

Consultation report

Proposed change to water restrictions in South East Queensland (change to the Water Regulation 2016 level of service objectives)

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Executive summary

This report outlines the consultation undertaken for a proposed change to the South East Queensland (SEQ) level of service (LOS) objectives, prescribed in section 80 of the Water Regulation 2016. The proposed change follows a review of the LOS objectives carried out in 2019, in which stakeholders expressed general support for refining or removing the LOS objective relating to the duration of medium level water restrictions in SEQ.

It is proposed to change the current expression of the duration of restrictions from “medium level water restrictions to not be in place longer than one year on average” to “the total duration of medium level water restrictions, and water restrictions of a greater severity, will not be longer than five per cent of the time on average.” The proposed change is to better reflect the way that the major SEQ sources of supply behave during drought times, which are typically infrequent but long in duration.

The Department of Regional Development, Manufacturing and Water (the department) engaged with Seqwater and SEQ water service providers, who expressed general support for the proposed amendment.

A public notice of the proposed change to the LOS objectives and invitation to comment was published online from 1 June 2021 to 9 July 2021. This was accompanied by an information paper about the proposed change, providing background on the LOS objectives and water security planning for SEQ. Nine public submissions were received.

The department considers that the long-term benefits of greater flexibility to the duration of water restrictions, if and when needed, outweigh the temporary inconvenience that restrictions might impose. Overall, the feedback and most of the submissions received support this.

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1.0 Background

Level of service (LOS) objectives for South East Queensland (SEQ) are specified in the Water Regulation 2016 (in accordance with section 344 of the *Water Act 2000*). These objectives are the targets set by government, in consultation with the community, for the performance of the SEQ Water Grid. The aims of the LOS objectives are that:

- appropriate planning will be done so that water supplies will be adequate to meet regional residential and non-residential needs over the long term
- the community is aware of what water restrictions (i.e. targeted demand reduction) may be imposed during droughts
- the community's basic water needs can be met under all circumstances, including drought emergencies.

The LOS objectives provide the basis for Seqwater's planning and its long-term water security plan, the Water Security Program for SEQ. The Water Security Program is an adaptive plan that sets out actions and processes on how Seqwater will meet the LOS objectives during times of water scarcity and plan for the long-term water security of SEQ. Compliance with the LOS objectives is monitored through Seqwater's computer modelling. Seqwater consider the cost impacts of each of its drought response options in order to develop the optimal drought response, to ensure ongoing, cost-effective water security. A review of the current Water Security Program is being undertaken, and a new Water Security Program is expected to be published in March 2022.

1.1 Current level of service objectives

The current LOS objectives were made in 2014 and are summarised on the next page.

LOS objective*	Reasoning for having the objective
The SEQ Water Grid has sufficient capacity to meet projected regional average urban demand.	Provide sufficient infrastructure and sources of water supply to meet demands during 'normal' times (not during drought).
Medium level water restrictions will: <ul style="list-style-type: none"> - not occur more than once every 10 years on average - not restrict consumption to less than 140 litres per person per day - last no longer than 1 year on average. 	Provide an indication of what might be expected by the community during drought. It indicates the expected frequency, severity and duration of the first level of restrictions (those with a potentially significant impact on lifestyles). This objective would result in household water consumption being reduced from around 170 litres per person per day to (not less than) 140 litres per person per day under medium level water restrictions.
Medium level water restrictions apply to residential water use, and non-residential water use that is incidental to the purpose of business. ^a	Minimises the community impact of medium level water restrictions by not impacting business.
Wivenhoe, Baroon Pocket and Hinze Dams will not reach minimum operating level more than 1:10,000 years on average. ^b	Provides for sub-regional water security i.e., to all areas of South East Queensland.
Be able to supply the essential minimum supply volume (100 L/p/d) (residential and non-residential demand combined) and for this not to occur more than 1:10,000 years on average. ^c	Basic water needs can be met under all circumstances.

* The LOS objectives have been paraphrased from legislation; refer to the Water Regulation 2016 available from the legislation Queensland website (www.legislation.qld.gov.au) for the full LOS objectives.

^a An example of water use that is incidental to the purpose of business is watering a garden in the grounds of a factory.

^b Minimum operating level is the minimum operating level for the dam stated on the relevant resource operations licence.

^c Essential minimum supply volume is the volume of water necessary to provide for drinking and basic hygiene, and for essential services such as hospitals, adequate food production and power generation in critical circumstances.

1.2 Proposed changes to level of service objectives

It is proposed to update the LOS objective for duration of water restrictions in the Water Regulation 2016 before the end of the year to enable the next version of the SEQ Water Security Program to adopt this objective. It is proposed to change section 80 of the Water Regulation 2016 relating to water restrictions to be similar to:

“The SEQ Water Grid is to be able to supply enough water so that:

- a. the total duration of medium level water restrictions, and water restrictions of a greater severity,^a will not be longer than 5 per cent of the time on average*
- b. medium level water restrictions on residential water use will not restrict the average water use for the SEQ region to less than 140 litres for each person for each day*
- c. medium level water restrictions will not happen more than once every 10 years on average”.*

^a Water restrictions of greater severity are those that are targeting a greater reduction in water use.

