Department of Climate Change, Energy, the Environment and Water

Sydney Water Regulation 2025

Regulatory Impact Statement

May 2025

NSW GOVERNMENT

Acknowledgement of Country

Department of Climate Change, Energy, the Environment and Water acknowledges the traditional custodians of the land and pays respect to Elders past, present and future.

We recognise Australian Aboriginal and Torres Strait Islander peoples' unique cultural and spiritual relationships to place and their rich contribution to society.

Artist and designer Nikita Ridgeway from Aboriginal design agency – Boss Lady Creative Designs, created the People and Community symbol.

Sydney Water Regulation 2025

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The Department of Climate Change, Energy, the Environment and Water has prepared this Regulatory Impact Statement with input from Sydney Water.

Copyright and disclaimer

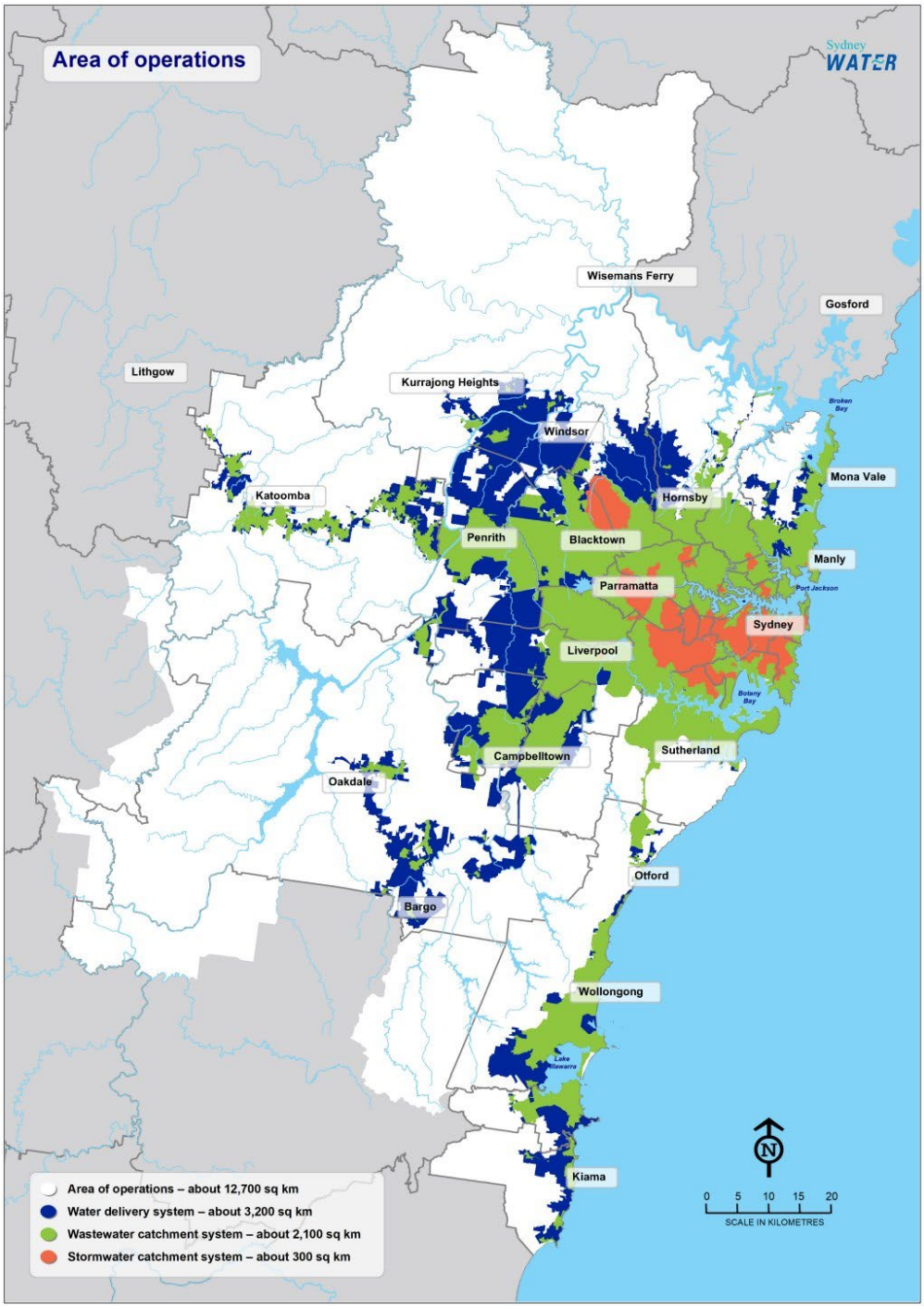
Abbreviations

NPV	Net present value
RIS	Regulatory Impact Statement
SL Act	*Subordinate Legislation Act 1989*
The Act	*Sydney Water Act 1994*
The Corporation / Sydney Water	The Sydney Water Corporation
The Department / DCCEEW	The Department of Climate Change, Energy, the Environment and Water
The Regulation	The proposed *Sydney Water Regulation 2025*
2017 Regulation	The *Sydney Water Regulation 2017*

Contents

Executive Summary

Sydney Water is Australia's largest water utility, providing safe, high quality drinking water to 5.4 million people and over 122,000 businesses across Greater Sydney, the Blue Mountains and the Illawarra.



The *Sydney Water Act 1994* (the Act) establishes the Sydney Water Corporation (Sydney Water) as a statutory corporation, fully owned by the NSW Government (section 57 of the *Constitution Act 1902*), with key objectives of protecting public health, the environment and to be a successful business.

The *Sydney Water Regulation 2017* (2017 Regulation) is a statutory instrument under the *Sydney Water Act 1994*. It is used to regulate activities in the catchment areas and water storages, compliance with plumbing and drainage standards, protection of Sydney Water works or property or assets, and implementation of water restrictions. This regulation supports Sydney Water in delivering its services to the community and meeting its objectives under the Act.

The 2017 Regulation is due to be repealed on 1 September 2025 under section 10(2) of the *Subordinate Legislation Act 1989* (the SL Act). The Department of Climate Change, Energy, the Environment and Water (the Department) and Sydney Water propose to remake the 2017 Regulation, with minor amendments, as the *Sydney Water Regulation 2025* (the Regulation).

The proposed amendments include administrative updates and additional minor changes intended to streamline the regulation by simplifying administration and providing more clarity to customers and community. It will also provide the necessary authorisation and flexibility for Sydney Water to meet the challenges of climate change and population growth.

Remaking the Regulation with minor amendments is considered the most effective option, in terms of any increased costs delivering greatest social and economic benefits. The Regulation is expected to commence on 1 September 2025. Other options considered included allowing the Regulation to lapse (do nothing) and remaking the Regulation as it is.

In considering future scenarios such as residential development, climate change, floods and droughts, it is likely that the Regulation will play a key part in ensuring essential water and wastewater services can continue to be delivered.

This Regulatory Impact Statement (RIS) considers the costs and benefits of the Regulation, as required by the SL Act. The proposed changes are necessary to improve the effectiveness of the Regulation.

The objective of the Regulation

The objective of the Regulation is to support Sydney Water in fulfilling its principal statutory objectives under the Act related to the supply of water, the provision of sewerage and drainage services and the disposal of wastewater in its area of operations. In accordance with the objectives of the Act, action is required to:

- protect the quality of drinking water supplied to customers;
- protect community health;
- protect the environment and enable ecologically sustainable development;
- protect Sydney Water's works and assets and ensure it is notified of any damage to its works, assets or property;
- ensure adequate supplies of water at all times but particularly during drought and in the case of 'emergencies'; and
- provide for the appropriate penalty notice offences and amounts.

The rationale for regulation rests on the efficiency and effectiveness of enforcing compliance with the Act. In the absence of regulation:

- there would be insufficient disincentives for activities that pose risks to water quality and the environment in and around the catchments;
- compliance powers would be insufficient and the costs of enforcing compliance would be unnecessarily high ;
- Sydney Water could not effectively protect its assets from damage or enforce compliance with plumbing and drainage standards; and
- There would be no mechanism for Sydney Water to implement water restrictions to protect water security during drought or other emergencies.

