable standard, we offer the following optional how-to guidance.

The optional how-to guidance in this section covers guidance across the three sets of iterative strategic decision that may help address the expectations set out in section 3 of this guidance document:

1. **Setting optimal service levels** that meet regulatory requirements as well as customers' needs, values and preferences, having regard to customer 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.

Making and implementing sound strategic decisions when setting optimal service levels

This section provides additional how-to guidance as well as a case study to guide local water utilities when making and implementing strategic decisions related to setting optimal service levels.

The following questions can help determine whether a sound strategic decision-making process has been undertaken when setting optimal service levels.

- Is the problem, context, and objective adequately defined to support informed decision-making on options, including to allow for consideration of all viable means of achieving these outcomes?
- Is the timeframe for the decision clear? What are the consequences of deferring the decision?
- Is there a clear understanding of the minimum service levels the utility will provide consistent with the requirements and expectations of its regulators as reflected in legislation, regulation, regulatory instruments (such as licences), and guidance material? These are non-discretionary service levels and outcomes that should form part of the utilities' strategic planning (for example, complying with minimum water quality and environmental requirements).
- Is there a clear understanding of where local water utilities have discretion to choose a higher or lower level of service? Is there a clear understanding of customers' preferences and willingness and capacity to pay in relation to these potential levels of service?

- Are there current or potential future operational constraints or opportunities that may emerge (including environmental factors, access to natural resources, asset capacity and technology, skills and operational and financial resources available) that could impact the service levels local water utilities can provide?

Example: Understanding service needs, risks, and resources when making strategic decisions on levels of water security

Local water utilities have a responsibility to ensure their communities have a safe and secure supply of water. However, as periods of low rainfall are inevitable and expected to increase in future, financially costly interventions to increase supply or socially costly interventions to restrict demand can be necessary to align the supply and demand of water to minimise the probability of running out of water.

Communities understand the need for additional supply measures if the financial costs are not prohibitive, or additional demand-management measures if they aren't overly frequent, severe, or long-lasting. Depending on the key characteristics of the customer base and their preferences, customers some local water utilities supply may be more willing to pay to receive a higher level of water supply security that either minimises the need for restrictions or the likelihood of running out of water.

However, determination of the levels of water supply security that are acceptable requires an understanding and balancing of community preferences for service outcomes, the associated costs (social, economic and environmental), and the future constraints on the water supply system.[16]

Example: Identifying key triggers or signposts that prompt review of strategic decisions – setting optimal service levels

As climate variability and weather impact local water utilities, resilience to these factors is critical to ensure the utility can continue to meet essential services to communities under these increasingly changing conditions.

Identifying key triggers or signposts that prompt review of strategic decisions on service levels can ensure the best value and outcomes for customers and the community and minimise the need for destabilising expenditure adjustments or revenue and pricing adjustments. Appendix B provides a case study on water security.

- Examples of climate-related triggers include:

- Water availability (for example dam levels)

- Material changes in demand as a result of climate change

[16] A Killen, Water Security Levels of Service, Water e-Journal Vol 4 No 1, 2019; accessible from: https://www.awa.asn.au/resources/latest-news/business/assets-and-operations/water-security-levels-of-service

- Customer expectations of water security

- Significant changes in customer demographics and/or customer willingness or ability to pay

- Extreme events (for example, bushfires and storms).

There may be additional metrics for evaluating performance in relation to climate-related triggers. For example, the extent to which the preferred solution provides the flexibility to respond to the climate trigger.

Making and implementing sound strategic decisions when identifying and implementing solutions

This section provides additional how-to guidance as well as a case study to guide local water utilities when making and implementing strategic decisions related to identifying and implementing solutions to deliver services at efficient cost, now and into the future.

The following questions can help determine whether the utility has undertaken a sound strategic decision-making process when identifying and implementing solutions.

- Is there a clear link between the optimal service levels and the solutions considered?
- Was there a transparent assessment process of a reasonable range of potential options to achieve the objective, including consideration of non-built options, risks, customers' expectations, and opportunities for innovation before the investment decision was locked in?
- Is it clear how the information from other strategic planning outcomes and sub-outcomes has been used to reach the decision on the preferred solution?
- Is there a clear outcome of the decision-making process (for example, agreement to progress solution X or Y)?
- Are there clear next steps?
- Is it monitoring and reporting on the right service, operational, and financial outcomes to support accountability in implementing the strategic decisions?