The proposed change would apply to the whole of the SEQ region.¹ It is intended, at this stage, for the existing objectives relating to frequency and severity to remain the same. No changes will be made to the LOS objectives

¹ Under section 341 of the Water Act, the SEQ region is defined as the local government areas of Brisbane City Council, Gold Coast City Council, Ipswich City Council, Lockyer Valley Regional Council, Logan City Council, Moreton Bay Regional Council, Noosa Shire Council, Redland City Council, Scenic Rim Regional Council, Somerset Regional Council, Sunshine Coast Regional Council, and any local government area, or part of a local government area, adjacent to a local government area mentioned above and designated by gazette notice.

relating to projected regional average urban demand, the supply of essential minimum supply volume, and the draw down to minimum operating level of Wivenhoe, Hinze and Baroon Pocket Dams. The next review of the LOS objectives, due in 2024, will revisit all of the criteria.

The reasons for the proposed change to the LOS objective for duration of water restrictions include:

- It provides a clearer idea of what water restrictions might be imposed in response to drought, and also enables better monitoring of compliance with the LOS objectives. The proposed objective applies to all water restrictions that are of medium level and greater severity. This compares with the current objective which applies only to medium level water restrictions.
- It better reflects the behaviour of the bulk water supply system. Historically, severe SEQ droughts have lasted for up to eight years and have occurred only about twice every 100 years. In such long droughts, the cumulative time spent in water restrictions could be two years or longer. It is therefore likely that restrictions will be required greater than one year on average in future.
- It allows for climate change impacts. The future impacts of climate change are likely to increase the severity and frequency of drought. The proposed change to LOS objective allows for potential increases in the duration of water restrictions (which are currently less than three per cent of the time) due to climate change.
- It provides cost savings. Maintaining the current LOS objective is likely to drive an increase in the bulk water price for SEQ water customers by driving the need for drought water supplies sooner than would otherwise be required. The proposed LOS objective reduces the risk of constructing drought response infrastructure that could be idle for much of the time (i.e., generally only used during drought until the population grows and increases the water demand).
- It does not alter Seqwater's drought response plan. An assessment by Seqwater, using an updated hydrological model that considers climate change, confirms that this change will not impact the trigger for medium level water restrictions or bring forward augmentation in the foreseeable future.
- Consistent with other places. The proposed change is consistent with other jurisdictions, such as Greater Sydney and the Lower Hunter Valley.

If this change is not made, modelling indicates that this would likely drive the construction of additional bulk water infrastructure to augment supply to the residents of SEQ earlier than it would otherwise be necessary. This infrastructure would likely be sitting idle during periods outside of drought and not used to its full capacity for a significant time. It is estimated a new bulk water supply source for the SEQ region would cost around \$3 billion and the cost for this would be recovered from all SEQ customers through increased water charges.

2.0 Level of service objectives review process

The level of service objectives for SEQ are required to be reviewed at least every five years. Reviews are important to ensure the objectives are providing an appropriate level of water supply security for SEQ. A review of the current LOS objectives was carried out in 2019 (see section 3.1).

After a review, the level of service objectives can be amended following:

- a public notice describing the proposed desired level of service objectives for SEQ (s345 of the *Water Act 2000*)
- consideration of all properly made submissions by the chief executive of the *Water Act 2000*, after which the chief executive is satisfied that the level of service objectives should be revised (s346 of the *Water Act 2000*)
- the Minister recommending the amendment to the Governor in Council (s344 of the *Water Act 2000*).

3.0 Level of service consultation activities

Consultation and engagement relating to the proposed change to LOS objectives has occurred in three phases, as shown in Figure 1. The first of these was consultation and engagement during the review of the LOS objectives in 2019 with Seqwater, SEQ water service providers and a number of industry stakeholders. This first phase led to the proposed change being pursued. In 2021 subsequent engagement occurred with Seqwater and SEQ water service providers before proceeding with a public notice of the proposed change.