Regulation and alternative options

Three options have been considered as part of this RIS process. These are:

- a 'do nothing' case, where the 2017 Regulation is repealed and no replacement regulation is introduced (**Option 1**),
- a 'minimalist' (no-change) case, where a replacement regulation is introduced which mirrors the 2017 Regulation in place with minor administrative updates (**Option 2/base case**),
- a 'proposed' case, where the 2017 Regulation has specified amendments intended to streamline regulation and enable more effective compliance and enforcement of existing regulations and restricted activities by simplifying administration and providing more clarity (**Option 3**).

Costs and benefits of options

The costs and benefits of the three options were evaluated. Option 2 (no-change) is considered to be the 'base case' against which other options are evaluated.

The do-nothing case (Option 1) is estimated to have significant disbenefits over the base case (Option 2), primarily in increasing risks to drinking water quality and the associated costs in managing resultant contamination, and alternative water sources to maintain water security in the absence of any ability to implement water restrictions. Sydney Water would also have a reduced ability to protect its assets from damage or unauthorised uses, which may lead to increased costs for Sydney Water and its customers.

The Regulation (Option 3) includes amendments, which individually and collectively provide additional benefits over and above Option 2. Most of the amendments are minor, however, they all have positive benefit.

Table 1-1 below summarises the evaluation in terms of net present value (NPV). The values provided should be considered indicative, but the conclusions are not sensitive to any reasonable changes in assumptions.

Table 1-1 NPV for all three options ($m PV over 30 years at 5% real discount factor, 1 Mar 2024)

	Net present value (NPV) relative to Option 2[1]	Notes
Option 1 — No regulation	Savings in compliance costs: $352.7m Adverse outcomes: -$939.8m	Includes costs to Sydney Water and other agencies relative to base case
Option 2 – No change	N/A	Base case
Option 3 – Proposed 2024 regulation	Small positive net benefits	Each proposed amendment has a net benefit relative to base case. None of the proposed amendments impose material costs.

These figures are explored in detail in Section 5 of this document.

Public Exhibition Process

In accordance with the requirements of the SL Act, the draft Regulation and RIS will be made available for comment for a minimum of 28 days. The proposed draft of the Regulation will be open for consultation from 19 May 2025 to 11:59 pm on 15 June 2025.

A What We Heard report will be published following the public consultation period. This report will outline the feedback received and the Department's response.

What happens to submissions?

The Department will review all submissions received by the closing date and consider key issues raised. The proposed 2025 Regulation will be amended in response to feedback as appropriate. A more detailed summary of feedback received and the NSW Government response will be included in the What We Heard report.

The Minister for Water will be advised of all submissions and proposed actions arising from them. A copy of all submissions will be provided to the Legislation Review Committee of the NSW Parliament with the final version of the Regulation. A report on the outcomes of consultation detailing the issues raised in submissions, and the Department's response, will be published on the Department's website.

Following the consultation process and commencement of the Regulation there will be:

- updated information on Sydney Water's website
- communication to consultation participants advising of the publication of the revised regulation
- communication to other stakeholders (who may not have participated in consultation) advising of the publication of the revised regulation.

1 Introduction and background

Under the SL Act, most regulations are automatically repealed every five years. The 2017 Regulation is due to be repealed on 1 September 2025 in accordance with the requirements of the SL Act. A RIS is to be prepared as part of the process to remake the Regulation under section 5 of the SL Act, unless not required under section 6 of the SL Act.

When a regulation is to be made, the responsible agency must consider its social and economic impacts, and whether the regulation is necessary. This will ensure that the Regulation provides a net benefit to the community and that any regulatory burden imposed is justified.

The RIS is required to address seven better regulation principles. Information on these principles is available in the NSW Treasury document, NSW Government Guide to Better Regulation[2].

This RIS sets out the analysis of the impact of the Regulation. The preparation of the RIS involves identifying and assessing the relevant costs and benefits of the Regulation.

1.1 Purpose of the RIS

The purpose of the RIS process is to improve the quality of regulatory proposals, to ensure that alternative options are considered, and that the regulations selected provided the best approach to meet the objectives proposed.

The SL Act requires that a RIS include:

- a statement of the objectives sought to be achieved and the reasons for them
- an identification of the alternative options by which those objectives can be achieved (whether wholly or substantially)
- an assessment of the costs and benefits of the proposed statutory rule, including the costs and benefits relating to resource allocation, administration and compliance
- an assessment of the costs and benefits of each alternative option to the making of the statutory rule (including the option of not proceeding with any action), including the costs and benefits relating to resource allocation, administration and compliance
- an assessment as to which of the alternative options involves the greatest net benefit or the least net cost to the community
- a statement of the consultation program to be undertaken.

[2] TPP19-01 - Guide to Better Regulation.pdf (nsw.gov.au), https://www.productivity.nsw.gov.au/sites/default/files/2022-05/TPP19-01_Guide-to-Better-Regulation.pdf

1.2 Structure of this report

The rest of this report broadly follows this structure:

- Section 1.3 provides background.
- Section 2 reviews the objectives and rationale for the Regulation.
- Sections 3 and 4 review the alternative options
- Section 5 examines the costs and benefits of the Regulation and alternatives, and provides an overall evaluation.
- Section 6 outlines the consultation process.
- Section 7 discusses evaluation and review of the Regulation.

1.3 Background

This report is a RIS for the Regulation which will help remake the 2017 Regulation with minor amendments. The proposed amendments include minor administrative updates and additional minor changes to reflect current practices, simplify administration and provide more clarity to the reader.

1.3.1 About Sydney Water

Sydney Water provides essential water and wastewater services to 5.4 million customers across Sydney, the Blue Mountains and the Illawarra.

Greater Sydney supports 25–30% of Australia's GDP ($500–600 billion). Water services are a critical enabler of economic development, providing the essential infrastructure needed to support developments such as the Western Sydney Aerotropolis, attract investment, sustain daily operations, and meet the needs of businesses and residents.

Sydney Water looks to discharge its statutory and regulatory functions in line with the *Greater Sydney Water Strategy* and the NSW response to the *National Housing Accord*.

1.3.2 Sydney Water Regulation 2017

The 2017 Regulation is a statutory instrument under the Act and is used to regulate activities on land adjacent to catchment areas and water storages, improve compliance with plumbing and drainage standards, protect Sydney Water works or property or assets, and implement water restrictions. The Regulation supports effective, efficient and prudent operations of Sydney Water in delivering its services to the community.

The Sydney Water Regulation 2017 is structured around key functions:

- Part 1 sets out the name of the Regulation, details around its commencement and definitions
- Part 2 relates to Controlled Areas (see Box 1), setting out powers Sydney Water has to restrict access, primarily to protect assets and water quality. For example, land at Warragamba around water infrastructure, treatment facilities and pipelines at Prospect Reservoir

- Part 3 covers plumbing and drainage, to allow Sydney Water to take action when plumbing and drainage work is not done in accordance with set standards
- Part 4 allows Sydney Water to implement Ministerial decisions around water restrictions and be notified about damage to its works or property
- Schedule 1 sets out the penalty notice offences that apply under the Act or the Regulation, permitting Sydney Water to issue on the spot fines or prosecute more serious offences.

Under the SL Act, statutory rules such as the 2017 Regulation are required to be reviewed every five years. Under this process, a regulation may lapse, or be remade with or without amendment following review and consultation. The 2017 Regulation will be automatically repealed on 1 September 2025.

Section 70 of the Act provides that the Governor may make regulations, not inconsistent with the Act, for or with respect to any matter that by this Act is required or permitted to be prescribed or that is necessary or convenient to be prescribed for carrying out or giving effect to the Act.

Box 1

What are Sydney Water's "controlled areas"?

Controlled areas are provided for under section 88 of the Act, where the Governor may, on the recommendation of the Minister, declare an area of land to be a controlled area. Section 89 of the Act also provides for the regulations to make provisions with respect to controlled areas and to establish conditions to protect the pollution or contamination of water and land within these areas.

Control of land in and around water sources is particularly important to enable the protection of the quality of the water supplied to customers. Protection of these areas also helps Sydney Water to achieve its required objective to protect the environment. This is done through the management of visitor behaviour by limiting access to certain areas, controlling allowable activities and establishing other conditions of entry into a controlled area.

