

Hunter Water Regulation 2024

Regulatory Impact Statement

June 2024



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.

Hunter Water Regulation 2024

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Abbreviations

Abbreviation	Meaning
NPV	Net present value
RIS	Regulatory Impact Statement
SL Act	<i>Subordinate Legislation Act 1989</i>
The Act	<i>Hunter Water Act 1991</i>
The Corporation / Hunter Water	The Hunter Water Corporation
The Department	The Department of Climate Change, Energy, the Environment and Water
The Regulation	The proposed (draft) Hunter Water Regulation 2024

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Executive Summary

The *Hunter Water Act 1991* (the Act) establishes the Hunter Water Corporation (Hunter Water) as a statutory State-owned corporation. Hunter Water provides drinking water, wastewater, recycled water and some stormwater services to a population of more than 630,000 people in homes and businesses across the Lower Hunter region of New South Wales. Hunter Water's area of operations is more than 6,600 km² and includes the local government areas of Newcastle, Lake Macquarie, Maitland, Cessnock, Port Stephens, Dungog and parts of Singleton.

To deliver its services to the community, Hunter Water constructs, operates, manages and maintains a range of natural and built assets used to collect, store, treat, and convey water, wastewater, recycled water and stormwater. Shifting climate patterns and increasing pressures on natural resources present increasing challenges to Hunter Water in meeting the changing needs of the growing region while protecting its health for future generations.

The Hunter Water Regulation 2015 is a statutory instrument under the *Hunter Water Act 1991*. It is used to regulate activities in the catchment areas and water storages, compliance with plumbing and drainage standards, protection of Hunter Water works or property or assets, and implementation of water restrictions. This regulation supports effective, efficient and prudent operations of Hunter Water in delivering its services to the community.

The Hunter Water Regulation 2015 is due to be repealed on 1 September 2024 pursuant to the provisions of the *Subordinate Legislation Act 1989* (the SL Act). Under this process, a regulation may lapse, or be remade with or without amendment following review and consultation. The Department and Hunter Water propose to remake the 2015 Regulation with minor amendments as the Hunter Water Regulation 2024 (the proposed 2024 Regulation). The proposed amendments include minor administrative updates and additional minor changes intended to streamline regulation by simplifying administration and providing more clarity to the region. This is considered the most effective means of achieving the greatest net benefit (or least net cost) to the community. Pending consultation and government approval, the proposed revised regulation is expected to commence on or before 1 September 2024.

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.

The SL Act requires a Regulatory Impact Statement (RIS) to be prepared as part of the review of the Regulation, to demonstrate that the direct and indirect social and economic costs and benefits to the community of the proposed 2024 Regulation have been considered. This RIS considers the costs and benefits of the proposed Hunter Water Regulation 2024 (the Regulation), a remake of the existing Hunter Water Regulation 2015.

The objective of the Regulation

The objective of the Regulation is to support Hunter 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 the Lower Hunter region. In accordance with the objectives of the Act, action is required to:

- protect the quality of drinking water supplied by Hunter Water to its customers;
- protect community health;
- protect the environment and enable ecologically sustainable development;
- protect Hunter 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 primarily due to the remote locations involved would be unnecessarily high;
- Hunter Water could not effectively protect its assets from damage or enforce compliance with plumbing and drainage standards; and
- There would be no mechanism for Hunter Water to implement water restrictions to protect water security during drought or other emergencies.

Proposed 2024 regulation and alternative options

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

- a ‘do nothing’ case, where the 2015 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 2015 Regulation in place with minor administrative updates (Option 2),
- a ‘proposed’ case, where the 2015 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 to the region (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.

The proposed 2024 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 7% real discount rate, 1 Mar 2024)

	Net present value (NPV) benefit relative to Option 2	Notes
Option 1 — No regulation	Savings in compliance costs: \$2.2m Adverse outcomes: -\$384.8m	Includes costs to Hunter Water and other agencies
Option 2 – No change	Option 2 is the base case.	Base case (zero net benefits)
Option 3 – Proposed 2024 Regulation	Small positive net benefits.	Each proposed amendment has a net benefit. None of the proposed amendments impose material costs.

Public Exhibition Process

Exhibition of the Regulatory Impact Statement and proposed 2024 Regulation provides interested stakeholders, including industry members and members of the wider community, with an opportunity for direct input into the regulatory development process.

In accordance with the requirements of the SL Act, the proposed 2024 Regulation and RIS will be available for comment for a minimum of 21 days. The proposed draft of the Regulation is open for consultation from 24 June to 11:59 pm 14 July 2024.

The department is seeking feedback from water users, peak water associations and interested community representatives.

To have your say, you can fill out the survey, upload a submission or write to us with your views.

A What We Heard report will be published following the public consultation period which outlines the feedback received and the department’s response.

Your submission may be published. If you do not want your personal details or responses published, please tell us.

For further information, you may contact 1300 081 047 during business hours, or attend our webinar on 4 July.

How to make a submission

¹ NPVs are expressed in 2024-dollars.

Interested parties are invited to submit written comments on the proposed 2024 Regulation or the RIS to the Department by mail or email to:

Post

Attn: Hunter Water Regulation 2024 Public Consultation

NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW)

Locked Bag 5022

Parramatta NSW 2124

Email

water.enquiries@dpie.nsw.gov.au

The closing date for submissions is 14 July 2024 at 11:59 pm.

What happens to submissions?

The Department will review all submissions received by the closing date and consider any issues raised. The proposed 2024 Regulation may be amended following consideration of any issues or comments made in submissions.

Use of submissions and confidentiality

The Minister for Water will be advised of all submissions and 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 placed on the Department's website.

The Department may also place submissions or summaries of submissions on its website. You should advise the Department if you do not want your submission published, or if you want part or all of it to be kept confidential, for example your name and/or personal contact details. The Department will respect your request unless required by law to disclose this information, for example under the provisions of the *Government Information (Public Access) Act 2009*.

Following the consultation process there will be additional communication to stakeholders informing them of the publication of the revised regulation. This communication will likely include:

- updated information on Hunter 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 must be reviewed every five years. The current Hunter Water Regulation 2015 lapses on 1 September 2024. Failure to review a regulation in this time will result in the regulation lapsing unless the time period is extended. A RIS is to be prepared as part of the review of most regulations under the staged repeal program.