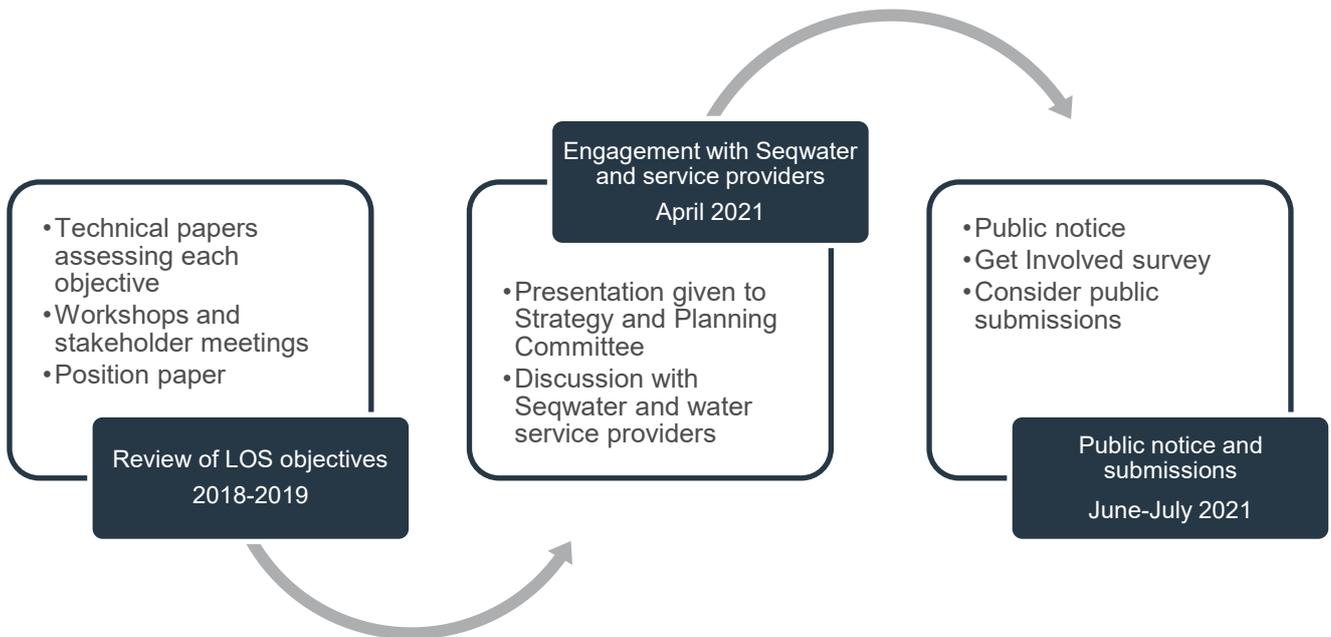


Figure 1: Consultation process for the review and proposed change of level of service objectives

Table 1: Timings of consultation

Description of consultation	Date
Workshops with Seqwater and Department of Environment and Science to discuss technical papers	22 August 2018, 13 December 2018
LOS position paper shared with stakeholders for feedback	January to March 2019
Meetings with stakeholders	February to March 2019
Final LOS review stakeholder workshop seeking feedback on LOS review outcomes	1 April 2019
Presentation to Strategy & Planning Committee, followed by discussion	1 April 2021
Advice of proposed change given to Seqwater and SEQ water service providers	28 May 2021
Public notice given	1 June 2021
Submission period opened	1 June 2021
Submission period ended	9 July 2021

3.1 Review workshops

Stakeholder engagement played an important role in the review of the current LOS objectives in 2019, in which 63 people from 27 organisations provided feedback. The main aims of this review were to:

- assess the fitness for purpose of the existing objectives
- clarify requirements for assessing compliance with the LOS objectives
- drive appropriate water security outcomes.

Each of the individual LOS objectives were considered, including consideration of potential impacts on:

- LOS yield—on average, how much water can be sustainably supplied by the SEQ Water Grid each projected year during droughts whilst meeting the LOS objectives
- infrastructure—when might new bulk water supplies/infrastructure be required
- potential cost—what are the possible broad cost implications on the community.

Other factors, such as drinking water quality requirements and peak daily and monthly demands, can also affect the timing of new bulk water supply infrastructure but were not considered within this review.

Hydrological modelling was used to examine future demand, yield and potential future infrastructure requirements. Broad cost implications were also considered from a qualitative perspective only. Technical papers were prepared by the then Department of Natural Resources, Mines and Energy and shared with Seqwater and the Department of Environment and Science. These technical papers were discussed in two workshops, held on 22 August 2018 and 13 December 2018. These workshops were held to get feedback on the current LOS objectives and potential options for their refinement.

In addition, key stakeholder organisations were invited to meetings with the then Department of Natural Resources, Mines and Energy. These meetings were information-sharing exercises that allowed the department to better understand stakeholder interests and priorities, and answer questions on the LOS review. A position paper on the outcomes of the LOS review was shared for feedback from stakeholders (January to March 2019), and a final workshop was held in April 2019 with key stakeholders to discuss the review and its outcomes.

Key stakeholders that were involved the LOS review included representatives of:

- Seqwater
- SEQ water service providers
- State Government agencies, including the departments of:
 - Premier and Cabinet
 - Treasury
 - Environment and Science
 - Natural Resources, Mines and Energy
- International River Foundation
- Cooperative Research Centre for Water Sensitive Cities
- CSIRO
- Australian Water Association
- Healthy Land and Water
- International Water Centre
- Australian Rivers Institute
- Advanced Water Management Centre
- Ipswich City Council
- Scenic Rim Regional Council
- Moreton Bay Regional Council
- Toowoomba Regional Council
- Somerset Regional Council.

3.2 Engagement with Seqwater and South East Queensland water service providers

Seqwater and SEQ water service providers were directly engaged by the department about the proposed LOS amendment, with a presentation given to the Strategy and Planning Committee (made of representatives from each SEQ water service provider) on 1 April 2021. This presentation canvassed the reason for the proposed change, and the proposed changed wording to the Water Regulation 2016. This was followed by ongoing discussion between SEQ water service provider representatives and the department.

3.3 Public notice of proposed changes

A public notice of the proposed change to the LOS objectives and invitation to comment was published on the Business Queensland South East Queensland water security web page from 1 June 2021 to 9 July 2021. The public notice was supported by an information paper about the proposed change, with background information on the LOS objectives and the framework for water security planning in SEQ. Formal notice of the proposed change to the LOS objectives was given to Seqwater and SEQ water service providers on 28th May 2021, along with a copy of the public notice of the proposed change and key information relating to the public consultation.

Information about the proposed change, along with a survey to gain feedback about the change (which was taken to be a properly made submission), was published on the [Get Involved website](#). (Information about the public submission process was also provided on the Water Queensland Facebook account, the department's LinkedIn account, and the Environment, Land and Water section of the Queensland Government website (www.qld.gov.au)). Some SEQ water service providers shared details of the public consultation with their customers via their websites or social media accounts.

Public notice requirements under section 345 of the *Water Act 2000* were met, with public notice of the proposed change to the LOS objectives published for the required 28 business days, and relevant information shared. A summary of the issues raised in public submissions is provided in Section 4 below, with further details of each of the public submissions provided in the Appendix.