Example: Applying decision-making criteria when making a strategic decision on identifying and implementing solutions to provide water security

In identifying and implementing solutions to achieve a water security service objective, a council may be comparing the performance of recycled water (Solution 1), with a more traditional solution involving the construction of a new dam (or dam upgrade).

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- Solution 1 delivers greater economic, social, and environmental value to the community. This is a cost benefit analysis (CBA) measure from a community or society perspective (often known as an economic appraisal, which measures 'value for money'). In this example, the costs are shared

across the community, but a sub-set of the community receives the social and environmental benefits.

- Solution 1 is a higher financial cost option than Solution 2 as measured through a financial appraisal.
- Both Solution1 and Solution 2 have other relevant considerations including community attitudes and potential barriers.

In this example, while both solutions may achieve the water security service objective, it may be the councillors place greater weight on the results of the economic appraisal than the financial appraisal. As such, while Solution 1 represents a higher cost solution, its overall performance is assessed as 'better' than Solution 2.

Table 1. Identifying the preferred solution should consider the performance of the solutions across a decision-making criterion

Category	Solution 1	Solution 2
Economic performance (that is, social, economic, and environmental impact)	Performs better	Performs worse
Financial performance	Performs worse	Performs better
Distribution of costs and benefits	Performs worse	Performs better
Other considerations (community acceptance, regulatory barriers)	No significant difference	No significant difference
Overall performance	Performs better	Performs worse

Source: DPE

Note: Better performance is indicated by higher economic, social and environmental net benefit, lower financial cost, limited distributional impacts, no identifiable barriers). Worse performance is indicated by lower net benefit, higher financial costs, greater distributional impacts.

Making and implementing sound strategic decisions when determining revenue requirements and setting prices for services

The following questions can help determine whether a utility has undertaken a sound strategic decision-making process when determining revenue requirements and setting prices for services.

- Does the revenue requirement capture the full efficient cost of the implemented solutions, accounting for the lifecycle of the assets and any resilience measures (including any pre-planning) to achieve the desired service level?
- Are the prices and charges likely to recover the revenue requirements to ensure the utility's financial sustainability and allow appropriate investment in infrastructure?
- Do prices send efficient signals to developers and users regarding the cost of providing services?

- What are the impacts of prices on customers? Do customers have the capacity to pay? Will there be a need for alternative funding solutions? How reliable are these alternatives?
- Is there a need to set prices below efficient levels due to affordability concerns? What would be the impacts on the utility (and the council) and/or on future customers in terms of impact on quality of services or higher future prices?
- Do prices promote a path of long-term price stability?

Example: Considering whether to defer full cost recovery in response to key events impacting services

If a local water utility is required to incur large costs in response to an unforeseen event, such as significant flooding, there are options available to assist in minimising the impact on customers.

A utility's prices may not necessarily need to be set to recover its revenue requirement in every year. Rather, to allow for a smooth price profile, prices could be set to recover these costs in aggregate over a specified multi-year period in net present value (NPV) terms.

However, this can create intergenerational equity issues between current and future customers and needs to be balanced against the need to send efficient price signals to customers and maintain the financial sustainability of utilities.

To understand which option is the most appropriate given this unforeseen event could require re-evaluating the three sets of iterative of strategic decisions (Figure 1) and 'restarting' the circular process for making sound strategic decisions (Figure 2).

This will provide several options that could be considered to manage the key event including re-making the decision on optimal service levels, re-making the decision on solutions to achieve the service objectives, and/or re-making the decision on revenue requirements and prices.

Appendix B: Templates, case studies, and tools

To support utilities in achieving the strategic planning outcome of **make and implement sound strategic decisions** to a reasonable standard, we give the following optional templates, case studies and tools.

Case studies – Making and implementing strategic decisions relating to water security

This section provides a case study on water security covering the three sets of iterative decisions.

1. **Setting optimal service levels** that meet regulatory requirements as well as customers' needs, values and preferences, with regard to customer 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.