When a regulation is reviewed, the responsible agency must consider its social and economic impacts, and whether the regulation is necessary. This will ensure that the proposed 2024 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 Regulation².

This RIS sets out the analysis of the impact of the proposed 2024 Regulation. The preparation of the RIS involves identifying and assessing the relevant costs and benefits of the proposed 2024 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 including the proposed 2024 Regulation and the option of no-regulation.
- Section 5 examines the costs and benefits of the proposed 2024 Regulation and alternatives, and provides an overall evaluation.
- Section 6 outlines the consultation process.

1.3 Background

This report is a regulatory impact statement (RIS) for the proposed Hunter Water Regulation 2024 which will help remake the Hunter Water Regulation 2015 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 region.

1.3.1 About Hunter Water

The *Hunter Water Act 1991* (the Act) establishes the Hunter Water Corporation (Hunter Water, referred to in the Act and the Regulation as ‘the Corporation’) as a statutory State-owned corporation. Hunter Water’s role is to provide water and wastewater services for the Lower Hunter region of New South Wales, encompassing the local government areas of Newcastle, Lake Macquarie, Maitland, Cessnock, Port Stephens, Dungog and parts of Singleton.

As part of its role, Hunter Water constructs, operates, manages and maintains a system of natural assets and built assets used to collect, store, treat, and convey water, wastewater, recycled water and stormwater.

Hunter Water extracts water from the Chichester River, Williams River, Allyn River, Paterson River and from groundwater sources at Tomago and Tomaree in accordance with conditions set out in water access licences and in combined water supply work and water use approvals issued under the *Water Management Act 2000*.

1.3.2 Hunter Water Regulation 2015

The Hunter Water Regulation 2015 is a statutory instrument under the *Hunter Water Act 1991*, and is used to regulate activities in the catchment areas and water storages, compliance with plumbing and drainage standards, protection of Hunter Water works or property or assets, and implementation of water restrictions. The Regulation is to support effective, efficient and prudent operations of Hunter Water in delivering its services to the community.

Under the SL Act, statutory rules such as the Hunter Water Regulation 2015 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 current Hunter Water Regulation 2015 lapses on 1 September 2024.

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.

1.3.3 Proposed Hunter Water Regulation 2024

Following consultation and government approval, the proposed 2024 Regulation is intended to commence on 1 September 2024 and is required to be published on the NSW legislation website. This Regulation replaces the Hunter Water Regulation 2015, which will be repealed on 1 September 2024 by Section 10(2) of the SL Act.

The proposed 2024 Regulation is a similar regulatory instrument to those that have previously been made. Its primary effects are to:

- regulate conduct in (and access to) Special Areas that are defined under the Act.
- allow Hunter 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 a number of offences and penalties that Hunter Water has authority to apply. The offences largely relate to failure to comply with access and conduct conditions established by Hunter 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 regulation

The general objective of the regulation is to support Hunter Water in fulfilling its principal statutory objectives under the Act, namely to:

- protect the quality of drinking water supplied by Hunter Water to its customers;
- protect community health;
- protect the environment and enable ecologically sustainable development by providing good quality management of wastewater services;
- protect Hunter 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 a regulation, Hunter 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, and would weaken Hunter Water’s case for investment or cost-recovery. For example, there would be insufficient disincentives for activities that pose risks to drinking water quality and the environment in and around the drinking water catchments. 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 (the catchment and built structures) are in remote locations away from regular law enforcement and so it is more efficient for Hunter Water to undertake enforcement activities relating to water quality given its objectives and its presence in the catchment areas. Some form of regulation is required to address these failings.

2.1 Overview of the 2015 Regulation and its relation to the Act

The current version of the regulation is the Hunter Water Regulation 2015, which commenced on 1 September 2015. Table 2-1 provides an overview of the 2015 regulation, including its structure and description for each part. The proposed 2024 Regulation is structured in a similar way to the 2015 Regulation but there are amendments in the section names and contents.

Table 2-1 Overview of the 2015 regulation

Part	Description
Part 1: Preliminary	This part includes the name of regulation, commencement date and definitions of “Corporation” and “the Act” in this regulation
Part 2: Special Areas	This part applies to the following Special Areas:

	<ul style="list-style-type: none"> • Chichester Catchment Area, • Grahamstown Catchment Area, • Nelson Bay Catchment Area, • North Stockton Catchment Area, • Tomago Sandbeds Catchment Area, • Williams River Catchment Area. <p>This part covers controls for agriculture, sewage disposal, animal management, pollution of waters, control of waste on Hunter Water land, gates or barriers on or to Hunter Water land, and stock control on Hunter Water land.</p> <p>This part also includes specific restrictions for areas including:</p> <ul style="list-style-type: none"> • Balickera Canal and Chichester and Grahamstown Storage Reservoirs • Nelson Bay, North Stockton and Tomago Sandbeds • Williams River.
Part 3: Plumbing and drainage work	<p>This part applies to plumbing or drainage work that affects Hunter Water. Examples of controls in this Part 3 include the following:</p> <ul style="list-style-type: none"> • Must comply with Code of Practice • Must use approved fittings • Must notify Hunter Water • Must be authorised by permit • Must give certificate of compliance after work completed.
Part 4: Miscellaneous	<p>This part requires that a person who damages a work or other property of Hunter Water must immediately notify Hunter Water of the damage.</p> <p>This part also covers:</p> <ul style="list-style-type: none"> • Restrictions on the use of water • Penalty notice offences • Authorised officers for penalty notices.

The 2015 Regulation concerns the operation of three substantive issues: Special Areas, plumbing and drainage works and miscellaneous provisions. The legislative background to each of these issues and their respective heads of power are explained below.

2.1.1 Special Areas

Regulation of Special Areas enables Hunter Water to achieve a multi-barrier approach to protecting drinking water quality, for example by regulating development and activities undertaken in Special

Areas. The quantity and quality of drinking water are heavily influenced by the condition of these water supply catchments³.