4.0 Consultation outcomes and analysis

4.1 Summary of feedback from level of service review workshops

One of the outcomes of this review was a recommended change to the water restriction duration LOS objective. It was proposed to make a modification to the duration of the restrictions to state the 'imposed water restrictions should not last longer than three per cent of the time on average', instead of 'last no longer than 1 year on average'. This proposed change was considered to better represent the behaviour of the SEQ Water Grid, as well as bringing the specification more into line with those adopted in other jurisdictions such as Sydney and the Lower Hunter Valley. It was further proposed that the modification be made within three years so that it would be available in time to apply to the preparation of version 3 of the Water Security Program (to be published in March 2022). It is noted that subsequent to the review in 2019, more recent modelling has included consideration of the impacts of climate change on the performance of the SEQ water supplies. This indicated that the duration of droughts could be longer, and the duration of water restrictions needed to be increased from three per cent to five per cent of the time on average, and to avoid the construction of major infrastructure that would only be used for a small proportion of the time.

4.2 Summary of feedback from water service providers

Seqwater and each of the SEQ water service providers provided written support for the LOS amendment to the duration of water restrictions. One water service provider did express concern with how the objective could be clearly communicated and the implications of increased flexibility on long-term planning. Subsequent discussion and the information paper that was released attempted to clarify these matters.

4.3 Summary of the public submissions and analysis

Nine submissions were made in response to the public notice: eight submissions through the Get Involved survey, and one written submission from an organisation. A summary of these submissions is provided in Table 2 below. The Appendix provides more detail of the submissions and subsequent analysis by the department.

All but one of the Get Involved survey respondents that did not support the LOS amendment did not raise concerns with the proposed amendment itself; rather they raised concerns that uncontrolled population growth is a driving cause of water security concerns, and that this has not been adequately addressed. Analysis of the main issues raised by submitters is provided below.

Impact of water restrictions

A number of submissions commented on the benefits of restrictions in promoting water efficient behaviours and for improving water security. Some concern was raised as to the impact of water restrictions on the SEQ community. Both the department and Seqwater are aware of the impacts water restrictions can have. In developing the drought response plan, Seqwater are required to consider the costs and benefits of each of the drought response actions, including water restrictions and new infrastructure, to develop a well-considered plan. Seqwater optimise existing infrastructure before imposing water restrictions.

While several of the respondents did not support the proposed change, these respondents did not raise concerns with the proposed change itself, rather they raised concerns that uncontrolled population growth and lack of planning is a driving cause of water security concerns, and that this has not been adequately addressed. These concerns are commented upon below.

Population growth

Several submissions raised concerns about population growth. Since the Millennium Drought (2001-2009), SEQ's population has increased by over 1 million people, however the average volume of water used today is nearly the same volume as pre-Millennium Drought. This extra million people in the region can be supported by the same amount of water due to the water wise behaviour within the community that has been retained since the Millennium Drought and other innovations. Such innovations include the SEQ Water Grid and building code changes that require new properties to have water efficient fixtures.

Seqwater is responsible for planning to ensure safe and secure water supplies to meet the needs of a growing population. It has an adaptive plan that considers different scenarios for population growth. Annual monitoring of the projected average regional demand enables adjustment to the anticipated timeframe for system augmentation.

Appropriate planning

Several respondents raised concern about the perceived lack of water supply planning being undertaken for the region. Seqwater optimises the system operation, asset management and drought response in consideration of population, climate, storage levels, and many other factors. Seqwater outlines how it approaches its operations and planning in its long-term water strategy, the Water Security Program.

Seqwater base their planning on expected population growth, considering the cost and benefits of each action to determine their planned response. Water restrictions are less costly than infrastructure constructed solely in response to drought, which might remain idle until the infrastructure is required to meet increased demand.

Table 2: Summary of public submissions

Submitter	Summary of submitter's comments in relation to the proposed change	Analysis
1. Residential water user	Not supported. Believes regional growth and that climate change impacts have not been adequately addressed.	No direct concern related to the longer duration of water restrictions. Seqwater has an adaptive plan to address various population growth scenarios. The next version of the water security program (2022) is incorporating climate change considerations.
2. Residential water user	Not supported. Believes restrictions should be minimal in any event and nowhere near 1 year. Better planning, more catchment management and infrastructure should be in place to provide for a growing State. There should be encouragement (through rebates) of rainwater tanks and use of grey water around the home.	Seqwater are aware of the impacts water restrictions have on the SEQ community. In developing the drought response plan, Seqwater are required to consider the costs and benefits of each of the drought response actions, including water restrictions and new infrastructure, to develop a well-considered plan. Existing infrastructure is optimised before imposing water restrictions on the SEQ community. Rebates for rainwater tanks are up to local government, and safe use of grey water is permitted.
3. Residential water user	Supported. Believes greater flexibility for water restrictions to be activated and maintained in response to changes in climatic conditions is needed.	The proposed amendment provides for greater flexibility in responding to drought. Seqwater optimises the system operation, asset management and drought response in consideration of population, climate, storage levels, and other factors.
4. Residential water user	Supported. Believes educating and enforcing water savings are preferred actions, noting that businesses and agriculture can have unsustainable water practices (e.g., cotton, water mining for bottled water).	The proposed amendment will provide greater flexibility for water restrictions. This flexibility may help delay the need for a costly new bulk water supply source that will be paid for by all SEQ water customers through increased water prices. Seqwater, and this legislation, has no direct influence over the use/users of water.
5. Residential water user	Supported. Believes incompetence of both the government and the water management board has reduced available water supplies, and that rules that provide the least inconvenience to the real owners of the water facilities should be enabled.	Water restrictions are a temporary impost which can reduce the likelihood, and delay the timing of, the need to build an additional bulk water supply source and potential water price rises.
6. Residential/commercial water user	Comments indicate support. Believes restrictions should be in place for as long as necessary to allow for a secure water future. It doesn't matter if that is for 10/40 years, if we run out of water, we are in more trouble than rationing it out.	Seqwater consider the climate resilience of the water supplies, as well as the potential impacts of climate change, in its planning ensuring there is sufficiently reliable water supplies under all climatic conditions, including prolonged drought.

