

To	Graham Fraine Director-General Department of Regional Manufacturing and Water	From	Neil Brennan Chief Executive Officer Seqwater
Date	1 February 2022		
Subject	Draft Water Security Program 2022		

URGENT CONFIDENTIAL ROUTINE FOR APPROVAL FOR INFORMATION

<input type="checkbox"/> Noted <input type="checkbox"/> Further info required	Minister _____ Date ____/____/____ Comments:
DEWS Reference No.	CTS

RECOMMENDATION

1. It is recommended the Director General notes the status and key findings from the Water Security Program 2022 as presented in this briefing note.

BACKGROUND

1.	s.73 Irrelevant information
2.	

3. The key finding is that measures need to be taken over the next 10 years to maintain the Government's desired level of service for water security in South East Queensland (SEQ), in particular:

s.73 Irrelevant information

- c. Seqwater will examine options to increase supply to maintain security, including making use of existing infrastructure s.73 Irrelevant information augmenting the Gold Coast Desalination Plant, s.73 Irrelevant information

s.73 Irrelevant information
s.73 Irrelevant information

s.73 Irrelevant information

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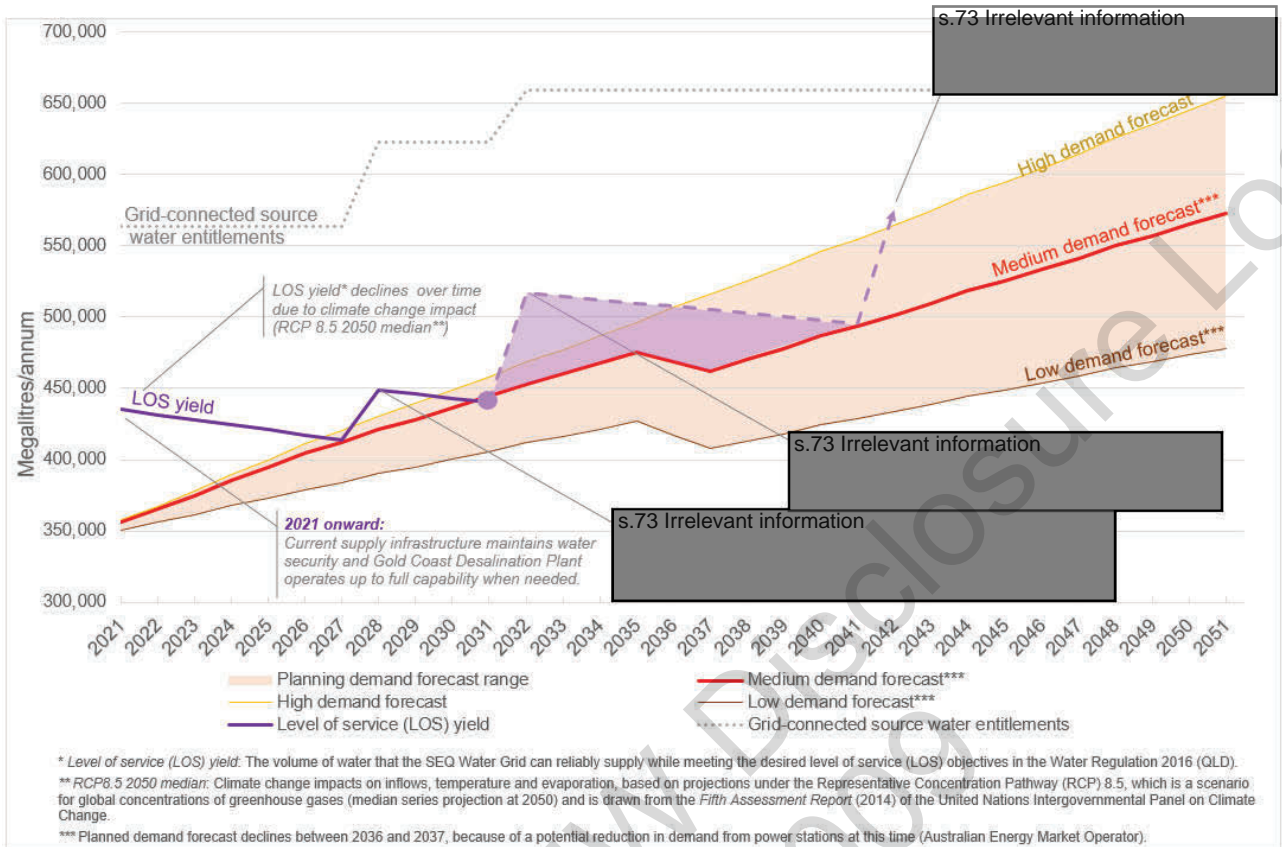