Part 5 Division 8 of the Act deals with Special Areas. Section 53 provides that the Governor may, on the recommendation of the Minister for Water (Minister), by order published in the Gazette, declare an area of land to be a Special Area. The Minister may recommend an order only if of the opinion that the exercise of the State's water rights under the *Water Management Act 2000* could be adversely affected unless the order is made.

Section 52 of the Act provides that the Secretary of the Department has the control of Special Areas for the purposes of Division 8. Section 57 provides that the regulations may make provision for or with respect to Special Areas, including charges or payments for the abstraction of water and the regulation or prohibition of abstracting, using, polluting or contaminating waters within Special Areas. A regulation made under section 57 prevails to the extent of any inconsistency with a statutory instrument made under another Act, including an environmental planning instrument within the meaning of the *Environmental Planning and Assessment Act 1979*.

Section 60 provides that the Secretary may authorise Hunter Water to exercise all or any of the Secretary's functions under a regulation or provision of a regulation made under the Act.

Part 2 of the 2015 Regulation applies to the following Special Areas:

- (a) Chichester Catchment Area,
- (b) Grahamstown Catchment Area,
- (c) Nelson Bay Catchment Area,
- (d) North Stockton Catchment Area,
- (e) Tomago Sandbeds Catchment Area,
- (f) Williams River Catchment Area.

2.1.2 Plumbing and drainage works

Section 69(1) of the Act applies to any kind of work for water supply, sewerage or drainage intended for direct or indirect connection with the pipes, sewers or drains of Hunter Water. Such work must be done by a person who holds an endorsed licence or a supervisor certificate in force under the *Home Building Act 1989*, or does the work under the immediate supervision of the holder of such a licence or certificate. This work may also be undertaken by a person who holds a tradesperson certificate in force under the *Home Building Act 1989* authorising the person to do that work under supervision and does that work under the general supervision of the holder of an endorsed licence or a supervisor certificate. Similar provisions are in section 73 of the *Water Industry Competition Act 2006* and section 99 of the *Sydney Water Act 1994*.

Section 69(2) of the Act provides the power to make regulations for or with respect to water supply, sewerage or drainage work, including the standards for and supervision of any such work.

³ <https://www.hunterwater.com.au/documents/assets/src/uploads/documents/Building-and-development2/Drinking-water-catchment/Guideline-GuidelineForDevelopmentInDrinkingWaterCatchments.pdf>, accessed May 2024

Section 20 of the Act provides that authorised officers of Hunter Water may enter land for a number of purposes. The purposes relevant to the regulation are:

- subsection (a) – in relation to activities necessary or appropriate to Hunter Water’s works or proposed new works;
- subsection l – to rectify defective or improper work that has not been rectified by a customer after being served with a notice.

Section 30A(1) of the Act makes it a penalty offence to connect any pipe or fitting to, or alter or use, a work owned by Hunter Water, unless authorised to do so by Hunter Water. Section 30A(2) provides that the regulations may make further provisions for the grant of authorisation by Hunter Water.

The *Plumbing and Drainage Act 2011* sets out standards and other requirements for plumbing and drainage work within the meaning of that Act.

2.1.3 Miscellaneous provisions

Water Restrictions

Section 64A of the Act provides that the portfolio Minister may give a direction to the Board of Hunter Water under the *State Owned Corporations Act 1989* if the Minister decides that this action is warranted on grounds involving urgency, public health or public safety.

Section 70(5) of the Act provides that the regulations may make provision for or with respect to the restriction or regulation of the supply and use of water in the area of operations in the case of drought or accident, or if the Minister is for some other reason of the opinion that it is necessary in the public interest and for the purpose of maintaining water supply.

Under the provisions in Hunter Water’s Operating Licence 2022 – 2027 and Hunter Water’s Customer Contract, both issued by the Governor under the Act, there is a general obligation to provide customers with safe drinking water (*water quality*), a reliable supply of water (*water security*), water at acceptable pressure for everyday use (*supply reliability*) and reliable collection, transport, treatment, reuse (*sustainability*) and/or disposal of sewage (*environmental protection*).

In relation to drought, Hunter Water’s Portfolio Minister may place restrictions on the use of the water supplied during or on the approach of a drought in consultation with Hunter Water. These conditions, which must be complied with, may include:

- restrictions on the use of water, including the purpose for which water may be used;
- a variation of charges consistent with the Act and Operating Licence; and
- other conditions that are considered appropriate, including the purposes for which water can be used, times when water can be used, the quantities of water that can be used and the means or methods of use of water.

Where it is necessary to shut down a water supply source in the event that a major operational difficulty occurs, and customer demands for water are high at the time of such an event, Hunter Water may interrupt the supply or place restrictions on the use of water supply services until such time as the operational difficulty is over. Supply/use conditions under these circumstances may include:

- restrictions on the use of water, including the purpose for which water may be used, and

- other conditions that are considered appropriate, including the purposes for which water can be used, times when water can be used, the quantities of water that can be used and the means or methods of use of water.

In line with the Lower Hunter Water Security Plan and Lower Hunter Drought Response Plan, Hunter Water continues to use the 'Love Water' water saving awareness campaign. This is complemented by a comprehensive water conservation program that can be expanded as part of a drought management response. The water conservation program includes permanent water conservation measures, known as 'Smart Water Choices', to encourage long-term behavioural change ⁴.

Hunter Water continues to work with non-residential customers outside of drought to develop and implement Water Efficiency Management Plans (WEMPs).

Hunter Water's approach for applying water restrictions is an education led restriction policy and the introduction of staged water restrictions as storage levels fall. This includes four levels of restrictions, with Level 1 to 3 triggered as storages reach 60%, 50% and 40% respectively.

Implementation and enforcement of water restrictions relies on the Regulation.

Penalty Notice Provisions

Section 31A(2) of the Act provides the regulation-making power for prescribing offences as penalty notice offences. Such offences include the illegal diversion of water, the creation of any unauthorised connections, alterations or use of works owned by Hunter Water, performing any works on infrastructure owned by Hunter Water for water supply without a licence, or discharging any substance into a work owned by Hunter Water without a written agreement of Hunter Water.