Submitter	Summary of submitter’s comments in relation to the proposed change	Analysis
7. Residential water user	Unsure about support. The proposed change does not provide sufficient clarity as to the extent water restrictions might be imposed. Water supply is an essential service just like supply of electricity, there will be no tolerance by the customers for an extended lack of supply.	The objective relates to long term average durations, similar to the other objectives, so is hard to express. The proposed change enables flexibility in the duration water restrictions can be in place to avoid building major infrastructure that would only be needed a small portion of the time.
8. Residential water user	Not supported. Doesn’t believe he or his family should suffer because of industrial expansion and population increase. Population should increase in line with infrastructure improvements.	Seqwater base their planning on expected population growth, considering the cost and benefits of each of each action to determine their planned response. Water restrictions are less costly than infrastructure constructed in response to drought that might remain idle before it is required to meet increased demand.
9. Organisation	Supported. Recognised the importance of water restrictions in managing water supply. Commented that legislative improvement could be made for tenants to receive timely water use information to facilitate compliance with water restrictions.	When water restrictions are imposed, while water bills contain information on water use, there will be media campaigns and other means by SEQ water service providers and Seqwater for ensuring engagement with all SEQ residents and visitors.

Terminology

One respondent indicated uncertainty with the proposed change due to the lack of clarity of the extent of restrictions that might be imposed.

The LOS objective for water restrictions relates to the average duration over the long term and is difficult to convey simplistically. The LOS objectives are specifically to guide the bulk water operations of Seqwater. Seqwater require probability information in their modelling and this information is not directed at the end customer. The department will work with Seqwater during the development of the next version of the Water Security Program to attempt to provide more meaningful terminology for the end customer.

Climate change

The Get Involved survey sought feedback from respondents on incorporating climate change considerations into long-term water security planning. The majority of respondents supported such consideration. The respondents that did support the consideration of climate change put forward that population growth was more of a concern.

In its long-term water strategy, the Water Security Program 2017, climate change was considered by Seqwater through a sensitivity analysis. Going forward, Seqwater intend to make it a key consideration in its planning. While some objections were raised to the incorporation of climate change in long term water security planning, the department is of the opinion that it is prudent to consider climate change to ensure the SEQ Water Grid is resilient enough to adapt to changing climatic influences and has sufficiently reliable water available to meet the growing needs of the community under all climatic conditions, including prolonged drought.

4.4 Overall analysis of submissions

The department considers the benefits of the proposed change to the duration of water restrictions for the broader SEQ region, in reducing the likelihood and delaying the need for drought water supplies, outweigh the temporary inconvenience. Delaying the need for a new bulk water supply helps keep water prices down, as the cost for any new infrastructure will be passed on to SEQ water customers through higher water charges.

The department is of the opinion that it is prudent to consider climate change in long-term water security planning to ensure the SEQ Water Grid is resilient and has sufficient water available to meet the growing needs of the community, supporting economic growth and liveability. This also helps support Seqwater's plans to ensure that essential water supplies will be maintained under all circumstances.

5.0 Preferred option

When SEQ enters drought, it is likely to mean several failed wet seasons, and therefore water restrictions are likely to last longer than one year during a severe drought. The behaviour of SEQ Water Grid storages is such that water restrictions might not be triggered for up to 30 or 40 years. This means, for example, over a 40-year period the total time that medium, and more severe, water restrictions could be in place for two years.

Water restrictions can reduce the likelihood, and delay the timing of, the need to build a contingency water supply during drought. It is estimated a new bulk water supply source for the SEQ region would cost around \$3 billion and the cost for this would be recovered from all SEQ customers through increased water charges. Building a new supply solely in response to drought could mean that the supply could be sitting idle, not used to its full capacity for a significant time. The longer the need to build new infrastructure can be delayed during drought, the greater the chance that there will be sufficient inflows to replenish surface water reserves.

The department considers that the long-term benefits of greater flexibility to the duration of water restrictions, if and when needed, outweigh the temporary inconvenience. Overall, the feedback and most of the submissions received support this.

Appendix: Analysis of public notice submissions

Submission 1

Topic	Comment
Proposed amendment for water restrictions	Respondent does not support the proposed change to water restrictions as they feel population growth and impacts of climate change have not been adequately addressed.
Consideration of climate change	Respondent considers that climate change should be considered in long term water security planning as the region is identified as most impacted in projections, with population growth being a significant factor.
General	Respondent raised concern over the impact of population growth on liveability and living expense to existing residents.
	Respondent suggested that less water efficient water uses should be targeted before utilities that affect life and questioned having no restrictions on watering sports ovals and filling swimming pools.