2021 onward:

- The current water supply infrastructure will be managed and operated to ensure the existing level of water security is maintained, including the continued ability to operate the Gold Coast Desalination Plant up to full capability when needed

s.73 Irrelevant information





s.73 Irrelevant information

9. A wide range of options are available to provide the volume of new water supply that will be needed. The Water Security Program will note some of the more significant water supply options, in no priority order, which include:
- expansion of the Gold Coast Desalination Plant and an increase in the size of connecting pipelines

s.73 Irrelevant information

Meeting Brief

Date	Friday 8 April 2022
Time	10.00am – 11.00am
Location	MS Teams
Attendees	Graham Fraine, DG - DRDMW, Neil Brennan, CEO – Seqwater, Cameron McLeod – Assistant Under Treasurer, Trudy Hart - A/Deputy Under Treasurer
Apologies	

s.73 Irrelevant information

s.73 Irrelevant information

2 South East Queensland Water Security

s.73 Irrelevant information

- Production at the Gold Coast Desalination Plant has been reduced in response to increased SEQ Water Grid levels.

s.73 Irrelevant information

Meeting Brief

Date	Monday, 21 February 2022
Time	2:00pm – 2:45pm
Location	MS Teams
Attendees	Graham Fraine, DG - DRDMW, Neil Brennan, CEO – Seqwater, Cameron McLeod – Assistant Under Treasurer
Apologies	Trudy Hart - A/Deputy Under Treasurer

s.73 Irrelevant information

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RTI Act 2009

s.73 Irrelevant information



South East Queensland Water Security

- s.73 Irrelevant information
- Production at the Gold Coast Desalination Plant has been reduced in response to increased SEQ Water Grid levels.
- s.73 Irrelevant information

s.73 Irrelevant information



Meeting Brief

Date	Wednesday, 18 May, 2022
Time	10.30am – 11.15am
Location	DG Office, 1 William St, Brisbane
Attendees	Graham Fraine, DG - DRDMW Neil Brennan, CEO – Seqwater Trudy Hart - A/Deputy Under Treasurer
Apologies	

s.73 Irrelevant information

s.73 Irrelevant information

2 South East Queensland Water Security

- s.73 Irrelevant information
- Production at the Gold Coast Desalination Plant has been slightly increased in response to poor water quality at Mt Crosby, which impacts production, following the recent rain event.

s.73 Irrelevant information

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- d. s.73 Irrelevant information