The authorised officers for penalty offences include:

- police officers and prescribed officers within the meaning of Section 30D of the *Maritime Services Act 1935*;
- staff members of Hunter Water;
- persons authorised under section 192 of the *National Parks and Wildlife Act 1974*, section 224 of the *Protection of the Environment Operations Act 1997* and section 365 of the *Water Management Act 2000*; and
- authorised staff members of Dungog Shire Council and Port Stephens Council under section 679 of the *Local Government Act 1993*.

⁴ https://www.industry.nsw.gov.au/___data/assets/pdf_file/0019/401626/draft-lower-hunter-water-security-plan.pdf, accessed April 2024

3 Proposed 2024 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) ⁵.

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

- a ‘do nothing’ case, where no replacement regulation is introduced, and the current 2015 Regulations are repealed (Option 1);
- 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
- a ‘preferred’ case, where a replacement regulation (the proposed 2024 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 2024 Regulation) by simplifying administration and providing more clarity to the region (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.

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, TPP19-01⁶, categorises costs and benefits into compliance costs, economic impacts, social impacts and environmental impacts.

Compliance costs are addressed in section 3.2.5.

Economic impacts of the options being considered relate to:

- drinking water quality
- alternative land uses
- Hunter Water management costs.

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

⁶ <https://arp.nsw.gov.au/tpp19-01-nsw-government-guide-better-regulation/>

Social and environmental impacts are discussed in section 3.2.6

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 the uncertainty as to the risk. Nevertheless, there are a number of public estimates that provide some indication of the importance. Tooth and Zhang (2018)⁷ 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 a benefit of ~\$100 million for the ~630,000 customers supplied by Hunter Water (in 2024\$).

⁷ <https://www.ipart.nsw.gov.au/sites/default/files/documents/benefits-of-water-quality-in-sydney-%E2%80%93-sapere-research-group.pdf>

The 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 that economic impacts of this incident have been estimated at around \$524 million (2024\$).

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)

Another incident of *Cryptosporidium* contamination in the water system was experienced in Milwaukee (USA) in 1993. The outbreak infected more than 400,000 people resulting in approximately 50 deaths and an estimated cost of US\$96 million. Factors such as changes in plant operations, increase in raw water turbidity, inadequate filtration and wastewater contamination of the water reservoir were the main contributors to the outbreak.

More recently, in the Hawkes Bay region of the North Island of New Zealand, 5,500 people were infected with *Campylobacteriosis* causing 45 hospitalisations with gastroenteritis and 3 related deaths⁸. Investigations concluded that faecal contamination occurred in the supply aquifer during heavy rainfall on the 5 and 6 August 2016. Sapere Research Group was commissioned by the New Zealand's Ministry of Health to assess the health and non-health related costs incurred as a result of the outbreak⁹. The estimated total financial cost was NZ\$21 million, with approximately 60% (NZ\$12.9 million) attributed to indirect costs to households (i.e. inconvenience), and the remaining NZ\$8.1 million accounted for direct costs, such as costs to local and central governments, businesses, NGOs, etc. The costs related to illness accounted for NZ\$2.5 million (12%).

Given the significance of drinking water quality, effective approaches to ensuring water quality are required. Hunter Water employs multiple approaches, starting with establishing the catchments as a barrier in a multi-barrier approach to prevent contamination of the water supply.

⁸ Ministry of Health National Situation Report 4 "Havelock North Gastroenteritis Outbreak", p 1.

⁹ Moore D, Drew R, Davies P and Rippon R. August 2017. The Economic Costs of the Havelock North August 2016 Waterborne Disease Outbreak. Wellington: Sapere Research Group Ltd.

The Regulation is critical to this approach to managing water quality as it regulates access and conduct in the Special Areas. Changes in the level and type of access and development activities that can be undertaken in 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.

3.2.3 Alternative land-uses

The key economic cost associated with regulating activity in the Special Areas and catchments relates to limiting the use of the land covered by the Regulation.

The Special Areas have potential economic value for alternative uses¹⁰. 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 more intensive forms of development.

Development applications within Special Areas and drinking water catchment areas are referred to Hunter Water by Councils under Section 51 of the Act. This is an important development control, first introduced in the Chichester Catchment in 1924 and Grahamstown Catchment in 1963, to ensure that proposed developments do not impact the quality or supply of drinking water in the Lower Hunter region.

Hunter Water is required under the Act to respond to referrals within 21 days. Some development applications contain insufficient information to enable Hunter Water to assess potential water quality risks in relation to the proposed development. Multiple requests for information to seek the necessary information to enable assessment of water quality risks can extend development application processing times. Hunter Water continues to work closely with local councils to ensure applicants and their consultants are made aware of Hunter Water's 2017 Guidelines for developments in drinking water catchments as early as possible in the application process. Hunter Water has also committed to work collaboratively with local councils to review these guidelines and develop a flyer summarising the application requirements for demonstrating Neutral or Beneficial Effects (NorBE) of sewage systems and stormwater management for developments. By ensuring that all applicants have a thorough understanding of the application requirements in Special Areas and drinking water catchment areas, particularly in demonstrating NorBE of proposed

¹⁰ The Regulation has only limited relevance to developments that have received environmental planning approval

developments, Hunter Water anticipates an improvement in the quality of development applications, with the aim of avoiding resubmissions, requests for information and associated delays.

Feedback from local Councils¹¹ suggests an indicative cost to developers to address Hunter Water's requirements in the order of \$3,000 to \$35,000 per development application, depending on the type, scale and details of the proposed development. Removing the Regulation will not simplify the process for development applications or reduce the cost to developers, because development applications within gazetted Special Areas will still be referred to Hunter Water by Councils under Section 51 of the Act.

3.2.4 Management costs

Under its Operating Licence 2022 – 2027, Hunter Water is required to maintain a Management System that is consistent with the Australian Drinking Water Guidelines. Regulation is an important tool that enables Hunter Water to achieve a multi-barrier approach to protecting drinking water quality, for example by regulating development and activities undertaken in Special Areas.

3.2.4.1 Managing physical risk

The different alternatives to regulation have a potentially significant effect on the amounts spent by Hunter Water and others on activities to protect the catchment and manage and monitor water quality.