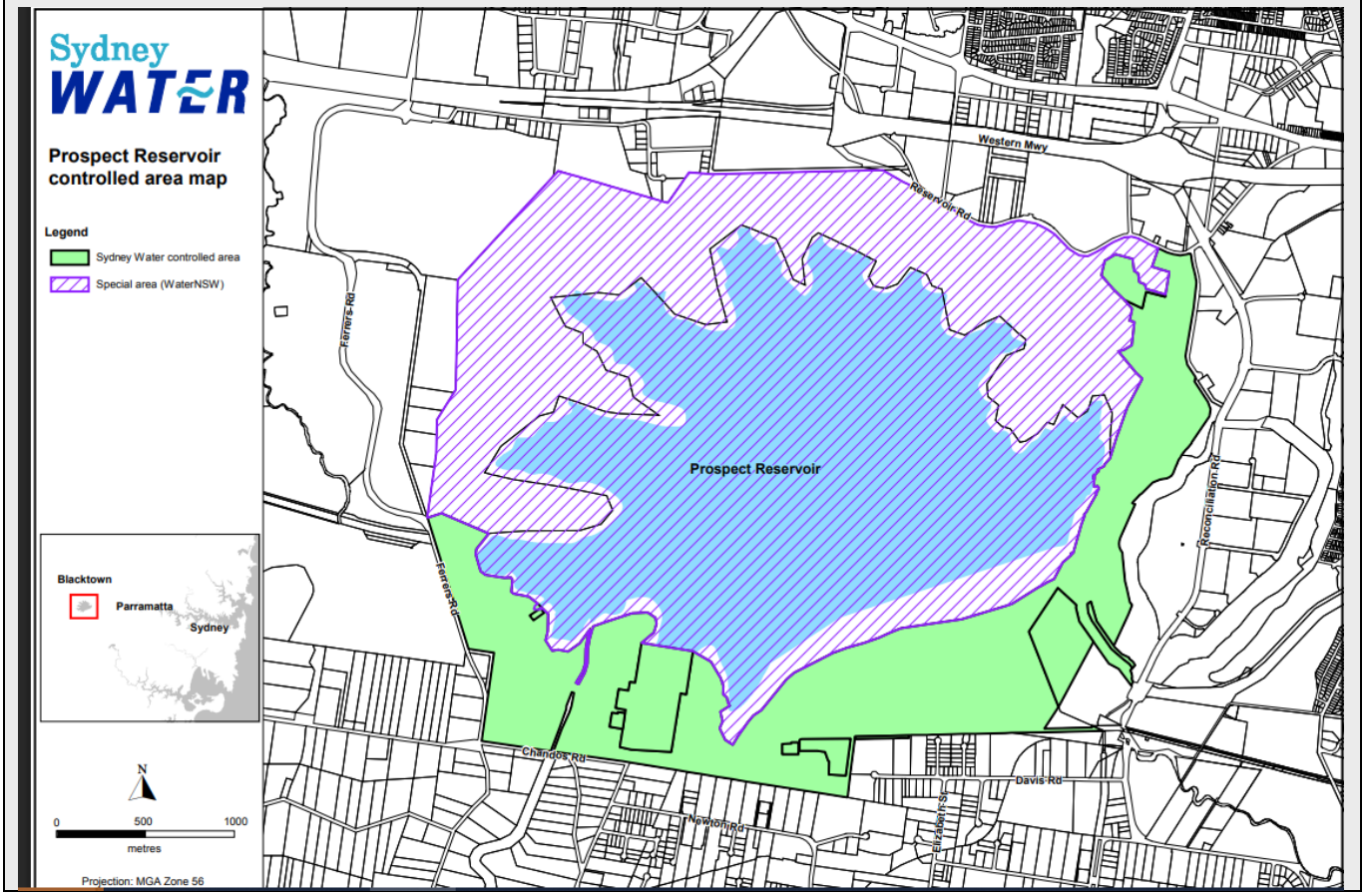
Under the *Water Board (Corporatisation) Act 1994* (NSW) (now the *Sydney Water Act*), the following lands were taken to be the subject of an Order by the Governor under Section 88, declaring them to be a controlled area:

Controlled areas: water transfer structures (being canals, tunnels, pipelines, water mains or drainage channels) on Sydney Water owned land.

One of Sydney Water's largest "controlled areas" is located adjacent to Prospect Reservoir. Prospect Reservoir is located about 35 kilometres west of Sydney and its original purpose was to store water transferred to Sydney from the Upper Nepean dams. Following the commissioning of the Prospect Water Filtration Plant in 1996, raw water from Warragamba and the Upper Nepean dams now most often flows directly to the filtration plant. However, Prospect Reservoir remains an integral part of Sydney's drinking water supply and is used as a contingency supply during periods of peak demand and in emergencies. The filtration plant at Prospect can draw water directly from the reservoir meaning water supply remains available in times when other parts of the water supply system are taken offline for maintenance or when other issues may arise.

Since 1999, the Prospect Reservoir water body has been owned by WaterNSW (previously the Sydney Catchment Authority). WaterNSW also owns and manages some of the land surrounding the reservoir as a drinking water catchment. Sydney Water retained ownership of the land where the water treatment plant is situated and some other small parcels of land in the surrounding area where certain other assets are located. These land parcels in the catchment, plus other areas below the reservoir wall, constitute a controlled area for the purposes of the proposed regulation. Although Sydney Water is no longer responsible for the reservoir itself, the reservoir can be accessed through Sydney Water land, and/or impacted by activities being undertaken on Sydney Water land, creating an obligation to protect water quality in the area.

The Prospect controlled area contains Cumberland Plain Woodland (an endangered ecological community) and several threatened flora and fauna species including the Green and Golden Bell Frog, Cumberland Plain Land Snail, Swift Parrot and the Downy Wattle. It also includes Aboriginal sites and a heritage listed cottage.



1.3.3 Proposed Sydney Water Regulation 2025

The Regulation is intended to commence on 1 September 2025. The Regulation is a similar regulatory instrument to those that have previously been made. Its primary aims are to:

- regulate conduct in (and access to) Controlled Areas that are defined under the Act.
- allow Sydney Water to fulfill its principal statutory objectives under the Act of protecting the water quality and ensuring sufficient supply of water to meet customer demand.

- provide for other miscellaneous items in accordance with the Act.

The Regulation establishes offences and penalties that Sydney Water has authority to apply. The offences largely relate to failure to comply with access and conduct conditions established by Sydney Water.

In considering future scenarios such as residential development and urbanisation, climatic variability, floods and droughts, it is likely that the Regulation will play a key part in ensuring essential water and wastewater services can continue to be delivered.

2 Objective of the Regulation

The general objective of the Regulation is to support Sydney Water in fulfilling its principal functions and objectives under the Act, namely to:

- protect the quality of drinking water supplied by Sydney Water to its customers;
- protect community health;
- protect the environment and enable ecologically sustainable development by providing good quality management of wastewater services;
- protect Sydney Water's works and assets and ensure it is notified of any damage to its works, assets or property;
- ensure adequate supplies of water at all times but particularly during drought and in the case of emergencies; and
- provide for the appropriate penalty notice offences and amounts.

The rationale for regulation rests on the efficiency and effectiveness of enforcing compliance with the Act, and the additional costs that would be imposed on Sydney Water and the community in the absence of regulation.

3 Proposed 2025 Regulation and alternative options

3.1 Overview

As part of the RIS process, the SL Act requires the identification and consideration of the alternative options by which those objectives can be achieved (whether wholly or substantially) [3].

Three options have been considered as part of this RIS process:

[3] SL Act, Schedule 2, Section 5(1)(b).

1. a ‘do nothing’ case, where no replacement regulation is introduced, and the current 2017 Regulations are repealed (**Option 1**);
2. a ‘minimalist’ (no-change) case, where a replacement regulation is introduced which mirrors the 2015 Regulation in place, with minor administrative updates (**Option 2**); and
3. a ‘preferred’ case, where a replacement regulation (the proposed 2025 Regulation) is introduced with minor administrative updates and additional minor amendments intended to streamline regulation and enable more effective compliance and enforcement of existing regulations and restricted activities (the proposed 2025 Regulation) by simplifying administration and providing more clarity (**Option 3**).

This section first considers the substantive costs and benefits that are relevant, and the key issues associated with the regulation, and then discusses these options and considers whether there are other options that should be evaluated.