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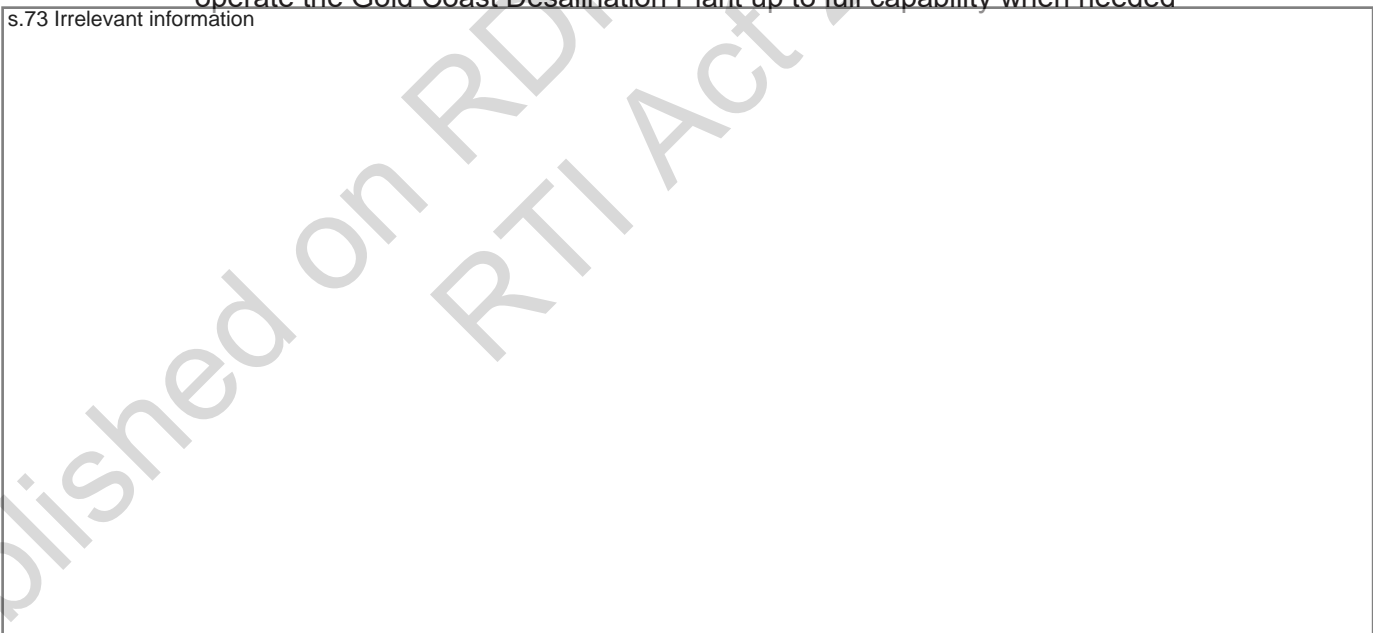
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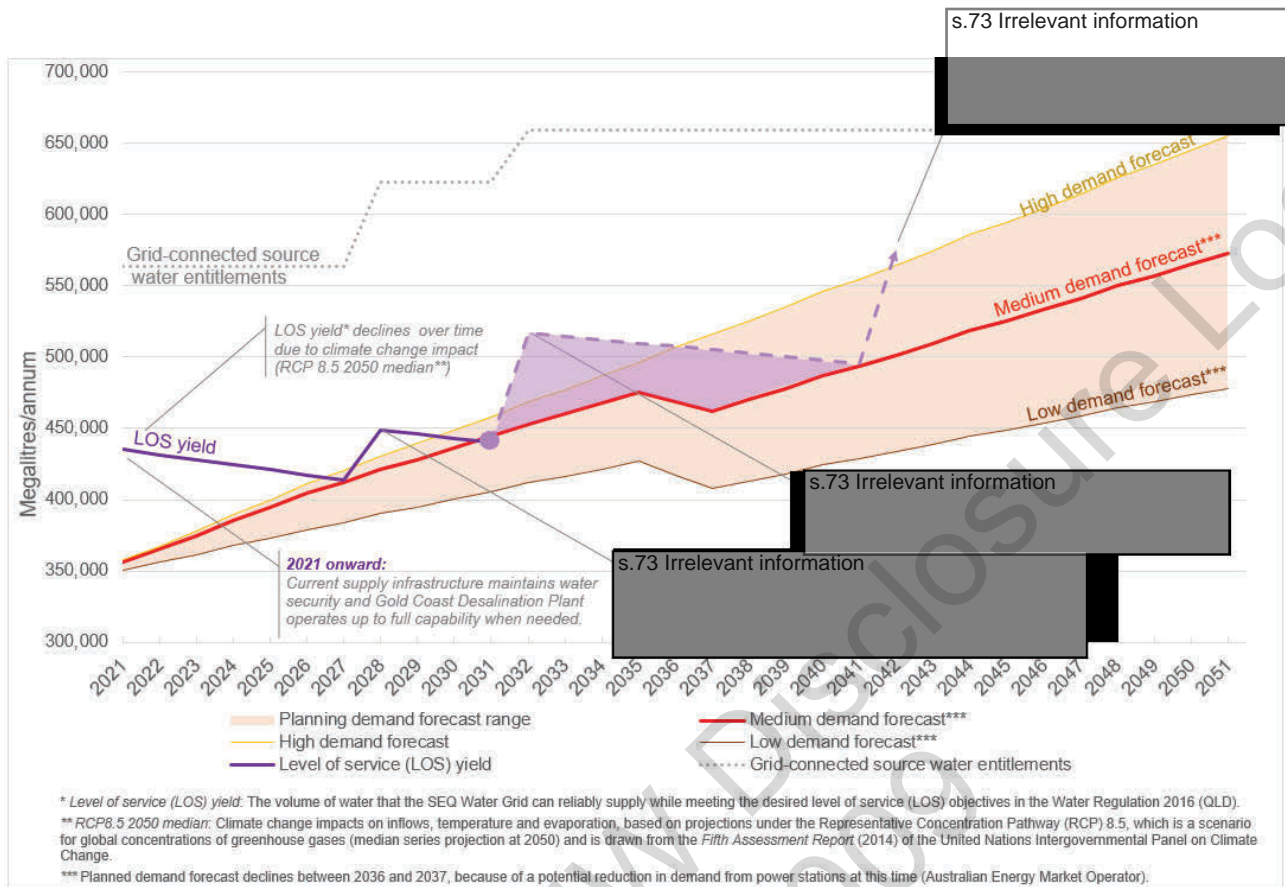


Figure 1: Long-term water security modelling outcomes indicate the need to build new water supply infrastructure by the early 2030s to meet the desired level of service objectives

7. s.73 Irrelevant information

8.