Hunter Water spends approximately \$1.3 million per annum on catchment management activities, including:

- land management including activities relating to fencing, signage, physical and remote surveillance and targeted inspections, fire prevention, pest and weed management, soil erosion and picnic sites;
- development assessments;
- catchment interventions, including facilitating the implementation of improved agricultural land practices and improved Integrated Water Management practices in key residential areas;
- community engagement and education;
- building and maintaining effective partnerships or working relationships with other stakeholders who work in managing catchment lands (including Local Land Services, local councils, National Parks and Wildlife Services, the NSW Police), for example working with Police to respond to incidents such as illegal dumping;
- monitoring and evaluation of catchment management programs; and
- research and development, investigations and innovation.

Catchment management and source water protection provide the first barrier to the protection of the water quality in the drinking water system. A multi-barrier approach to protecting drinking water quality is one of the guiding principles underpinning the ADWG. Some catchment investments can

¹¹ https://www.dungog.nsw.gov.au/files/assets/public/v/1/councildocuments/minutes_agendas/2023/12.-december/agenda-of-ordinary-council-meeting-wednesday-13-december-2023.pdf

result in multiple environmental improvements not achieved by other barriers, such as treatment plants, for example restoring vegetation and biodiversity, carbon sequestration, and improving amenity for the public. Investment in catchment management can also reduce the burden on, and operational costs of, water treatment plants. Without the Regulation, Hunter Water would still need to spend at least this amount on catchment management activities, to understand and address water quality risks.

In addition to the above, Hunter Water is spending \$11m on a project to address riverbank erosion in the Seaham weirpool. Erosion contributes to deterioration in water quality. Riverbank remediation works may include weed removal, native vegetation regeneration and stock exclusion, combined with embankment stabilisation works to protect the banks and newly planted vegetation. This project would proceed even if the Regulation was not in place.

In addition to catchment management activities, Hunter Water spends more than \$500,000 per annum on routine water quality monitoring within its catchments and storages. Monitoring is aligned with Hunter Water's Drinking Water Quality Management System and the ADWG. In addition to routine monitoring, Hunter Water also undertakes targeted, investigative and risk-based monitoring to increase its understanding of issues related to drinking water quality. This includes, for example, "event-based" monitoring during rainfall events to better understand risks associated with runoff from urban and rural lands in the drinking water catchments. The routine and ad-hoc monitoring data collected is used to inform operational and strategic decisions based on water quality risks. Removing the Regulation would have implications for the extent, and costs, of water quality monitoring required. Due to the heightened risk resulting from reduction in risk controls in the catchments, there would likely be an increase in monitoring to inform operational and strategic decision making, however the potential increase has not been quantified.

The Regulation also has implications for management costs by other parties. The Regulation provides Hunter Water with functions (e.g., enforcement powers) that may otherwise be undertaken by other agencies. Thus, modification of the Regulation that impacts the relative efficiency and effectiveness of Hunter Water in management activities has potential for costs to be transferred to other agencies, which would increase their compliance costs.

3.2.4.2 Managing 'perception risk'

Regulations have a foundational benefit of maintaining trust in government for natural resource management, in authorising Hunter Water and other statutory agencies to undertake their delegated functions. The reputation of Hunter Water and that of the water sector in general, depend on regulations that authorise them to take necessary measures (preventive, responsive and reactive actions). In the absence of regulation options are usually limited to remediation and litigation. For instance, poorly regulated catchments lead to poorer drinking water quality, an increased likelihood of supply issues and consequently a loss of trust in the water service provider.

Recent case studies in South-east Queensland after intense rainfall in degraded catchments led to issues in drinking water supply and consumer concerns. As reported by the State of Queensland in their *South East Queensland Rainfall and Flooding February to March 2022 Review Report 1: 2022–2023*¹², areas on South East Queensland recorded rainfall of up to 1100mm from 22 February to 1

¹² <https://www.igem.qld.gov.au/node/183>, accessed May 2024

March 2022, damaging infrastructure including residences, bridges and waterways. With large amounts of sediment and debris being collected by the heavy flows, raw water sources were heavily impacted in terms of water quantity and quality.

3.2.5 Compliance costs

Regulations often impose significant compliance costs on parties to 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

- Hunter Water costs 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.

Hunter Water employs four Rangers who among other responsibilities, undertake compliance and enforcement activities associated with Part 2 of the Hunter Water Regulation. Approximately 15% of the Ranger's time is spent on compliance and enforcement. The cost of compliance and enforcement activities associated with Part 2 of the Hunter Water Regulation is approximately \$60,000 per annum.

Hunter Water currently spends approximately \$70,000 per annum on administration, compliance and enforcement related to plumbing and drainage requirements under Part 3 of the Regulation. There is no significant additional compliance cost to the plumbing industry, as the compliance requirements under the Regulation are very similar to requirements under NSW statewide licensing¹³.

The total cost to Hunter Water associated with administration, compliance and enforcement of water restrictions under Part 4 of the Regulation during the 2019-20 drought was approximately \$500,000. This is based on the cost associated with community water officers, who spent approximately half of their time on administration (assessing and processing exemption requests) and the other half on patrolling and investigating breaches.

3.2.6 Social and environmental impacts

The drinking water catchments are home to a diverse range of native flora and fauna and areas of cultural heritage. As such the catchments have value over and above their use for managing water quality and/or alternative land-uses as discussed below. This value incorporates:

- the benefits of maintaining biodiversity
- people's intrinsic desire for the areas to be preserved

¹³ <https://www.fairtrading.nsw.gov.au/trades-and-businesses/licensing-and-qualifications/plumbing,-draining-and-gasfitting-licences>

- the option values associated with being able to use the resource in the future.

Maintaining the Special Areas and broader catchments for water quality has the additional benefit of protecting these lands from environmental impacts. In effect, this benefit is equal to the avoided costs associated with damage to the environment.

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 household¹⁴. This indicates the order of value people place on preserving the catchment environment, but we have not included the benefit here as some development is allowed within the Special Areas.

¹⁴ 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 2015 Regulation would lapse on 1 September 2024, and no replacement regulation would be introduced.

4.1.1 Part 2 – Special Areas

Under this option, there would be no regulation of activities that have potential to pollute waters within Special Areas as provided for under section 57(1) of the Act. It is very likely Hunter 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.

The hazards to water quality in the Special Areas under this option are considered unacceptable. 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.