In the absence of a regulation, Sydney Water would need to rely on other legislation (and possibly common law) and existing enforcement authorities (including the Police and councils) to achieve its objectives. For several reasons, this would neither be efficient nor effective. For example, there would be insufficient disincentives for activities that pose risks to drinking water quality and the environment. The current penalties for trespass relate only to access, are relatively light and are difficult to enforce. In the absence of regulation, the efficiency and effectiveness of the protection and enforcement activities would be diminished. Many key assets are in remote locations away from regular law enforcement and so it is more efficient for Sydney Water to undertake enforcement activities that will help to protect water quality. Some form of regulation is required to address these failings

3.2 Consideration of alternatives

3.2.1 Key issues for consideration

It is desirable to identify the option that meets the required objectives with the highest net benefit; that is, the option whose sum of benefits less costs are the greatest in present value terms.

The NSW Guide to Better Regulation, TPP19-01[4], categorises costs and benefits into compliance costs, economic impacts, social impacts and environmental impacts.

Section 3.2.2 and 3.2.3 consider economic impacts of the options relating to:

- drinking water quality, and
- alternative land uses.

Compliance costs are addressed in section 3.2.4.

Other social and environmental impacts are discussed in section 3.2.5.

[4] https://arp.nsw.gov.au/tpp19-01-nsw-government-guide-better-regulation/

3.2.2 Drinking water quality

The consequences of poor drinking water quality can be severe. Untreated water is a known potential carrier of pathogens and chemicals that can cause disease in humans. The impacts of these diseases range from mild discomfort to death.

The costs associated with poor drinking water quality include:

- health costs, including:
  - direct costs of illness including loss of quality of life and medical expenses
  - indirect costs of illness, including impact on carers and workplaces
  - risks and costs associated with large scale outbreaks of disease
- avoidance costs by water users, for example, the costs of purchasing bottled water and/or boiling water
- management costs associated with managing a water crisis
- the social impact of a loss of confidence in water quality
- the economic impact on industry, in particular food-processing, manufacturing and cleaning.

The costs of poor drinking water quality are difficult to quantify due to uncertainty as to the probability of poor water quality events but also the consequences that may occur.

Management and avoidance costs by themselves can be significant. For example, the 1998 Sydney Water crisis caused boil-water alerts to be issued for 35 days and a substantial increase in Sydney

Water's operating expenses. Figure 3-1 explains the economic impacts of this incident:

Figure 3-1 Costs of the 1998 Sydney Water crisis.

The 1998 outbreak of Cryptosporidium and Giardia contamination in Sydney caused boil water alerts to be put into place for 35 days. The operating expenses and foregone revenue to Sydney were estimated by the Productivity Commission at $74.6 million. This included abnormal operating expenses including compensation to customers, insurance claims, monitoring and testing costs, inquiry costs, and other costs (Hrudey & Hrudey 2004).

Jaguar Consulting (2004) undertook a broader estimate of the costs. Costs from direct health effects and indirect costs were estimated to be nearly negligible; however, the costs of averting behaviours were extremely large. These 'averting behaviour costs' included cash expenses (e.g. boiling water costs, buying bottles of water or substitutes) and the loss of utility. Based on a previous study that had estimated the average aversion costs per person per day for a giardiasis outbreak, they estimated the total aversion behaviour costs for Sydney (given the duration of the boil alerts and the population affected) to be around $308 million in 2004, which is equivalent to around $524 million in January 2024.

Source: Moore et al. (2010), Jaguar Consulting (2004). Quoted in Tooth and Zhang (2018)

In comparison, there are a number of public estimates of the benefits of good drinking water quality. Tooth and Zhang (2018) [5] recommended using a baseline estimate of $135 per-person per-year (in 2018$) for the benefits of meeting Australian Drinking Water Guidelines (ADWG), which equates to an annual benefit of more than $800 million for the customers serviced by Sydney Water as at 2024.

Given the importance of good quality drinking water, effective approaches to ensuring water quality are required. Changes in the level and type of access and development activities that can be undertaken in land adjoining water catchment areas may have a variety of impacts to water quality including:

- the introduction of pollutants to the catchments
- increased fire risk, and
- the deterioration of land, resulting in an increase of soil run-off.

The Regulation supports this approach to managing risks to water quality, particularly as it regulates access and conduct in the Prospect Controlled Area which is adjoins Prospect Reservoir.

3.2.3 Alternative land-uses

The key economic cost associated with regulating activity in the Controlled Areas relates to limiting the use of the land covered by the Regulation. Some Controlled Areas have potential economic value for alternative uses[6]. These alternative land-uses include:

- recreational uses such as:
  - walking, fishing and non-powered boating
  - mountain biking
  - other activities which are generally not allowed including powered vehicle use
- commercial activities, such as farming and mining
- other forms of development.

3.2.4 Compliance costs

Regulations often impose significant compliance costs on parties affected by the regulation; that is costs (including effort and money) of parties (businesses, other organisations or individuals) in complying with the requirements of the regulation. Such compliance costs are often a key issue that are reviewed as part of a RIS.

Compliance costs for the Regulation include:

[5] https://www.ipart.nsw.gov.au/sites/default/files/documents/benefits-of-water-quality-in-sydney-%E2%80%93-sapere-research-group.pdf

[6] The Regulation has only limited relevance to developments that have received environmental planning approval

- Costs for Sydney Water associated with administration, compliance and enforcement of requirements of the Regulation; and
- Costs to other parties (such as developers, the plumbing industry or the community) associated with complying with the requirements of the Regulation, for example costs to the plumbing industry in complying with plumbing and drainage requirements under Part 3 of the Regulation.

3.2.4.1 Part 2 of the Sydney Water Regulation

Sydney Water employs a mobile security patrols team, who conduct regular patrols in Sydney Water's controlled areas and more generally, across its area of operations. The cost of having this team is approximately $650,000 per annum ($24-25). This provides an upper limit of the cost of compliance and enforcement activities associated with Part 2 of the Sydney Water Regulation, given that Sydney Water would still need to maintain protective security measures for assets that are not located in a Controlled Area.[7]

3.2.4.2 Part 3 of the Sydney Water Regulation

Under Section 99(1) of the Act, a person must not do any kind of work on water supply, sewerage or stormwater drainage intended for direct or indirect connection with the pipes, sewers or drains of Sydney Water, unless they hold an appropriate licence (eg, under the *Home Building Act 1989*) or have been granted an authorisation by Sydney Water. Section 99(2) of the Act provides that regulations may be made with respect to work under s99(1), including standards for works, permits and approvals, and directions or supervision of works.

In addition, section 48A(1) of the Act provides that a person must not connect any pipe or fitting to a work owned by Sydney Water, or to alter or use a work owned by Sydney Water, without authorisation. Section 48A(2) provides that regulations be made with respect to authorisation and directions under s48A(1).

Part 3 of the 2017 Regulation deals with matters under both section 99 and 48A of the Act. The regulation does not deal with plumbing or drainage work that falls under the *Plumbing and Drainage Act 2011* or which is exempt for the purposes of that Act.

Sydney Water has several teams who are part of the following processes relating to Part 3 of the Sydney Water Regulation:

- **Authorisation of plumbing and drainage work (s99):** This typically arises in the context of new connections to Sydney Water infrastructure, with applications for a compliance certificate under Section 73 of the Sydney Water Act, or applications for a building plan approval where a proposed structure may have impacts on an existing or proposed Sydney Water asset.

  Sydney Water's processes for ensuring new connections do not compromise existing systems incorporate various stages of review and assurance, including:

[7] More detailed data was not made available by Sydney Water, due to the sensitive nature of the information which deals with matters of the security of critical infrastructure.

— An assessment of whether there is capacity in the system to accept new connections, identification of feasible connection points, and/or whether there could be impacts on existing or proposed Sydney Water assets;

— Ensuring all parties involved in the works have the relevant skills and capability to perform the works (eg, by engaging a service provider from a list authorised by Sydney Water);

— Engineering and design reviews to assess whether the proposed works comply with relevant industry codes and Sydney Water requirements;

— Environmental factors for construction or operation, including the need for easements;

— Authorisation to commence work;

— Inspections to ensure the works have met all requirements specified during the process.

The total Sydney Water cost of inspecting completed works is around $3.5 million a year, while the other aspects of the connection process amount to around $10.0 million a year ($24-25).