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s.73 Irrelevant information

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Date : 2/12/2021 10:03:06 AM

From : "Richard Priman"

To : "Bernadette Zerba" , "Daniel Harris"

Cc : "Emma Brewis"

Subject : FW: cost of high level water restrictions

Attachment : FINAL REPORT - Economic impact of severe drought scenarios - Synergies.PDF; Presentation - results workshop 12 June 2020 - Synergies - Economic impact severe drought scenarios.pdf; image001.png;

From: Richard Priman

Sent: Thursday, 2 December 2021 9:57 AM

To: Bernadette Zerba; Daniel Harris

Cc: Emma Brewis

Subject: RE: cost of high level water restrictions

I would be cautious about the use of the information in this report – I understand it is under review

From: Bernadette Zerba <Bernadette.Zerba@rdmw.qld.gov.au>

Sent: Thursday, 2 December 2021 9:10 AM

To: Richard Priman; Daniel Harris

Subject: cost of high level water restrictions

Hi Richard and Dan

Emily is after the following:

s.73 Irrelevant information

Do you know the source of this info?

Kind regards



Bernadette Zerba

Acting Deputy Director General

Water

Department of Regional Development, Manufacturing and Water

P: (07) 3137 4265 M: s.73 Irrelevant

E: bernadette.zerba@rdmw.qld.gov.au

A: Level 3, 1 William Street, Brisbane QLD 4000

W: www.rdmw.qld.gov.au



Drought Impact Assessment

Assessment of the economic impact of drought response on the SEQ Community

July 2020

Synergies Economic Consulting Pty Ltd
www.synergies.com.au

s.73 Irrelevant information

Market research firm, DBM, was engaged to administer the survey as an online questionnaire to SEQ residents aged 18 or over who own or rent their place of residence and pay water bills directly to their water service provider.

Key elements of the survey included:

- Water usage - provided insight to the household (e.g. type of dwelling, number living in household, garden size) and current water use.
- Scene setting - provided respondents with information about urban water management in SEQ and assessed respondents' awareness of the Millennium Drought and contingency supply infrastructure (i.e. the Gold Coast Desalination Plant and the Western Corridor Recycled Water Scheme).
- Scenario definition - presented respondents with differing drought triggers and response scenarios, the probability of these occurring, and the associated consequences for households (e.g. no sprinklers, no filling of pools, limited indoor appliance use). Respondents were also asked to consider how much of an impact a specified scenario would have on the household. The sample was split into five groups, and separate version of the questionnaire (corresponding to each of the five drought scenarios) were administered to each group.
- Willingness to pay questions - presented respondents with two options:
 - Option 1 is to continue managing drought using the existing set of infrastructure that makes up the Water Grid, by following the current drought

response plan with no additional contingency water supply to be developed. This option would involve no increase in water bills;

- Alternatively, Option 2 is to build additional drought contingency infrastructure, which would greatly reduce the risk of having to trigger the specified drought response scenario and the associated consequences. Under this option, water bills would increase by a specified amount and the additional charge would remain in place for 25 years.
- Water management – gained insight to respondents’ perspectives on, and attitudes to, water management and water management issues. This information formed basis for identifying explanatory variables for inclusion in the willingness to pay function.

The questions were tested using two Brisbane-based focus groups prior to finalising the survey instrument. A copy of the survey is contained in Appendix K.

8.1.2 Framing the issue

An example of the description used to introduce the drought response scenario to respondents is as follows, for the 10% scenario:

A Queensland water utility is investigating options for responding to extreme drought, should this occur.

Scientific evidence suggests that the frequency and severity of drought in SEQ is likely to be increasing.