Analysis

Water restrictions can reduce the likelihood, and delay the timing of, the need to build a contingency water supply during drought. Water restrictions are a temporary impost on the community, however prematurely constructing new infrastructure as a drought response will impose an ongoing financial burden on all SEQ water customers. It is estimated a new bulk water supply source for the SEQ region would cost around \$3 billion and the cost for this would be recovered from all SEQ customers through increased water charges.

The proposed change aims to better reflect the way that the major SEQ sources of supply behave during drought times, which are typically infrequent but long in duration. The department considers water restrictions to be an important element of the regional drought response strategy, which should be appropriately implemented in response to drought if, and when, needed as outlined in Seqwater’s Water Security Program.

The department acknowledges the possible impacts of population growth and climate change on water security for the SEQ region. Seqwater, SEQ’s bulk water service provider, is responsible for planning to ensure safe and secure water supplies to meet the needs of a growing population. It has an adaptive long-term water security strategy, the Water Security Program, that considers different scenarios for population growth and incorporates climate change impacts. Including climate change impacts is beneficial to ensuring the SEQ Water Grid is resilient enough to adapt to changing climatic influences and has sufficient water available to meet the growing needs of the community, supporting economic growth and liveability. Seqwater’s plans ensure that essential water supplies will be maintained under all circumstances.

Submission 2

Topic	Comment
Proposed amendment for water restrictions	Respondent does not support the proposed change to water restrictions as they believe water restrictions should be minimal (less than one year).
	Respondent considers better planning, more catchment management and more infrastructure should in place to provide for a growing state.
Consideration of climate change	Respondent considers climate change has no scientific basis, which is supported by records of seasonal weather patterns. Need to plan for all aspects of weather.
General	Respondent believes people should be encouraged, through rebates or water discounts, for using rainwater tanks and using of grey water around the yard.
	Respondent believes water should be government-owned, including associated infrastructure, as they believe this would be cheaper (not for profit).

Analysis

The Water Supply Regulation 2016 sets out the desired level of service objectives for SEQ. These objectives outline the minimum performance expected from the SEQ Water Grid to ensure SEQ has enough water to meet the needs of the community. Seqwater’s Water Security Program is an adaptive plan that sets out actions and processes for how they will meet the level of service during times of water scarcity and plan for the long-term water security for SEQ. Seqwater consider the cost impacts of each of its drought response options in order to develop the optimal drought response, to ensure ongoing, cost-effective, water security.

Water restrictions are a temporary impost on the community, however bringing forward the construction of a new bulk water supply sources as a drought response will place a long-term financial burden on all SEQ water customers. The proposed change aims to better reflect the way that the major SEQ sources of supply behave during drought times, which are typically infrequent but long in duration. The department considers the benefits of water restrictions to the broader SEQ region, if and when needed, in reducing the likelihood and delaying the need for drought water supplies outweigh the temporary inconvenience. Delaying the need for a new bulk water supply helps keep water prices down, as the cost for any new infrastructure will be passed on to SEQ water customers through higher water charges.

The use of greywater in sewerred and non-sewerred areas is governed by the *Plumbing and Drainage Act 2002*. Treated greywater may be used for toilet flushing, washing paths, vehicles, cold water supply to washing machines and lawn/garden irrigation. Untreated greywater may be used for water lawns/gardens but must not cause an odour or health risk to residents or neighbours. There are currently no state-wide rebates for tanks or rates discounts for properties to install rainwater tanks. It is at the discretion of each local government area whether they offer any incentives for residents to install tanks or encourage the use of greywater.

The department acknowledges the respondent does not support the inclusion of climate change in future water supply planning. However, the department is of the opinion that it is prudent to consider climate change in long-term water security planning to ensure the SEQ Water Grid is resilient and has sufficient water available to meet the growing needs of the community, supporting economic growth and liveability. This also helps support Seqwater’s plans to ensure that essential water supplies will be maintained under all circumstances.

Submission 3

Topic	Comment
Proposed amendment for water restrictions	Respondent supports the proposed change to water restrictions as water restrictions need to be flexible to respond to changing climatic conditions.
Consideration of climate change	Respondent believes climate change is an escalating issue and is a vital consideration for future water planning.
General	No other comments raised.

Analysis

The proposed change to the level of service objectives will better reflect the storage behaviour of the major SEQ water sources, as well as providing a better idea of what water restrictions might be imposed in response to drought. Water restrictions could help delay the need for a costly drought water supply that will be paid for by all SEQ water customers through increased water prices.

In Seqwater’s Water Security Program 2017 (the long-term water strategy for SEQ) climate change was considered as a sensitivity analysis. Going forward Seqwater intend to make it a key consideration in its planning, which will be reflected in future versions of the Water Security Program. This ensures that the SEQ Water Grid is resilient enough to adapt to changing climatic influences and has sufficient water available to meet the growing needs of the community, supporting economic growth and liveability. Seqwater’s plans ensure that essential water supplies will be maintained under all circumstances.

Submission 4

Topic	Comment
Proposed amendment for water restrictions	Respondent supports a longer duration of water restrictions as they believe in educating on water savings and enforcing water restrictions.
Consideration of climate change	Respondent supports the inclusion of climate change in water security planning and considers that we all (including businesses and agriculture) need to have a new outlook on how to use water as a precious resource.
General	Respondent referred to unsustainable water practices by some industries (e.g. agriculture, particularly cotton, and water mining for bottled water). Respondent believes these should be restricted first before requiring residents to take shorter showers: taking care of our resources is a responsibility of all citizens, not just residents.