- **Unauthorised connection, alteration or use of Sydney Water works (s48A):** Issues around backflow, trade waste and cross-connections typically arise through Sydney Water's Customer Contact and Customer Hub teams. The Customer Contact team is responsible for managing customer interaction channels and is a first point-of-contact for many customers. The Customer Hub team specialises in investigating reported customer faults and conducting repairs. In addition to these two teams, there can also be instances of defective plumbing and drainage arising in source control works, water quality complaints, and water theft. The total cost of these teams to manage and ensure compliance in this area is approximately $3.6 million per annum ($24-25).

Together, Sydney Water currently spends approximately $17.1 million per annum on administration, compliance and enforcement related to plumbing and drainage requirements. This could be considered an upper bound of the administrative costs associated with the 2017 Regulation, as many of the process steps outlined above address issues such as the establishment of safe worksites and adequate environmental protections during construction which are also addressed by other regulations.

With respect to compliance with the NSW Plumbing Code, the NSW Building Commission (previously NSW Fair Trading) currently enforces the Code and is responsible for ensuring that plumbers and drainers complete work in accordance with the Code. As such, there are no compliance or enforcement costs for Sydney Water in this area. There is also no significant additional compliance cost to the plumbing industry, as the compliance requirements under the Regulation are very similar to requirements under NSW statewide licensing[8].

[8] See https://www.fairtrading.nsw.gov.au/trades-and-businesses/licensing-and-qualifications/plumbing,-draining-and-gasfitting-licences

3.2.4.3 Part 4 of the Sydney Water Regulation 2017

Sydney Water's Water Conservation field team manages the delivery of water conservation and water efficiency programs across its area of operations. The Water Conservation field team also educates customers and industry on water theft and backflow prevention (see Box 2).

During the last 2017 drought, the team grew to 46 people to support the additional administration, compliance and enforcement of water restrictions. The total cost to Sydney Water associated with administration, compliance and enforcement of water restrictions under Part 4 of the Regulation during the 2017 drought was approximately $7.1 million in 2019-20 ($2024-25). This included the cost associated with having additional community water officers to assess and process exemption requests, as well as patrol and investigate breaches during times of drought. Compared to current baseline costs of having the team in non-drought years, this means that the most recent estimate of the cost of compliance and enforcement activities relating to Part 4 of the Sydney Water Regulation is $6.5 million[9].

Box 2

What is 'water theft'?

Water theft arises when someone uses water without a meter and does not pay for it. This typically involves illegal plumbing works, including but not limited to:

- Meter tampering and bypassing
- Unmetered standpipe usage, and
- Illegal connections between mains to meter.

In 2023-24, Sydney Water's Water Conservation field team completed 4,256 investigations of water theft and conducted rectification works on 1,607 properties. This yielded $1.3 million in recovered revenue ($24-25).

For the most part, water theft is identified reactively. Sydney Water relies on complaints from the public or cases identified by data analytics. When a case of water theft is identified, Sydney Water will rectify the situation or have the customer rectify it on their own.

There are many cases where customers have had illegal plumbing and connections for many years. Ensuring that rectification works can be conducted, even when illegal plumbing works have been in place for many years, will ensure customers are correctly measuring their water usage, encourage water saving behaviours and protect Sydney Water's assets.

3.2.5 Social and environmental impacts

The 2017 Regulation only regulates activities in Sydney Water Controlled Areas. In many locations the land in Controlled Areas is already disturbed due to the presence of Sydney Water assets, such

[9] During the last 2017 drought, 9 fines were issued in total for breaches of water restrictions. These were all issued to residential properties in 2019-20, generating $1,980 in revenue being paid to Revenue NSW.

as reservoirs and above ground pipelines, and there may be limited social or environmental values at these locations.

However, other Controlled Areas may have more significant social and environmental values. For example, the Controlled Area at Prospect Reservoir is adjacent to land managed by WaterNSW, which has a range of native flora and fauna as well as being of significance for cultural heritage. Regulating activities in the Controlled Area helps to protect social and environmental values both within the Controlled Area but also on adjoining land. In effect, the benefit is equal to the avoided costs associated with damage to the environment.

Similarly, other Controlled Areas include stormwater drainage land in the Rouse Hill Development Area. These drainage lands, including wetlands and retention basis, form part of an integrated water cycle management approach for mitigating the impacts of urban development on nutrients and stream flows in local waterways. This has significant social and environmental value for local waterways and the downstream Hawkesbury Nepean River, as well as retaining green space that can be enjoyed by the community.

An approach to estimating the value of preservation of the catchments is to use surveys to estimate people's willingness to pay (WTP) to preserve the environments. Mazur and Bennett (2009) conducted a study in which they included people's WTP to preserve flora and fauna of the Hawkesbury-Nepean catchment. The study indicated that the Sydney households' implicit price to prevent the loss of up-to 1500 square kilometres of native vegetation was in the order of $0.06 per square kilometre per household[10]. This indicates the order of value people place on preserving the environment, but we have not included the benefit here as some development is allowed within the Special Areas.

[10] For example, the survey measured people's WTP for preservation over only a marginal range. The results would not be expected to be reflective of preserving all land within the catchment.

4 Description of options considered

4.1 Option 1: Do-nothing case

Under Option 1, the 2017 Regulation would lapse on 1 September 2025, and no replacement regulation would be introduced.

4.1.1 Controlled Areas

Under this option, there would be no regulation of activities that have potential to pollute waters. It is likely Sydney Water would need to improve water treatment infrastructure, at a cost to its customers, to compensate for poorer raw water quality resulting from the reduced regulation.

Contamination of drinking water sources poses hazards to public health (pathogens, toxins from algal blooms, metals and organic chemicals) and aesthetic water quality (taste, appearance, odour). In addition, poor quality water imposes costs on industrial users. The economic impact would be significant, as shown in the economic analysis in section 5.2.

In the event the 2017 Regulation is allowed to lapse, there are several other options that could be relied upon, however, none are considered to adequately protect water quality.

4.1.1.1 Rely on property rights

As owner of the land in controlled areas, Sydney Water can impose controls on who comes on to that land. It also has recourse to common law remedies, such as the laws of trespass and public nuisance. The *Inclosed Lands Protection Act 1901* also provides a landowner with powers in relation to unlawful entry on inclosed lands (section 4) and offensive conduct while on inclosed lands (section 4A).

4.1.1.2 Close the picnic areas at Prospect

Sydney Water could close the picnic areas in the Prospect Controlled Area to public access, which would avoid the need to control visitor behaviour, and for Part 2 of the regulation more generally. This, however, only applies to the Prospect controlled area and would not be relevant to other controlled areas.

4.1.2 Plumbing and Drainage Works

Under this option, there would be no specific statutory requirements for plumbing and drainage work for installations connected to Sydney Water mains. There would be no enforceable requirement that plumbing and drainage work must be undertaken in accordance with the Plumbing Code of Australia.

The requirements under the Act for plumbing work to be undertaken by people holding an appropriate licence or certificate would remain but there would be no requirement for authorisations to be obtained by persons intending to undertake plumbing or drainage work. Sydney Water would

lose significant compliance and deterrent powers. The risk of damage to Sydney Water works and impact on its services would increase.

4.1.3 Miscellaneous Provisions

4.1.3.1 Penalty notice provisions

Under this option, there would be no mechanism for the introduction of water restrictions in the case of drought or other emergency. Without restrictions, significant investment in alternative water sources would be required for Sydney Water to maintain the same level of water security. This is considered unacceptable.

4.2 Option 2: The no-change case

Option 2 is simply a roll-over of the existing 2017 regulation (in-effect, the status-quo), with amendments limited to minor administrative updates. This Option precludes the additional benefits outlined in Option 3 which increase clarity and reduce the overall regulatory burden of the Regulation.

This is the baseline for assessing Option 1 and Option 3.

4.3 Option 3: Proposed case

The proposed 2024 Regulation provides for various amendments, which are outlined in Table 4-1.

4.4 Other alternatives

Given the context of this proposed 2025 Regulation, no other economic/financial/social alternatives have been identified that could achieve the desired objectives of the Regulation.

Table 4-1 Proposed amendments and their rationale

Note: References are to the Regulation.