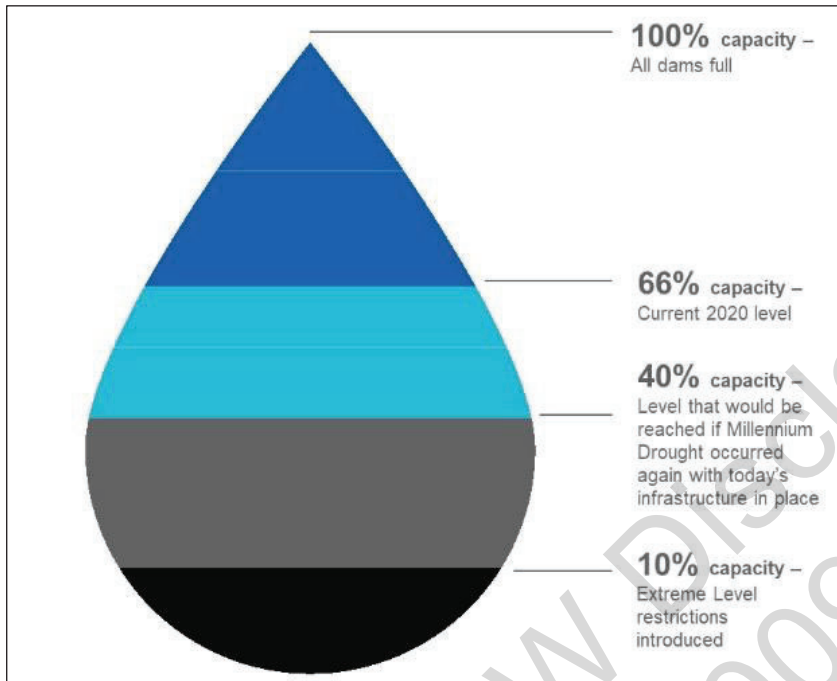
Water utilities have a range of plans in place for managing drought including:

- Educating the community about the need to conserve water
- Rebates for water efficient devices
- Water restrictions on households, businesses, local councils, and other organisations;
- Operating the Gold Coast desalination plant at full capacity and producing purified recycled water through the Western Corridor Recycled Water Scheme; and
- Constructing contingency infrastructure.

Even with these plans in place, in a very long and severe drought where dams fall to below 10%, Extreme Level water restrictions will be needed to conserve remaining water supplies.

Respondents were shown the graphic below, which depicts the 10% scenario in relation to current dam levels, and the levels reached in the Millennium Drought.

Figure 21 Illustration of the 10% capacity scenario



Source: DBM Consulting

s.73 Irrelevant information



Quarterly Performance Report Quarter 2 – October to December 2021

5. Key issues / highlights

s.73 Irrelevant information

Water Security

s.73 Irrelevant information

s.73 Irrelevant information

Operation of the Gold Coast Desalination Plant was reduced in December 2021 in response to the improved SEQ Water Grid combined storage levels.

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6. Capital projects / program

Project	Status	Year-to-date		Year-end forecast				Budget variance comment	Key issues/ risks
		Actual \$'000	Budget \$'000	Est. Actual \$'000	Budget \$'000 ⁶	Variance \$'000	Total project cost		
s.73 Irrelevant information									
Gold Coast Desalination Plant - reverse osmosis membranes replacements	Readiness for service	8,641	7,997	8,984	8,890	94	16,086	15,745	All membranes have been installed and the project is currently being finalised.
s.73 Irrelevant information									

Attachment 3 – Drought response



	This quarter	Year-to-date	Year-end	Comments
	Actual \$'000	Actual \$'000	Forecast (estimated actual) \$'000	
OPEX	3,180	6,461	21,462	Most drought costs were related to the production of manufactured water, primarily at the Gold Coast Desalination Plant. s.73 Irrelevant information
s.73 Irrelevant information				

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RTI Act 2009

Date : 17/05/2022 10:32:30 AM

From : "Seqwater Media"

Subject : Seqwater wet weather talking points #11

Attachment : 1000 17 05 2022 Seqwater WEATHER EVENT Talking Points #11 - FINAL.pdf;imagefe628b.JPG;

Good morning,

Please find Seqwater's Talking Points #11 for the current wet weather event.

s.73 Irrelevant information

For dam level updates visit our [website](#) or download the [Seqwater public safety app](#).

Kind regards,

Seqwater Media

Seqwater Media

(07) 3247 3000



our vision **WATER FOR LIFE** | our promise **SAFE FOR LIFE** | our values **INTEGRITY RESPECT CARE COURAGE**

Bulk water supply system status

s.73 Irrelevant information

-
-

s.73 Irrelevant information

The Gold Coast

Desalination Plant has also increased production to supplement supply.

s.73 Irrelevant information

s.73 Irrelevant information

-

s.73 Irrelevant information

Seqwater Media p: 07 3247 3000 | e: media@seqwater.com.au

Date : 30/09/2022 5:03:47 PM

From : "Lauren Grey"

To : "Frances Stewart" , "Mike Smith" , "Daniel Campbell" , "Danica Thumm" , "Emilia Hutchinson"