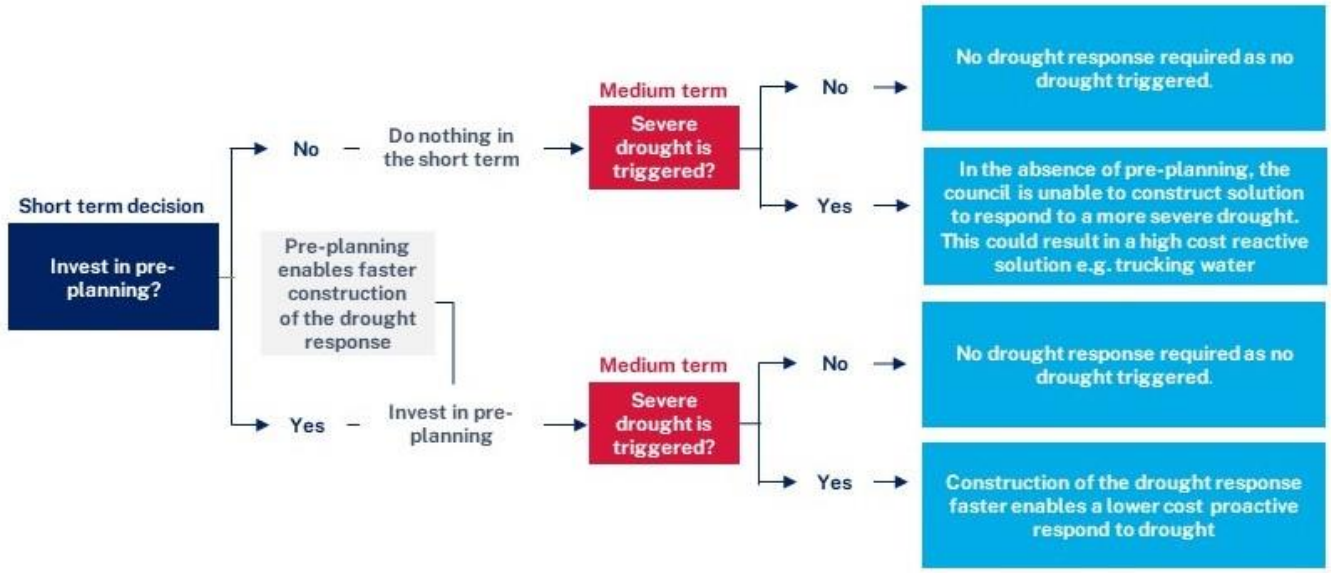
The aim is to show these are interrelated strategic decisions (as per Figure 1) and that the decision-making process is iterative (as per Figure 2).

Example

The population of a small council region is forecast to increase by 35% over the next 30 years. As population increases, so too will the demand for water to service the region's needs. At the same time, climate change is likely to lead to further declines in average rainfall and increased temperatures, reducing the yield from climate-dependent sources and further increasing demand.

Current infrastructure can only supply the community with a limited amount of water at certain times or in certain situations, so the local water utility needs to be in a position to increase the water supply to meet future demand. However, future demand and supply, and thus the need to invest, is uncertain, impacted by the likelihood and severity of future droughts, climate change, and population growth. Investing too much too early or too little too late could impose unnecessary costs on customers and the community. Conversely, delaying investment could mean the local water utility is not in the position to respond quickly enough, for example, if a drought is more severe than expected (see indicative example shown in Figure 3).

Figure 3. Pre-planning can ensure local water utilities are in a position to respond to risk and uncertainty



Source: NSW DPE

To ensure the local water utility is in a position to deliver water services consistent with the expectations of customers, regulators, and other key stakeholders, it used strategic decision making (including considering the value of adaptive planning) to:

- set the service levels related to water security
- identify and implement solutions to deliver services to meet service levels at efficient costs
- identify revenue requirements and set prices.

Setting optimal service levels related to water security

In identifying the preferred service level, the council considered multiple possible levels.

- The council could set the level of service such that the likelihood of running out of water would be zero. In other words, there is sufficient enduring supply[17] to meet demand for water in the region. However, to ensure there is zero likelihood of running out of water would require significant investment in rainfall-independent supply (such as recycling and/or desalination), potentially imposing a significant cost on the community.
- Conversely, if the community was willing to accept a lower level of service, such as, increasing the likelihood of running out of water to 0.1%, it would reduce the amount of enduring supply required. While this would increase the social cost imposed on the community (by increasing the likelihood of running out of water), it would reduce the cost of delivering water security to the area.

[17] An amount of water that can be supplied confidently, to meet demand for water in a city or region, irrespective of the duration and intensity of a drought. https://water.dpie.nsw.gov.au/plans-and-programs/greater-sydney-water-strategy/glossary

To understand whether the costs savings associated with a lower level of service outweighed the additional cost to the community (in the form of increased risk of running out of water), councillors drew on information from a range of sources, including evidence covering the following.