Part 1 Preliminary

2017 Regulation Clause Title	Proposed 2025 Regulation Clause Title	Proposed Change
1. Name of Regulation	1. Name of Regulation	No change
2. Commencement	2. Commencement	No change
3. Definition	3. Definitions and Dictionary	No material change

Part 2 Controlled Areas

2017 Regulation Clause Title	Proposed 2025 Regulation Clause Title	Proposed change
4. Definitions	4. Definitions 5. Meaning of authorised officer	No material change:
5. Corporation's Consent	6. Corporation's consent	No material change
6. Manner of consent	6. Corporation's consent	No material change
7. Entry to controlled area	7. Directions to leave 8. Entry	No material change
8. Vehicles and animals	9. Animals 10. Driving and parking vehicles	No material change

2017 Regulation Clause Title	Proposed 2025 Regulation Clause Title	Proposed change
9. Agriculture	11. Agriculture	No material change
10. Damage to property or environment in controlled areas	12. Causing damage	No material change
11. Control of waste and pollution	13. Waste and pollution	No material change
12. Gates or barriers on or to controlled areas	14. Gates and barriers	No material change
13. Fees and charges	15. Fees and charges	No material change

Part 3 (Plumbing and Drainage) and New part 3 and 4 (Part 3 Authorisations for connections, alterations or use of works—the Act, ss 48A Part 4 Work for water supply, sewerage or stormwater drainage—the Act, s 99)

Note: PCO has restructured this section, splitting it into two parts (relating to authorisations for connections and works for water supply, sewerage or stormwater). This is intended to align better with powers in the Act but contains no material changes.

2017 Regulation Clause Title	Proposed 2025 Regulation Clause Title	Proposed change
N/A	16. Granting authorisations	Provides the Corporation may grant an authorisation under s48(A)(1) of the Act to a person or class of persons. Authorisations granted to a class of persons must be published on the website.
19. Application for permit	17. Applications for authorisations	No material change
20. Refusal of permit	18. Decisions about applications	No material change

2017 Regulation Clause Title	Proposed 2025 Regulation Clause Title	Proposed change
16, 21. Compliance with the Plumbing Code of Australia, Conditions of permits	19. Conditions of authorisations	No material change
22. Suspension or cancellation of permit	20. Suspension or cancellation of authorisations	The 2025 Regulation includes an option for Sydney Water to attach conditions to a suspension or cancellation of an authorisation, and corresponding penalties for failing to comply with conditions of a suspension or cancellation. The maximum penalties a court can impose are 100 penalty units for an individual ($11,000) or 200 for a corporation ($22,000). Sydney Water can fine a person $750 or a corporation $1500.
17. Use of approved fittings	21. Directions by the Corporation to use approved fittings	No material change
23. Defective plumbing or drainage work	22. Directions by the Corporation for non-standard work	22 (2) specifies that a direction to rectify defective plumbing or drainage work must be given no later than 6 years after the work was completed. This is an increase from 2 years in the 2017 Regulation.
14. Application of Part and Plumbing and Drainage Act 2011	23. Definition	No material change, but redrafted to be more in line with powers under the Act.
15. Definitions	23. Definition	Removes list of definitions and refers to the kinds of work to which s99(1) of the Act applies.

2017 Regulation Clause Title	Proposed 2025 Regulation Clause Title	Proposed change
16. Compliance with the Plumbing Code of Australia	24. Plumbing or drainage work must comply with the Plumbing Code of Australia	No material change
17. Use of approved fittings	25. Persons must use approved fittings for plumbing and drainage work	No material change
17. Use of approved fittings	26. Approval by the Corporation of fittings	No material change
18. Work must be authorised by permit	27. Unauthorised plumbing or drainage work	No material change
N/A	28. Granting permits	Provides the Corporation may grant a permit to a person or class of persons Sydney Water must publish on its website all permits granted to a class of persons.
19. Application for a permit	29. Applications for permits	No material change
20. Refusal of permit	30. Decisions about applications	No material change, redrafted to allow for grant or refusal of permit
21. Conditions of permits	31. Conditions of permits	No material change

2017 Regulation Clause Title	Proposed 2025 Regulation Clause Title	Proposed change
22. Suspension or cancellation of permit	32. Suspension or cancellation of permits	The 2025 Regulation includes an option for Sydney Water to attach conditions to a suspension or cancellation of a permit, and corresponding penalties for failing to comply with conditions of a permit suspension or cancellation. The maximum penalties a court can impose are 100 penalty units for an individual ($11,000) or 200 for a corporation ($22,000). Sydney Water can fine a person $750 or a corporation $1500.
23. Defective plumbing or drainage work	33. Directions by the Corporation for non-standard work	33 (2) specifies that a direction to rectify defective plumbing or drainage work must be given no later than 6 years after the work was completed. This is an increase from 2 years in the 2017 Regulation.

Part 4 (new Part 5) Miscellaneous

2017 Regulation Clause Title	Proposed 2025 Regulation Clause Title	Proposed change
24. Restrictions on use of water	34. The Minister may regulate water use for drought, accident or public interest	Maximum penalty units adjusted from 5 to 50 for individuals ($5,500) and from 50 to 100 for corporations ($11,000). Fines for failing to comply with water restrictions have been increased from $220 to $450 for individuals, and from $550 to $900 for corporations.
25. Corporation to be notified of damage to its works or other property	35. Persons must notify the Corporation of damage to works and other property	No change.

2017 Regulation Clause Title	Proposed 2025 Regulation Clause Title	Proposed change
N/A.	36. Penalty notices	
26. Savings	37. Savings	No material change.

Schedule 1 Penalty Notice Offences

2017 Regulation Clause Title	Proposed 2025 Regulation Clause Title	Proposed change
24 (4). Penalty notice offences (Restrictions on use of water)	34(4). Penalty notice offences	Change penalty for failing to comply with water restrictions from $220 for an individual, to $450, and $550 for a corporation to $900.
16. Compliance with Plumbing Code of Australia	19(3). Conditions of authorisations	The 2017 Regulation made it a penalty notice offence with a fine of $750 for an individual and $1500 for a Corporation, for failing to do works in line with the Plumbing Code of Australia. The 2025 Regulation retains this requirement, but also makes it a penalty notice offence to contravene any other condition of the authorisation, which may be imposed by the Corporation.
22. Suspension or cancellation of permit	20(6). Suspension or cancellation of authorisations	A penalty has been added for failing to comply with a condition of a suspension or cancellation of an authorisation. Sydney Water can fine a person $750 or a corporation $1500.

2017 Regulation Clause Title	Proposed 2025 Regulation Clause Title	Proposed change
21. Conditions of permits	31(3). Conditions of permits	Penalty notice amounts of $750 for an individual and $1500 for a corporation have been added.
22. Suspension or cancellation of permit	32(6). Suspension or cancellation of permits	Penalty notice amounts of $750 for an individual and $1500 for a corporation have been added.

5 Costs and benefits of each option

5.1 Approach

The methodology adopted for analysing the options, and the impact of the proposed 2025 Regulation, is based on the procedure set out in Schedules 1 and 2 of the *SL Act*, as well as the following guidelines:

- New South Wales Treasury, *New South Wales Government Guide to Cost-Benefit Analysis*[11]
- NSW Productivity Commission, Regulatory Impact Statements[12]
- New South Wales Treasury *Guide to Better Regulation* (TPP 19-01[13] and TC19-02[14]).

This RIS assesses the impacts of no-regulation and the proposed 2025 Regulation against the base case (Option 2). Such impacts may include direct and wider economic costs and benefits.

5.2 Option 1: No-regulation

Benefits to government and to industry in allowing the Regulation to lapse will be realised through reduced regulatory costs associated with remaking and administering all parts of the Regulation.

However, these benefits must be weighed against the potential costs to the community, which are considered in this section.

This option would likely lead to deterioration in water quality, which will be valued through estimating how much extra it would cost to treat water that is not protected at source.

5.2.1 Part 2 – Controlled Areas

This option assumes the controls provided for in the 2017 Regulation on activities in the Controlled Areas would no longer apply.