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

4.1.3 Part 4 – 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 Hunter 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 2015 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 as outlined in Table 4-1.

Table 4-1 Proposed amendments and their rationale

Note: References are to the Regulation.

2015 Regulation Clause Title		Proposed 2024 Regulation Clause Title		Proposed Change
Part 1 Preliminary		Part 1 Preliminary		
1	Name of Regulation	1	Name of Regulation	No change
2	Commencement	2	Commencement	No change
3	Definitions	3 and Schedule 2	Definitions and Dictionary	No material change – definitions moved to Schedule 2 Dictionary
Part 2 Special areas		Part 2 Special areas		
Division 1 Preliminary		Division 1 Preliminary		
4	Definitions	Schedule 2	Dictionary	No material change: <ul style="list-style-type: none"> • Definitions moved to Schedule 2 Dictionary • Definition of ‘Balickera Canal’ amended to include the words ‘in the Grahamstown Catchment Area’ • Definition of Secretary updated to remove the redundant reference to the ‘Department of Industry, Skills and regional Development’ • Definition of Department added
5	Application of Part	4	Application	No change
6	Delegation	15	Secretary may delegate approval and direction functions to Corporation – the Act, s 57	No material change – moved to Division 4 Miscellaneous and updated to include delegation to the Corporation or its directors, officers or staff, in line with the Act section 57(1A)(b)
Division 2 Special areas generally		Division 2 Special areas – offences – the Act, ss 57 and 70(6)		
7	Agriculture	5	Persons must not engage in aquaculture and agriculture	No practical impact: <ul style="list-style-type: none"> • Exemption for the Williams River Catchment Area removed to achieve consistency across all

2015 Regulation Clause Title		Proposed 2024 Regulation Clause Title		Proposed Change
				<p>Special Areas, streamline regulation and remove duplication with the Dungog Local Environment Plan 2014</p> <ul style="list-style-type: none"> Does not result in additional development control. Dungog Shire council remains the consent authority.
8	Sewage disposal	6	Persons must not erect and operate on-site sewage management facilities	<p>No practical impact:</p> <ul style="list-style-type: none"> Exemption for the Williams River Catchment Area removed to achieve consistency across all Special Areas, streamline regulation and remove duplication with the Dungog Local Environment Plan 2014 Does not result in additional development control. Dungog Shire council remains the consent authority.
9	Animal management	7	Persons must not leave and dispose of animal carcasses near watercourses	No material change – removed the word ‘dead’
10	Pollution of waters	8	Persons must not pollute waters	No material change – consolidated clauses, changed ‘detrimentally affect’ to ‘pollute’ and moved definition of ‘pollute’ to section 5 Definitions
11	Control of waste on Corporation land	9	Persons must not bring and leave waste	No change
12	Gates or barriers on or to Corporation land	10	Persons must not open, interfere with and obstruct gates and barriers	No material change – clarified reference to Corporation staff
13	Stock control on Corporation land	11	Persons must ensure stock do not enter	No change
Division 3 Specific restrictions		Division 3 Specified special areas – offences – the Act, ss 57 and 70(6)		

2015 Regulation Clause Title		Proposed 2024 Regulation Clause Title		Proposed Change
14	Balickera Canal and Chichester and Grahamstown Storage Reservoirs	12	Prohibition on entry to Balickera Canal and Chichester and Grahamstown Storage Reservoirs	No change
15	Nelson Bay, North Stockton and Tomago Sandbeds	13	Persons must not engage in extractive industries in Nelson Bay, North Stockton and Tomago Sandbeds	No change
16	Williams River	14	Persons must not use vessels in Williams River	No material change – wording amended for ease of reading
Division 4 Miscellaneous		Division 4 Miscellaneous		
17	Approvals given by Secretary and Corporation	16	Approvals given by Secretary and Corporation – the Act, s 57	No material change: <ul style="list-style-type: none"> • Changed ‘given unconditionally or subject to conditions’ to ‘given with or without conditions’ to (b) • Removed ‘as the case may be’ from (c)
18	Notices by public agencies	17	Notices of functions of public agencies in special areas – the Act, s 55	No material change: <ul style="list-style-type: none"> • Amended to better reflect the current practice of electronic lodgement • Removed the redundant reference to the ‘Department of Industry, Skills and regional Development’
Part 3 Plumbing and drainage work		Part 3 Authorisation for connections, alterations or use of works and Part 4 Works for water supply, sewerage or drainage – the Act, s 30A(2)		
19	Application of Part after commencement of Plumbing and Drainage Act 2011		Removed	Removed to better reflect the Act, section 30A.
20	Definitions	Schedule 2	Dictionary	No material change: <ul style="list-style-type: none"> • Definitions moved to Schedule 2 Dictionary • Removed redundant definitions for ‘approved’, ‘recycled or reclaimed water pipe’, ‘sewerage service pipe’, ‘stormwater drainage service drain’

2015 Regulation Clause Title		Proposed 2024 Regulation Clause Title		Proposed Change
				<p>and 'water supply service pipe' as they are no longer required.</p> <ul style="list-style-type: none"> • Moved definitions for 'certificate of compliance' and 'Plumbing Code of Australia' to Division 2 section 26. • Moved definition for 'plumbing and drainage work' to Division 2 section 26 and amended to better reflect the Act, section 69.
21	Must comply with Code of Practice	25	Plumbing and drainage work must comply with Plumbing Code of Australia	No change
22	Must use approved fittings	23 and 26	<p>Conditions – Approval of fittings for plumbing and drainage work and</p> <p>Persons must use approved fittings for plumbing and drainage work</p>	<p>No material change:</p> <ul style="list-style-type: none"> • Split across two clauses to differentiate between provisions under the Act section 30 and 69 • Removed requirement for fittings to be 'submitted to the Corporation for examination and testing' to better reflect current practices • Removed requirement for 'submission to the Corporation of a satisfactory result of tests of a fitting of that kind carried out by an approved person or body' to better reflect current practices • Changed 'manufactured under an approved system of quality assurance' to 'manufactured under a system of quality assurance approved by the Corporation'
23	Must notify Corporation	24	Conditions – Persons must notify Corporation of plumbing and drainage work	No material change – reworded to better reflect the Act, section 30A
24	Must be authorised by permit			Removed to better reflect the Act, section 30A