Analysis

The proposed change to the level of service objectives will better reflect the storage behaviour of the major SEQ water sources, as well as providing a better idea of what water restrictions might be imposed in response to drought. Water restrictions could help delay the need for a costly drought water supply that will be paid for by all SEQ water customers through increased water prices. Seqwater considers the costs of restrictions on each water user, as well as the water security benefit, when developing its water restrictions schedule.

In Seqwater’s Water Security Program 2017 (the long-term water strategy for SEQ) climate change was considered through a sensitivity analysis. Going forward, Seqwater intends to make it a key consideration in its planning, which will be reflected in future versions of the Water Security Program. This ensures that the SEQ Water Grid is resilient enough to adapt to changing climatic influences and has sufficient water available to meet the growing needs of the community, supporting economic growth and liveability. Seqwater’s plans ensure that essential water supplies will be maintained under all circumstances.

There is no assessment under the *Planning Act 2016* (Qld) for bottling or extracting water that is not covered as a development under the *Water Act 2000*. Assessments against planning schemes consider the use of the land for an activity, for example bottling and transportation, and are managed by local government.

Regarding ‘water mining’ for bottled water, a 3-year study into groundwater extraction at Mount Tamborine was published by the Queensland University of Technology in 2011, with an additional three-year study commenced in 2017. The review reported that total water extraction is less than five per cent of the annual groundwater recharge, falling well within sustainable levels. The Australian Bottled Water Association is working on public information, such as interactive map of Queensland, to identify where its members source water and what percentage of this resource they take annually.

Submission 5

Topic	Comment
Proposed amendment for water restrictions	Respondent supports the proposed change as they believe it is necessary to make such rules to compensate for the incompetence of those running the system. The rules that are the least imposed to the real owners of the water facilities should be enabled.
Consideration of climate change	Respondent supports the inclusion of climate change in water security planning as it is likely to increase the severity and frequency of drought and bring forward the requirement for additional sources of water supply.
General	Respondent commented to not wait until it's past due to build the next dam, as they believe we are almost out of time now.

Analysis

The proposed change to the level of service objectives will better reflect the storage behaviour of the major SEQ water sources, as well as providing a better idea of what water restrictions might be imposed in response to drought. Water restrictions could help delay the need for a costly drought water supply that will be paid for by all SEQ water customers through increased water prices. Seqwater considers the costs of restrictions on each water user, as well as the water security benefit, when developing its water restrictions schedule.

In Seqwater's Water Security Program 2017 (the long-term water strategy for SEQ) climate change was considered as a sensitivity analysis. Going forward Seqwater intend to make it a key consideration in its planning, which will be reflected in future versions of the Water Security Program. This ensures that the SEQ Water Grid is resilient enough to adapt to changing climatic influences and has sufficient water available to meet the growing needs of the community, supporting economic growth and liveability. Seqwater's plans ensure that essential water supplies will be maintained under all circumstances.

Seqwater, SEQ's bulk water service provider, is responsible for planning to ensure safe and secure water supplies to meet the needs of a growing population. It has an adaptive plan that considers different scenarios for population growth. Annual monitoring of the projected average regional demand enables adjustment to the anticipated timeframe for system augmentation if needed.

Submission 6

Topic	Comment
Proposed amendment for water restrictions	Respondent indicated support for the proposed change to water restrictions because if we run out of water. we're in bigger trouble. Respondent commented restrictions should be in place as long as necessary to allow for a secure water future.
Consideration of climate change	Respondent supports the inclusion of climate change in water security planning as constant change and unpredictable weather is leading to an insecure water future.
	Respondent believes SEQ should have an integrated water supply system that would allow for adaptive water futures. There should also be plans to look towards providing other sources of water that do not rely on rainfall.
General	No other comments made

Analysis

The proposed change to the level of service objectives will better reflect the storage behaviour of the major SEQ water sources, as well as providing a better idea of what water restrictions might be imposed in response to drought. Water restrictions could help delay the need for a costly drought water supply that will be paid for by all SEQ water customers through increased water prices. Seqwater considers the costs of restrictions on each water user, as well as the water security benefit, when developing its waters restrictions schedule. Water restrictions are an important element of the regional drought response strategy and will be implemented in accordance with the Water Security Program if, and when, needed.

In Seqwater's Water Security Program 2017 (the long-term water strategy for SEQ) climate change was considered through a sensitivity analysis. Going forward Seqwater intend to make it a key consideration in its planning, which will be reflected in future versions of the Water Security Program. This ensures that the SEQ Water Grid is resilient enough to adapt to changing climatic influences and has sufficient water available to meet the growing needs of the community, supporting economic growth and liveability. Seqwater's plans ensure that essential water supplies will be maintained under all circumstances.

The SEQ Water Grid provides an interconnected system, providing for enhanced water security across the region compared to if the SEQ water sources were isolated water supplies. Seqwater consider the climate resilience of the water supplies, knowing that you can't always rely on the rain to fill a water storage. A surface water source (such as a dam) can be a high-cost investment that might not yield the necessary long-term water security. Seqwater considers all options when determining the best approach for future water security.

Seqwater optimises the system operation, asset management and drought response in consideration of population, climate, storage levels, and many other factors. Seqwater outlines how it approaches its operations and planning in its long-term water strategy, the Water Security Program.