5.2.1.1 Prospect Reservoir Controlled Area

The removal of controls on public use of the Prospect Reservoir Controlled Area would increase the risk of flow-on impacts on drinking water quality (taste, appearance, odour), and public health

[11] TPG23-08 NSW Government Guide to Cost-Benefit Analysis

[12] https://www.productivity.nsw.gov.au/regulatory-policy/regulatory-impact-assessments

[13] https://arp.nsw.gov.au/tpp19-01-nsw-government-guide-better-regulation/

[14] https://arp.nsw.gov.au/tc19-02-nsw-government-guide-better-regulation/

(pathogens, toxins from algal blooms, metals and organic chemicals). This makes it an unacceptable option.[15]

This option would incur costs of enhanced water treatment to continue to meet ADWG. A recent study conducted by DCCEEW (2024) found that providing direct recreational access in and on Prospect Reservoir would have significant impacts on drinking water quality and require between $800 million to $2.1 billion ($24-25) in water treatment upgrades to protect drinking water supply.

As discussed in Section 3.2.2, there are also other costs, including the loss of the benefits of having good drinking water quality for Sydney Water's customers and the management and avoidance costs of a water quality crisis. The benefits of having good drinking water quality, which meets the Australian Drinking Water Guidelines (ADWG) has been previously valued at $135 per-person per-year (in $17-18) or in today's terms, more than $900 million for the 5.4 million customers serviced by Sydney Water ($24-25). The management and avoidance costs can also be significant. For example, the 1998 Sydney Water crisis caused boil-water alerts to be issued for 35 days and a substantial increase in Sydney Water's operating expenses. The economic impacts of this incident have been estimated at around $524 million.

5.2.1.2 Other Controlled Areas

Other Controlled Areas include stormwater drainage land in the Rouse Hill Development Area. These drainage lands, including wetlands and retention basis, form part of an integrated water cycle management approach for mitigating the impacts of urban development on nutrients and stream flows in local waterways. This has significant social and environmental value for local waterways and the downstream Hawkesbury Nepean River, as well as retaining green space that can be enjoyed by the community.

5.2.1.3 Avoided costs

The cost of compliance and enforcement activities associated with Part 2 of the Regulation, Controlled Areas (eg mobile security controls) is around $650,000 per year, which could be partly avoided under a 'no regulation' scenario.

5.2.2 Part 3 – Plumbing and Drainage Works

Under this option, there would be no specific statutory requirements for plumbing and drainage work for installations connected to Sydney Water mains. There would be no enforceable requirement that plumbing and drainage work must be undertaken in accordance with the Plumbing Code of Australia, nor a requirement for authorisations to be obtained by persons intending to undertake plumbing or drainage work.

Sydney Water would lose significant compliance and deterrent powers. The risk of damage to Sydney Water works and impact on its services would likely increase. There could, for example, be a rise in backflow issues and defective cross-connection controls, increasing the risk of contamination

[15] Alternatively, this could also be expressed as a benefit of the proposed regulation or rolling over the 2017 regulation, rather than as a cost of doing nothing.

of public water supply. There would also likely be an increase in non-compliant wastewater and trade waste connections, increasing the risk of blockages, corrosion, and damage to Sydney Water's assets.

It is expected that many people undertaking plumbing and drainage work would continue to follow the requirements in the Plumbing Code of Australia and to use approved service providers and fittings, from a sense of community responsibility, pride in their work and in support of the good will of their companies. However, inevitably some people will fail to maintain the current standards and there would likely be a deterioration in the standard of work from current levels.

Anecdotal evidence highlights the skills and capacity shortages in the plumbing industry and the extent of claims for damages arising from poor plumbing and drainage. Aging assets including septic tanks are another issue that is driving demand for services.

Representatives of the plumbing industry have indicated that relaxation of regulatory efforts does result in deterioration in the standard of plumbing and drainage work as measured by the number of plumbing defects. While it is difficult to quantify this effect, it is considered that, under this option, there is a risk that plumbing and drainage work would be of significantly lower quality than at present. There is a risk that contamination would be introduced into the drinking water network – perhaps 0.1% of customers per year.

Contamination would likely increase the severity and frequency of water quality incidents such as the 1998 Sydney Water crisis. Tooth & Zhang (2018) Benefits of water quality in Sydney recommended using a baseline estimate of $135 per person per year ($17-18) for the benefits of meeting the Australian Drinking Water Guidelines (ADWG). This equates to a benefit of $0.9 million per year ($24-25) if 0.1% of 5,400,000 customers supplied by Sydney Water were affected.

There could also be additional costs in the form of increased blockages, corrosion, and damage to Sydney Water's assets. Sydney Water currently runs a Source Control program to address wet weather overflows and ensure it meets its EPL requirements. The program targets inflow and infiltration management through repair works on Sydney Water assets (Stage 1 & Stage 2), as well as addressing defective plumbing and drainage works on private properties (Stage 3). The costs of source control work on private properties over the next 5 years are estimated at $5 million per annum ($24-25).

The downstream consequences of defective plumbing can be extremely high. For example, allowing rainwater to enter the sewer system can lead to untreated, diluted wastewater being discharged from Sydney Water's wastewater system during rainfall events. Wet weather overflows can increase risks to public health and the environment, and lead to aesthetic impacts on local waterways and beaches. In the absence of solutions that address this problem at source, Sydney Water would need to invest in additional measures to contain, capture and/or treat the excess volume of water entering the system during rainfall events, such as building additional pipes, storage tanks or similar measures. The cost of these 'end-of-pipe' solutions can be very significant.

Box 3

Solutions to wet weather overflows are high cost

Wet weather overflows arise when stormwater enters wastewater pipes during periods of rain, causing the system to overload.

In 2013, Sydney Water commissioned a storage tank in the Sydney suburb of Brookvale. The facility involved an 18 million litre aboveground storage tank that will temporarily store excess wastewater diverted from the Narrabeen Submain, a nearby large diameter sewer.

After the rain passes, the excess wastewater is released back into the Submain and continues to the North Head Wastewater Treatment Plant. This facility, together with local sewer improvements, contributed to reducing the frequency of wastewater overflows by 65% over ten years, further protecting local beaches, lagoons and creeks.

The storage tank was completed at a cost of $70 million ($12-13), part of a wider $560 million program across Sydney to reduce wet weather overflows.

The cost of compliance and enforcement activities associated with plumbing and drainage work under Part 3 of the Regulation, would be considered a saving of $17.1 million per year under Option 1.

5.2.3 Part 4 – Miscellaneous Provisions

5.2.3.1 Water restrictions

Under this option, there would be no mechanism for the introduction of water restrictions in the case of drought or other emergency. Without restrictions, Sydney Water would need to consider supplementing drinking water supply with alternative water sources (such as the Sydney Desalination Plant (SDP), Shoalhaven transfers or environmental flow releases) and/or investing in additional supply augmentation measures to maintain the same level of water security. In the event of a shortfall in supply (i.e. insufficient water supply during a drought), there would also be significant social costs to both residential and non-residential customers.

On the other hand, not having restrictions would also avoid some costs. In the event of a drought, the cost of compliance and enforcement activities associated with water restrictions would be avoided.[16] Water restrictions can also impose social costs, including limiting home and recreational activities for residential customers (such as gardening, car washing and use of sports grounds and aquatic centres) and water-dependent activities for non-residential customers. In the event of a drought, this cost would similarly be avoided. Previous studies have demonstrated a positive willingness-to-pay to avoid the imposition of water restrictions, ranging from $1.71 per household to avoid one month of Level 1 water restrictions, rising to $20.80 per household to avoid one month of Level 3 restrictions (Centre for International Economics 2017).

Recently, Sydney Water conducted a study comparing cost and benefits of using different demand responses to manage drought risk, including water restrictions. Using probabilistic modelling of drought likelihoods over 30 years, the expected costs implementing demand response including water restrictions were compared to the expected benefits or avoided costs from not having water restrictions. The costs considered included costs of triggering supply-side measures and the social cost of a shortfall in water supply, based on WTP estimates. The benefits considered included the compliance and enforcement costs of implementing water restrictions and the social cost of water restrictions, based on WTP estimates. The resultant Benefit Cost Ratio (BCR) of below 1 suggests that not implementing a demand response, such as water restrictions during drought, places a greater cost on society than implementing them (based on a time horizon of 30 years and a discount rate of 5%).