2015 Regulation Clause Title		Proposed 2024 Regulation Clause Title		Proposed Change
25	Application for permit	19	Applications for authorisation	No material change: <ul style="list-style-type: none"> • Changed 'permit' to 'authorisation' • Changed 'in an approved form' to 'in a form approved by the Corporation' • Changed 'lodged at an office of the Corporation' to 'lodged using an online system provided on the Corporation's website' to better reflect the current practice of electronic lodgement
26	Refusal of permits	20	Refusal of applications	No material change – changed 'any relevant information that was not supplied with the application and that has been requested by the Corporation from the applicant is outstanding' to 'information required under the approved form is not supplied with the application and remains outstanding after a request from the Corporation'
27	Conditions of permits	18	Conditions – granting authorisations	No material change: <ul style="list-style-type: none"> • Amended to include flexibility for authorisations to be granted to a person or a class of persons. • Changed 'may grant a permit subject to conditions' to 'may grant the authorisation with other conditions the Corporation considers necessary' • Removed 27(2) to better reflect the Act section 30A
28	Suspension or cancellation of permit	21 and 22	Conditions – suspending and cancelling authorisations and Conditions – request for suspension or cancellation of authorisation by holder or owner of authorisation	No material change: <ul style="list-style-type: none"> • Split across two clauses • Changed 'permit' to 'authorisation' throughout

2015 Regulation Clause Title		Proposed 2024 Regulation Clause Title		Proposed Change
29	Defective plumbing or drainage work	28	Persons must comply with directions for non-standard plumbing and drainage work	No material change: <ul style="list-style-type: none"> Changed 'in a tradesmanlike manner' to 'in the way of a tradesperson' to reflect more inclusive language Changed timeframe for Corporation to issue a direction from 2 years to 6 years to allow the Corporation more time to identify and issue notice to repair defective works
30	Must give certificate of compliance after work completed	27	Persons must give Corporation certificate of compliance after completing plumbing and drainage work	No material change – amended to reflect the current practice that a certificate of compliance need only be provided on request by the Corporation
31	Exemption from certain requirements	NA		Removed to better reflect the Act, section 30A
Part 4 Miscellaneous		Part 4 Miscellaneous		
32	Must notify Corporation of damage to its works or property	NA		Removed
33	Restrictions on use of water	30	Minister may regulate water use for drought, accident or public Interest – the Act, s 70	No material change: <ul style="list-style-type: none"> Removed 'If the Minister considers it necessary to do so in the case of drought or other emergency, or the Minister is for some other reason of the opinion that it is necessary in the public interest and for the purpose of

2015 Regulation Clause Title		Proposed 2024 Regulation Clause Title		Proposed Change
				<p>maintaining water supply' to avoid duplication of the Act, section 70</p> <ul style="list-style-type: none"> • Changed 'cut off or restrict' to 'limit or stop' • Changed 'fails to comply with an order under this clause regulating or restricting the use of water' to 'contravenes an order under this section'
34	Penalty notice offences	31	Penalty notices	
35	Authorised officers for penalty notices	29	Authorised officers for issuing penalty notices – the Act, s 31A	<p>No material change:</p> <ul style="list-style-type: none"> • Updated reference to Maritime Services Act • Added NSW Fisheries officers to improve the effectiveness of compliance and enforcement of illegal fishing in the drinking water storages
36	Savings	32	Savings	No change
Schedule 1 Penalty notice offences		Schedule 1 Penalty notice offences		<p>Penalty amounts added 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 has been increased to \$750 (from \$220) for a person or \$1,500 (from \$550) for a corporation, in line with the penalty amount for other offences of similar</p>

2015 Regulation Clause Title	Proposed 2024 Regulation Clause Title	Proposed Change
		consequence. All other penalty amounts remain unchanged.
NA	Schedule 2 Dictionary	No material change – new schedule added for ease of reading

4.4 Other alternatives

Given the context of this proposed 2024 Regulation, no other economic/ financial/ social alternatives have been identified that could achieve the desired objectives of the Regulation.

5 Cost and benefits of each option

5.1 Approach

The methodology adopted for analysing the options, and the impact of the proposed 2024 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* (February 2023)¹⁵
- NSW Productivity Commission, *Regulatory Impact Statements*¹⁶
- New South Wales Treasury *Guide to Better Regulation* ([TPP 19-01](#)¹⁷ and [TC19-02](#)¹⁸).

This RIS assesses the impacts of no-regulation and the proposed 2024 Regulation against the base case (no-change 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 wasn't protected at source.

5.2.1 Part 2 – Special Areas

This option assumes the controls provided for in the 2015 Regulation on activities in the Special Areas would be lifted. Since controls have been in place (in one form or another) for an extended period, it is difficult to forecast the future levels of each activity in the absence of the controls.

Lifting controls will result in a risk of contaminated drinking water, which poses hazards to public health (pathogens, toxins from algal blooms, metals and organic chemicals) and aesthetic water quality (taste, appearance, odour).

This option would therefore incur costs of enhanced water treatment to continue to meet ADWG. The additional operating cost associated with enhanced water treatment is estimated at \$5 million

¹⁵ TPG23-08 NSW Government Guide to Cost-Benefit Analysis

¹⁶ <https://www.productivity.nsw.gov.au/regulatory-policy/regulatory-impact-assessments>

¹⁷ <https://arp.nsw.gov.au/tpp19-01-nsw-government-guide-better-regulation/>

¹⁸ <https://arp.nsw.gov.au/tc19-02-nsw-government-guide-better-regulation/>

per annum, excluding additional capital costs. These costs would be funded by Hunter Water's customers. In addition, poor water quality imposes costs on industrial users.

The cost of compliance and enforcement activities associated with Part 2 of the Regulation, Special Areas, would be considered a saving of \$60,000 per year under Option 1.

5.2.2 Part 3 – Plumbing and Drainage Works

Under this option it can be assumed that the standard of plumbing and drainage work would deteriorate from the current levels. The RIS requires an estimate of deterioration in standard of work, plus savings from reduced compliance activity.

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.