- The type, size, and timing of solutions required to meet the alternative levels of service in the short, medium, and long term, under various states of the world. This indicated that under the *worst-case* (high demand, dry climate change), an additional three rainfall-independent supply schemes (such as recycling, or where relevant, desalination) would be required to meet the higher level of service, compared to only one rainfall-independent supply scheme under the lower level of service.
- The financial cost to the local water utility of delivering each level of service, which indicated that the higher level of service would require construction of an additional rainfall-independent supply scheme in the short term.
- The social economic and environmental costs and benefits imposed on the community, which indicated that the lower level of service would increase the risk of running out of water (and thus impose social and economic costs on the community) but the higher level of service would involve an additional environmental cost to the community associated with increased energy consumption.
- Incremental service levels valued by customers, including their ability and willingness to pay. This indicated that while customers valued water security, their willingness and capacity to pay was not sufficient to deliver the higher level of service (that is, the incremental costs outweighed the customers' ability and willingness to pay).
- Broader regulatory and community considerations, which indicted there were no material differences between the two levels of service.

In this example, the solutions originally identified to deliver water security were rainfall-independent supply schemes. However, some forms of rainfall-independent supply schemes (such as purified recycled water, or where relevant, desalination) may be an alternative following extensive customer and stakeholder engagement and consideration of key risks.

On this evidence base, the councillors determined that the lower level of service (that is, a likelihood of running out of water of 0.1%) was the preferred level of service.

Table 2. Case study – comparing the performance of alternative levels of service

Category	Higher level of service	Lower level of service
Economic performance (that is, social, economic, and environmental costs and benefits)	Performs better	Performs worse
Financial performance	Performs worse	Performs better
Other considerations (community acceptance, regulatory barriers)	No significant difference	No significant difference
Overall performance	Performs worse	Performs better

Source: DPE

Note: Better performance is indicated by higher economic, social and environmental net benefit, lower financial cost, limited distributional impacts, no identifiable barriers). Worse performance is indicated by lower net benefit, higher financial costs, greater distributional impacts.

Identifying and implementing potential solutions

Following the selection of the lower level of service as the preferred service level, the next step is to identify and implement potential solutions to deliver the level of service.

The strategic planning the local water utility adopted identified three broad approaches to delivering water security to the area.

- Solution 1: Desalination (without pre-planning)
- Solution 2: Purified recycled water
- Solution 3: Desalination with pre-planning

To understand whether the costs savings associated with a lower level of service outweighed the additional cost to the community (in the form of increased risk of running out of water), councillors drew on information from a range of sources, including evidence covering the following.

- The financial cost to the local water utility of delivering each solution, which indicated the desalination solution without pre-planning was the lowest cost solution. The purified recycled water solution provided cost savings (or benefits) in the sewerage system.
- The social, economic, and environmental costs and benefits imposed on the community, which indicated the desalination solutions involved an additional cost to the environment.
- The timeframe required, allowing for extensive customer and stakeholder engagement and consideration of key risks, to implement purified recycled water. This indicated that purified recycled water is unlikely to be feasible in the short term.
- The performance of the solutions under alternative states of the world, which indicated that desalination with pre-planning provided the greatest flexibility to respond to drought. However, this solution involved an additional cost of planning.

On this evidence base, the councillors selected desalination without pre-planning as the preferred solution.

Identify revenue requirements and set prices

Following the selection of the level of service, and preferred solution, the next 'step' was to identify revenue requirements and to set prices. To inform the decision around prices, the local water utility drew on information from a range of sources, including information relating to:

- potential revenue sources
- customers' willingness and capacity to pay
- potential equity impacts/considerations.

Based on this evidence, councillors decided to implement prices that would enable the utility to recover its revenue requirement (that is, efficient costs) from users of the service and send efficient price signals.

Impact of unforeseen events

As discussed above, in certain circumstances, it may be appropriate to revisit some strategic decisions more regularly than others or in response to certain events. The local water utility identified water availability (that is, dam levels of below 50%) as a trigger to review levels of service, solutions and prices, to ensure the best value for customers and the community maintained at the lowest overall cost.

Two years after the strategic planning was undertaken, the area experienced a drought more severe than expected and dams dropped to 50%. As a result of this trigger, the local water utility identified 2 broad potential solutions.