Cc : "DLO RDMW" , "Graham Fraine" , "Linda Dobe" , "Wietske Smith" , "Office of the Director-General" , "Bernadette Zerba"

Subject : [s.73 Irrelevant information] - 30 September 2022

[s.73 Irrelevant information]

[s.73 Irrelevant information]

.0 Water Security Status Report.pdf

[s.73 Irrelevant information]

[s.73 Irrelevant information]

Hi all

[s.73 Irrelevant information]

Lauren



Lauren Grey

Senior Project Officer

Office of the Director-General

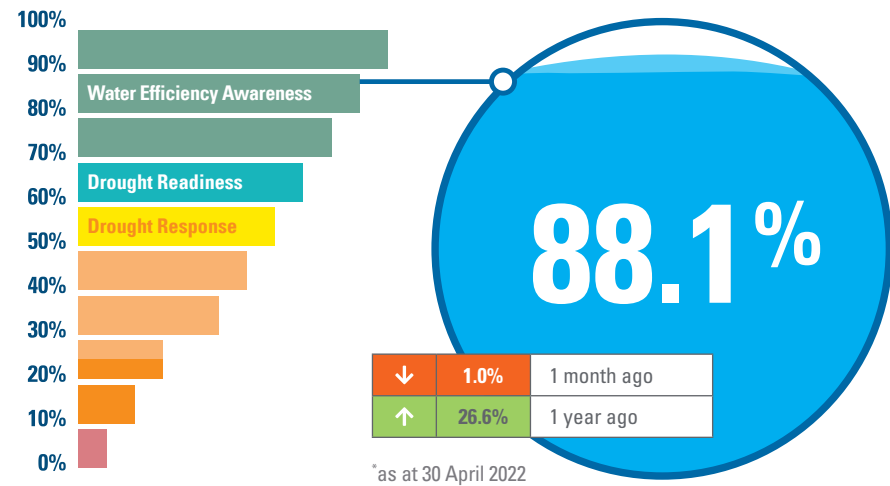
Department of Regional Development, Manufacturing and Water

p: [s.73 Irrelevant information]

E: Lauren.Grey@rdmw.qld.gov.au

A: Level 33, 1 William Street, Brisbane QLD 4000

Overall water security position



After significant rainfall events filled storages earlier this year, the South East Queensland (SEQ) Water Grid storage level has remained at or near Full Supply Level this month, which is a relatively secure position as we near the traditional dry season (typically April to October). Most storages throughout the region continue to operate at or near their Full Supply Level. Although some storages are operating at a reduced Full Supply Level (see below for further information), modelling projections suggest a very low risk of drought for the SEQ Water Grid in 2022.

Water Grid storage

The SEQ Water Grid has remained at a relatively constant level in April at 88.1%. Many of the region's storages were filled during the major flood events of February and the continued above average rainfall during March. Despite only near-average to below average rainfall across the region in April, the already wet catchments have meant that storages have remained at or slightly above their Full Supply Levels.

With winter rainfall (June to August) considered likely to be above median for much of the region, the outlook for Grid levels in the coming months looks relatively positive and a rapid decline in levels is unlikely.

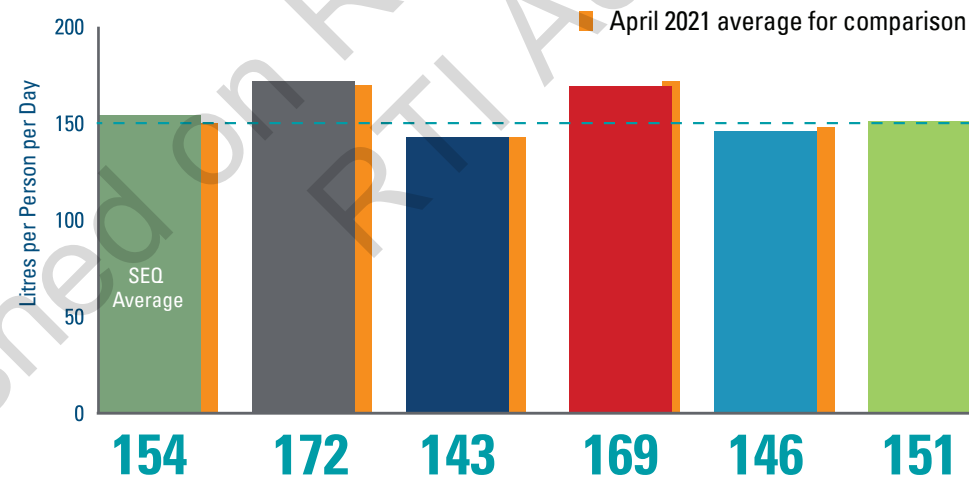
Did you know?