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 (2018\$) for the benefits of meeting the Australian Drinking Water Guidelines (ADWG). This equates to a benefit of \$0.1 million per year (2024\$) if 0.1% of 630,000 customers supplied by Hunter Water were affected.

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 \$70,000 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, Hunter Water would need to invest in alternative water sources to maintain the same level of water security. Hunter Water is already planning to construct a desalination plant at Belmont with capacity to supply around 15% of the region's average daily water needs, at a capital cost of \$530 million¹⁹. It is estimated that during the

¹⁹ <https://www.hunterwater.com.au/documents/assets/src/uploads/documents/Belmont-Desal-Community-update-Jan-2024-FINAL-WEB.pdf>

2019-20 drought, Level 2 restrictions reduced demand by approximately 18%²⁰. Assuming similar potential savings in other drought events, the inability to apply restrictions might result in the need for additional alternative water sources to maintain the same level of water security. An indicative cost to provide additional desalination capacity might be in the order of \$530 million capital expenditure (2024\$), additional to the planned Belmont desalination plant.

The cost of compliance and enforcement activities associated with water restrictions under Part 4 of the Regulation, would be considered a saving of approximately \$500,000 per drought event under Option 1.

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 Hunter Water works, under the Act. Pursuing these illegal activities through court proceedings will increase Hunter 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, Hunter Water's operating costs and capital investment requirements would significantly increase as a result of increased risks to water quality and impacts on Hunter Water's services.

5.2.4 Summary of Option 1

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

- \$60,000 per year for Part 2 Special Areas;
- \$70,000 per year for Part 3 Plumbing and Drainage works; and
- \$56,000 per year (on average) for water restrictions under Part 4 Miscellaneous.

However, it would result in additional costs including:

- An increase in water treatment costs of at least \$5 million per year;
- Risks of contaminated water supply at a cost of approximately \$100,000 per year; and
- Additional cost in the order of \$530 million to deliver alternative water sources such as desalination.

5.3 Option 2: No-change

This option is the base case, which is a roll-over of the 2015 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 2024 Regulation

Costs to government associated with Option 3 relate to making and administering the proposed 2024 Regulation, although making the regulation is considered routine business of the Government

²⁰ <https://www.hunterwater.com.au/news/level-2-water-restrictions-apply-across-the-lower-hunter-1>

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 – Special Areas

No additional controls are proposed. The removal of Clause 7(4) and 8(3) from the Regulation will allow all Special Areas to be dealt with in a consistent manner. This should have no practical effect as the same controls apply to the Williams River Catchment Area due to the application of the *Dungog Local Environmental Plan 2014*.

No additional costs or benefits are expected.

5.4.2 Part 3 – Plumbing and Drainage Works

The proposed changes are minor:

- Change definitions as shown in Table 4-1
- Change ‘permit’ to ‘authorisation’.

The changes are not expected to impose any additional costs or benefits to the community.

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 be added 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 \$750 for a person and from \$550 to \$1,500 for a corporation, in line with the penalty amount for other offences of similar consequence. All other penalty amounts remain unchanged.

The penalty notice provisions provide added incentive for individuals and corporations to adhere to requirements under the Act and the Regulation.

There should be slight (unquantified) benefits due to increased deterrence from additional penalties.

5.5 Conclusion and evaluation of alternatives

It is concluded that Option 3 Proposed 2024 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 7% real discount factor, 1 Mar 2024)

Net present value (NPV) benefit relative to Option 2		Notes
Option 1 – No regulation	Savings in compliance costs: \$2.2m Adverse outcomes: -\$384.8m	Includes costs to Hunter Water and other agencies relative to base case (Option 2)
Option 2 – No change	Option 2 is the base case	Base case (so zero net benefits compared to itself)
Option 3 – Proposed 2024 regulation	Small positive net benefits (not quantified)	Each proposed amendment has a net benefit relative to base case (Option 2). None of the proposed amendments impose material costs.

Justification for the preferred option is further outlined below.

5.5.1 Part 2 – Special Areas

The hazards to drinking water quality in the Special Areas under the option of allowing the regulation to lapse are considered unacceptable. The consequent risk of contamination of drinking water 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.

5.5.2 Part 3 – Plumbing and Drainage Works

The proposed 2024 Regulation continues the 2015 Regulatory framework for plumbing and drainage works which has operated satisfactorily in the past. The proposed 2024 Regulation is expected to provide assurance for the quality of plumbing and drainage work in the future at a level that meets community expectations.

Regulatory costs are not considered excessive in view of the size of expenditures on plumbing and drainage within Hunter Water’s area. While it is not possible to quantify the benefits and costs of compliance with the regulation, qualitative analysis suggests that the benefits from reductions in serious risks to health and the environment, as well as the protection of Hunter Water’s assets and commercial interests, outweigh the costs involved.

Of the options considered, the proposed 2024 Regulation provides assurance that the costs resulting from substandard plumbing and drainage work that has the potential to impact on Hunter Water’s operations will be avoided. The associated regulatory costs are relatively low.

5.5.3 Part 4 – Miscellaneous Provisions

5.5.3.1 Water restrictions

It must be recognised that there are limits to the reductions in water use that can be achieved by non-mandatory measures such as public education and pricing. There will always be people who do not respond to such measures and this places an unfair burden on others. Regulatory powers to

impose and enforce water restrictions play a valuable role in meeting Hunter Water's long-term water conservation objectives, and for conserving additional water during times of drought or emergencies. It is important that Hunter Water has the necessary power to impose water restrictions under specified circumstances and apply penalties when individuals do not comply with restrictions.

5.5.3.2 Penalty notice provisions

The penalty notice amounts are considered to provide an adequate deterrent for all penalty notice provisions and are in line with the maximum penalties outlined in section 70(6) of the Act. The benefits of enforcing the Regulation are considered to outweigh the costs of making and administering the provisions.

6 Consultation

The proposed 2024 Regulation has been co-developed by the Department and Hunter Water. Relevant New South Wales government agencies and stakeholders have been directly advised that the proposed 2024 Regulation and RIS is available for comment and will be consulted with directly. In addition, industry and the public will be able to make submissions regarding the proposed 2024 Regulation and RIS.

7 Evaluation and Review

The proposed 2024 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 repeal every five years.