Submission 7

Topic	Comment
Proposed amendment for water restrictions	Respondent is uncertain about the proposed amendment as the wording does not provide sufficient clarity as to the extent water restrictions might be imposed. Respondent considers that there is a need to have something specific to drive a solution to restrictions within a fixed time period.
	Respondent considers water is an essential service and customers will not tolerate extended lack of supply.
Consideration of climate change	Respondent does not support the inclusion of climate change in water security planning as they believe population growth is a greater impact on water security than climate change.
General	No other comments made.

Analysis

The level of service objectives are specifically to guide the bulk water operations of Seqwater. The objective relates to long term average durations, similar to the other objectives i.e. over 100,000-year modelled durations and is difficult to convey simplistically. Seqwater will provide clear triggers and targets for water restrictions in its Water Security Program. The department will also work with Seqwater during the development of the next version of the water security program to attempt to provide more meaningful terminology for the end customer.

Seqwater consider the benefits and cost implications of each of its drought response measures when developing the SEQ drought response plan to determine the optimal cost-effective drought strategy to provide for ongoing water security. Seqwater has a drought planning principle to optimise existing infrastructure before imposing water restrictions. Seqwater’s long-term water strategy, the Water Security Program, also outlines the plans to ensure that SEQ’s essential water needs will always be met.

The proposed change aims to better reflect the way that the major SEQ sources of supply behave during drought times, which are typically infrequent but long in duration. The department considers the benefits of water restrictions to the broader SEQ region, if and when needed, in reducing the likelihood and delaying the need for drought water supplies outweigh the temporary inconvenience. Delaying the need for a new bulk water supply helps keep water prices down, as the cost for any new infrastructure will be passed on to SEQ water customers through higher water charges.

The department acknowledges the respondent does not support the inclusion of climate change in future water supply planning. However, the department is of the opinion that it is prudent to consider climate change in long-term water security planning to ensure the SEQ Water Grid is resilient and has sufficient water available to meet the growing needs of the community, supporting economic growth and liveability. This also helps support Seqwater’s plans to ensure that essential water supplies will be maintained under all circumstances.

Submission 8

Topic	Comment
Proposed amendment for water restrictions	Respondent does not support the proposed change because it is population growth (from migration interstate) that will cause water supply issues as they believe SEQ doesn't have appropriate infrastructure.
Consideration of climate change	Respondent is unsure about incorporating climate change into long term water security planning. Respondent believes our water issues are not due to climate change.
General	Respondent believes water issues are caused by poor planning with population growth exceeding infrastructure capacity. Respondent believes there is a need to control population so it gradually increases otherwise it will cause economic issues for future generations.

Analysis

While the respondent indicated that they do not support the proposed change, their concern related to population growth and lack of planning. Water restrictions are an important element of the regional drought response strategy which can reduce the likelihood, and delay the timing of, the need for drought water supplies. The proposed change aims to better reflect the way that the major SEQ sources of supply behave during drought times, which are typically infrequent but long in duration. The department considers the benefits of water restrictions to the broader SEQ region, if and when needed, in reducing the likelihood and delaying the need for drought water supplies outweigh the temporary inconvenience. Delaying the need for a new bulk water supply helps keep water prices down, as the cost for any new infrastructure will be passed on to SEQ water customers through higher water charges.

Seqwater optimises the system operation, asset management and drought response in consideration of population, climate, storage levels, and many other factors. Seqwater outlines how it approaches its operations and planning in its long-term water strategy, the Water Security Program.

Seqwater, SEQ's bulk water service provider, is responsible for planning to ensure safe and secure water supplies to meet the needs of a growing population. It has an adaptive plan for its systems operations, asset management and drought response that considers population growth, climate, storage levels, as well as other factors as outlined in its Water Security Program. Monitoring water demands enables Seqwater to optimise the system operation in response to demand in different areas, moving water from areas where there is more available to where it is most needed. Annual assessment of the projected regional demand enables adjustment to the anticipated timeframe for system augmentation, if needed.

The department is of the opinion that it is prudent to consider climate change in long-term water security planning to ensure the SEQ Water Grid is resilient and has sufficient water available to meet the growing needs of the community, supporting economic growth and liveability. This also helps support Seqwater's plans to ensure that essential water supplies will be maintained under all circumstances.

Organisation submission

Topic	Comment
Proposed amendment for water restrictions	Respondent recognises the importance of water restrictions in managing water supply for specific purposes.
Consideration of climate change	No comments in relation to climate change were made.
General	Respondent noted that the success of water restrictions depends on community support. Respondent considers that water users need to be supported and sufficiently informed so that they can actively participate and comply with water restrictions. In particular the lack of appropriate regulatory mechanisms to provide tenants with water use information was raised by the respondent.

Analysis

The proposed change to the level of service objectives will better reflect the storage behaviour of the major SEQ water sources, as well as providing a better idea of what water restrictions might be imposed in response to drought. As acknowledged by the respondent, water restrictions could help delay the need for a costly drought water supply that will be paid for by all SEQ water customers through increased water prices. Seqwater considers the costs of restrictions on each water user, as well as the water security benefit, when developing its waters restrictions schedule. Water restrictions are an important element of the regional drought response strategy and will be implemented in accordance with the Water Security Program if, and when, needed.

When water restrictions are imposed, while water bills contain information on water use, there will be media campaigns and other means by which SEQ water service providers and Seqwater will ensure engagement with all SEQ residents and visitors.