Prior to the extreme rain events experienced throughout the region at the end of February 2022, SEQ's largest storages, Wivenhoe and Somerset Dams, were at their lowest combined level since the Millennium Drought.

Average daily residential consumption

Average residential consumption in April was 154 litres per person per day (LPD). This is a decrease on March consumption which was 159 LPD.

*Date range is 31/03/2022 to 27/04/2022 and 1/04/2021 to 28/04/2021

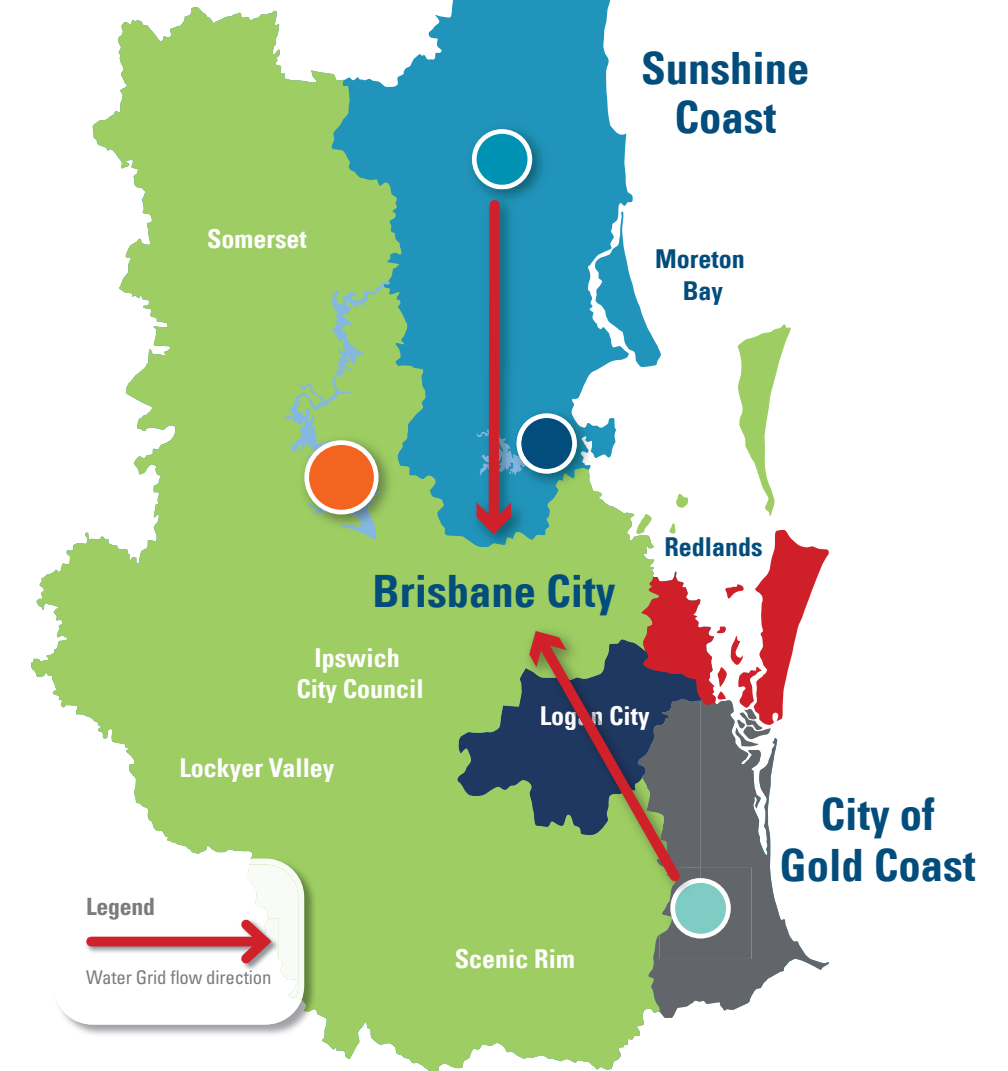


CITY OF GOLDCOAST
 UrbanUtilities

Unitywater
 Redland CITY COUNCIL
 CITY OF LOGAN

Water Grid operation

The Southern Regional Water Pipeline has primarily operated in the northern direction and the Northern Pipeline Interconnector has primarily operated in the southern direction this month.



Purified Recycled Water

Seqwater is continuing to provide up to 6 ML/d of Purified Recycled Water to industrial customers.