5.2.3.2 Penalty notice provisions

Without the regulation, there would be no penalty notice provisions to issue on the spot fines for unauthorised connection or discharge to Sydney Water works, under the Act. Pursuing these illegal activities through court proceedings will increase Sydney Water's administrative and legal costs. Without the deterrent of on-the-spot fines related to activities covered by both the Act and the Regulation, Sydney Water's operating costs and capital investment requirements would

[16] The expected social cost of water restrictions to both residential and non-residential customers, based on probabilistic modelling of drought likelihoods over 30 years, was recently estimated by Sydney Water at $55 million ($24-25).

significantly increase as a result of increased risks to water quality and impacts on Sydney Water's services.

5.2.4 Summary of Option 1

Option 1 would result in estimates savings on compliance and enforcement costs including:

- $0.7 million per year for Part 2 Controlled Areas;
- $17.1 million per year for Part 3 Plumbing and Drainage works; and
- $6.5 million per year (on average) for water restrictions under Part 4 Miscellaneous.

However, it would result in additional costs including:

- An increase in capital costs to improve water treatment plants of between $800 million to $2.1 billion;
- Risks of contaminated water supply at a cost of approximately $0.9 million per year (assuming a 0.1% probability of occurrence); and
- Potentially higher costs in the event of a drought from purchasing water from alternative sources, investing in additional supply augmentation, and the social costs of having a shortfall in water supply.

5.3 Option 2: No-change

This option is the base case, which is a roll-over of the 2017 Regulation. As this represents a 'status-quo' scenario, all current activities and expenditures would be maintained at their current levels.

5.4 Option 3: Proposed 2025 Regulation

Costs to government associated with Option 3 relate to making and administering the proposed 2025 Regulation, although making the regulation is considered routine business of the Government so is unlikely to reduce public sector resource cost. Additional costs to industry include any additional regulatory costs required to maintain compliance and are considered low. These costs must be weighed against the benefits to the community which are considered in sections 5.4.1 to 5.4.3 below.

5.4.1 Part 2 – Controlled Areas

Under this option, the controls provided for in the 2017 Regulation on activities in the Controlled Areas would continue to apply, with no additional controls being proposed. As such, no additional costs or benefits are expected.

5.4.2 Part 3 – Plumbing and Drainage Works

The proposed changes are minor:

- Clarify requirements relating to Sydney Water's authorisations for connections to its assets, as well as plumbing and/or drainage works undertaken by third parties,
- Include offences for failing to comply with conditions of a cancellation or suspension of an authorisation or permit, and
- Change the timeframe for Sydney Water to issue a direction from 2 years to 6 years to allow Sydney Water more time to identify and issue notice to repair defective works.

The changes are expected to provide overall benefits to the community.

Defective plumbing and drainage works can have a significant impact on Sydney Water's assets, posing risks to public health and service delivery. In particular, defective cross-connection controls, backflow issues and non-compliant wastewater and trade waste connections can pose a risk to contamination of the public water supply and blockages, corrosion and general damage to Sydney Water's assets. In many cases, these issues are found well beyond the 2-year period since the defective plumbing and drainage works have been completed. **Defective plumbing and drainage and its impact on wet weather overflows**

Wet weather overflows arise when stormwater gets into wastewater pipes during periods of rain, causing the system to overload. This can result in wastewater overflowing into local waterways as well as on private properties, including inside homes, and have potential negative impacts on human and ecosystem health. Many of Sydney Water's Environment Protection Licences (EPLs) set out requirements regulating the frequency and volume of wet weather overflows.

Wet weather overflows can be caused by a number of issues, including infiltration/inflow into Sydney Water's wastewater systems through cracks and leaks and defective plumbing and drainage work on private properties in the form of stormwater-to-wastewater connections.

Sydney Water currently runs a Source Control program to address wet weather overflows and ensure it meets its EPL requirements. The program consists of three stages of improvement: inflow & infiltration management via repair works in Sydney Water assets (Stage 1 & Stage 2) as well as in private properties (Stage 3).

As part of the Source Control program, Sydney Water recently conducted a deeper investigation into the causes of wet weather overflows. To identify if properties are a source of wet weather overflows, smoke testing was undertaken in West Camden. The key findings were:

- in new properties built between 2010 and 2020, approximately **1.8%** of properties tested had major defects.
- in older properties built between 1980 and 2000, only **0.3%** of properties tested had major defects.

Major defects identified were roof to sewer, storm drain to sewer and patio to sewer. These findings confirmed that new properties can often be a source of wet weather flows, due to defective plumbing and drainage works. If these works on private properties are not investigated, the defects can remain hidden for long periods of time resulting in increased wet weather overflows.

Sydney Water is exploring options to address defective plumbing and drainage on private properties to reduce wet weather overflows. These include installing a flow monitor on major developments, engaging with developers/builders to raise awareness of issues (during construction and handover) and conducting further smoke testing in new growth areas.

Another measure, which is being proposed in Option 3, is to extend the current 2-year warranty period for defective plumbing and drainage in the *Sydney Water Regulation 2017* to 6 years. This would allow Sydney Water to issue directions to third parties to repair defective plumbing and drainage, where it is within 6 years of the work being completed.

5.4.3 Part 4 – Miscellaneous Provisions

5.4.3.1 Water restrictions

The ability to implement water restrictions to maintain water security will reduce the need to invest in additional (unplanned) alternative water sources.

5.4.3.2 Penalty notice provisions

Under this option, penalty amounts will continue for penalty offences under the Act, sections 30(1) and 69(1) and the regulation, sections 27, 28, 29 and 30(4), to enable on the spot fines for all offences under the Act and Regulation.

The penalty for contravening water restrictions will be increased from $220 to $450 for a person and from $550 to $900 for a corporation, in line with the penalty amount for other offences of similar consequence. All other penalty amounts remain unchanged.

These penalty notice provisions will provide an added incentive for individuals and corporations to adhere to requirements under the Act and the Regulation, and to refrain from using water in breach of restrictions during a time of drought.

During the last 2017 drought, Sydney Water received 13,289 breach reports on its website and issued 274 breach warnings over a period of 2019-20.[17] Level 1 restrictions applied until 10 December 2019, after which restrictions were increased to Level 2. Level 1 restrictions aim to achieve an average reduction in water use of about 5%, increasing to about 10% under Level 2 restrictions.

Using the number of breach warnings issued as a lower estimate of the potential number of individuals and corporations who would be further deterred from using water in breach of restrictions, it can be estimated that there would be 3,900kL of water saved from an additional 274

[17] Sydney Water relies on a range of demand and supply-side measures to respond to drought and considers water restrictions to be one tool as part of a comprehensive drought response plan. Of its breach reports and warnings, Sydney Water only issued 9 fines in total. These were all issued to residential properties in 2019-20, generating $1,980 in revenue being paid to Revenue NSW. This relatively low number of fines was complemented by Sydney Water with other measures at the time, including an ongoing water conservation program, advertising campaigns, and supplementing bulk water supply with SDP.

individuals/corporations using water. At a value of water of $3.25 per kL (retail price of water during periods of drought), these water savings would produce a small additional benefit of $12,725.

5.5 Conclusion and evaluation of alternatives

Option 3, the proposed 2025 Regulation will provide the greatest net benefits to the community.

A summary of the evaluation is provided in the Table 5-1 below. While the values provided should be considered indicative, the conclusions are not sensitive to any reasonable changes in assumptions.

Table 5-1 NPV for all three options ($m PV over 30 years at 5% real discount factor, 1 Mar 2024)

	Net present value (NPV) relative to Option 2	Notes
Option 1 — No regulation	Savings in compliance costs: $352.7m Adverse outcomes: -$939.8m	Includes costs to Sydney Water and other agencies relative to base case.
Option 2 – No change	N/A	Base case.
Option 3 – Proposed 2024 regulation	Small positive net benefits	Each proposed amendment has a net benefit relative to base case. None of the proposed amendments impose material costs.

6 Consultation

The proposed 2025 Regulation has been co-developed by the Department and Sydney Water.

The proposed draft of the Regulation will be open for public consultation from 19 May 2025 to 11:59 pm on 15 June 2025.

Please feel free to register for the webinar on 5 June 2025 for further information.

A What We Heard report will be published following the public consultation period. This report will outline the feedback received and the Department's response. The feedback will be instrumental in finalising the 2025 Regulation to commence on 1 September 2025.

7 Evaluation and Review

The proposed 2025 Regulation, once made, will be the subject of periodic review under the requirements of the SL Act, which provides for most regulations to be subject to automatic repeal every five years.