- Continue to deliver the existing level of water security. This would require trucking in water to the area, at a significant cost, but would ensure that the area did not run out of water.
- Do not truck water, let the level of service deteriorate, and impose restrictions on the community. This would result in a cost saving (in the form of avoided cost of trucking water) but would impose additional social costs on the community.

Based on evidence from a range of sources, the councillors decided to continue to deliver the existing level of water security by trucking water to the area, as deterioration in the level of service was seen to impose too great a cost on the community.

As discussed above, trucking water to the area involved a significant cost, which meant the existing revenue requirement and associated prices (set when the strategic planning was originally undertaken) no longer recovered the cost of delivering water security. In response, the local water utility identified potential solutions.

- Increase prices to reflect the increased revenue requirement. Given the significant cost of trucking water to the area, this would likely dramatically increase prices.
- Do not increase prices and experience a deterioration in financeability metrics.
- Do not increase prices to reflect the increased revenue requirement nor experience a deterioration in financeability metrics, but rather seek funding from elsewhere – for example, a grant from the NSW Government on the basis that customers in the area are unable to pay cost-reflective charges.

Based on evidence from a range of sources (primarily related to capacity to pay and the local water utility's existing financial status), councillors selected not to increase prices and experience a deterioration in financeability metrics. Notably, given a limit to how much such metrics could decline, this is a decision that would need periodic monitoring and review.

Importantly, if the local water utility had adopted an alternative level of service or solution, the need to react quickly (and truck water) would not have eventuated.

- A higher level of service upfront (which would have delivered a larger enduring supply and ensured the area would not run out of water) would have delivered sufficient enduring supply to ensure the area would not run out of water.
- Pre-planning would have ensured the local water utility could construct a drought response desalination in the condensed timeframe available.

This would have avoided the need for high-cost, reactive solutions, and the potential to introduce substantial or socially destabilising revenue and expenditure adjustments. This highlights the need

to consider the broad range of impacts (economic, financial) of alternative levels of service and solutions under a range of scenarios.

Further examples:

Examples of strategic planning for water security are available in a range of places, including the following:

- Central Coast Water Security Plan (2021), available at https://www.yourvoiceourcoast.com/sites/default/files/2021-08/draft_central_coast_water_security_plan.pdf
- Bega Valley Water and Sewer Strategy (2020), available at https://begavalley.nsw.gov.au/files/Water-and-Sewer-Strategy-2020-23-July-2022.pdf?v=1661352347

Tools

Guidance is available in a range of places, including the following:

Strategic decision-making: Defining the problem and objectives

- NSW Treasury, Problem definition template to Business Case Guidelines (2018), available at: https://www.treasury.nsw.gov.au/sites/default/files/2018-09/TPP18-06%20NSW%20Government%20Business%20Case%20Guidelines%20-pdf.pdf
- NSW Treasury, NSW Government Business Case Guidelines (2018), available at: https://www.treasury.nsw.gov.au/sites/default/files/2018-09/TPP18-06%20NSW%20Government%20Business%20Case%20Guidelines%20-pdf.pdf
- Infrastructure NSW, Final Business Case: Designed for use in NSW Government Capital Projects, available at: https://www.insw.com/media/2369/fbc-report-insw-template_september_191.docx

Strategic planning and decision-making under uncertainty

- NSW Treasury and Infrastructure NSW (2019), Guidelines for Resilience in Infrastructure Planning: Natural Hazards, available at: https://www.treasury.nsw.gov.au/sites/default/files/2019-08/GUIDELINES%20FOR%20RESILIENCE%20IN%20INFRASTRUCTURE%20PLANNING%20-%20NATURAL%20HAZARDSV2.pdf
- Water Supply Association of Australia, Towards resilience: Climate change and the urban water industry in Australia and New Zealand, November 2021.
- Victorian Department of Environment, Land, Water and Planning (DELWP), Guidelines for the Adaptive Management of Wastewater Systems Under Climate Change in Victoria, 2022, available at: https://www.water.vic.gov.au/__data/assets/pdf_file/0036/591579/Guidelines-for-the-Adaptive-Management-of-Wastewater-Systems-Under-Climate-Change-in-Victoria-Final-2022.pdf

- Victorian Department of Environment, Land, Water and Planning (DELWP), Water Cycle Climate Change Adaptation Action Plan 2022-2026, available at: https://parliament.vic.gov.au/file_uploads/Water_Cycle_Climate_Change_Adaptation_Action_Plan_2022-2026_LrmMKKhk.pdf