Desalinated water production

The Gold Coast Desalination Plant production has been reduced in response to increased Grid levels, but continues to supply a nominal volume to customers.

Wivenhoe/Somerset¹

Wivenhoe and Somerset Dams are SEQ's largest storages, and combined make up about 70% of the region's water supply (dams).

Full supply capacity: 1,545,089 ML

Current capacity: 1,347,934 ML

↓	0.1%	1 week ago
↓	0.4%	1 month ago
↑	37.3%	1 year ago

¹combined dam levels

STORAGE LEVEL
87.2%

100%

Baroon Pocket

67.1%

North Pine
(Lake Samsonvale)

100%

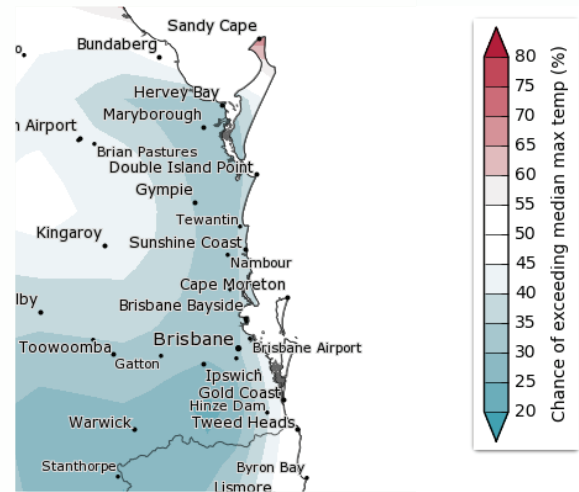
Hinze

Somerset, Wivenhoe and North Pine Dams are currently operating at a reduced Full Supply Level for dam safety reasons. The reduced Full Supply Level for these dams is 80%, 90% and 68% respectively. As such, the current Full Supply Level for the SEQ Water Grid is limited to 88.1% (rather than 100%).

Weather outlook

Temperature

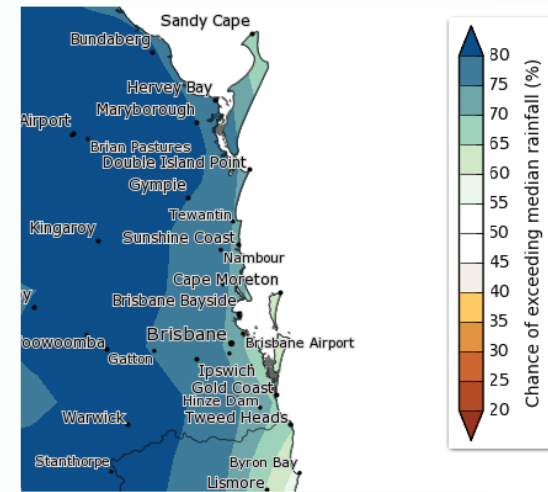
The Bureau of Meteorology (BOM) outlook is that there is a 30-45% chance of exceeding median maximum temperature from May to July 2022.



<http://www.bom.gov.au/climate/outlooks/#/temperature/maximum/median/seasonal/0>
*as at 28 April 2022

Rainfall

The BOM outlook is that there is a 65-80% chance of exceeding median rainfall from May to July 2022. Long-term predictions suggest the next two years will be drier than the preceding year.



<http://www.bom.gov.au/climate/outlooks/#/rainfall/median/seasonal/0>

Off-grid community drought status

The SEQ Water Grid allows us to move treated drinking water around the region. Off-grid communities are not connected to the SEQ Water Grid.

*as at 30 April 2022

Sunshine Coast Regional Council

1 Kenilworth Mary River at Bellbird Creek flow: ~724 ML/day ● ●

Moreton Bay Regional Council

2 Dayboro Groundwater Well No 1 standing water level: 41.28 m AHD ● ●

Somerset Regional Council

3 Jimna Yabba Creek flow: water flowing over the Big Hole Weir ● ●

4 Linville Brisbane River at Linville: Unknown (Last reading at 26/02/2022 - no further data currently available) ● ●

Redland City Council

5 Amity Point ● ●

6 Point Lookout North Stradbroke Island Groundwater standing water level (primary bore): 18.05 m AHD ● ●

7 Dunwich ● ●

Scenic Rim Regional Council

8 Kalbar (Boonah, Aratula and Mount Alford) Moogerah Dam storage level: 100% ● ●

9 Canungra Canungra Creek flow: ~ 146 ML/day ● ●

10 Beaudesert ● ●

11 Kooralbyn Maroon Dam storage level: 100% ● ●

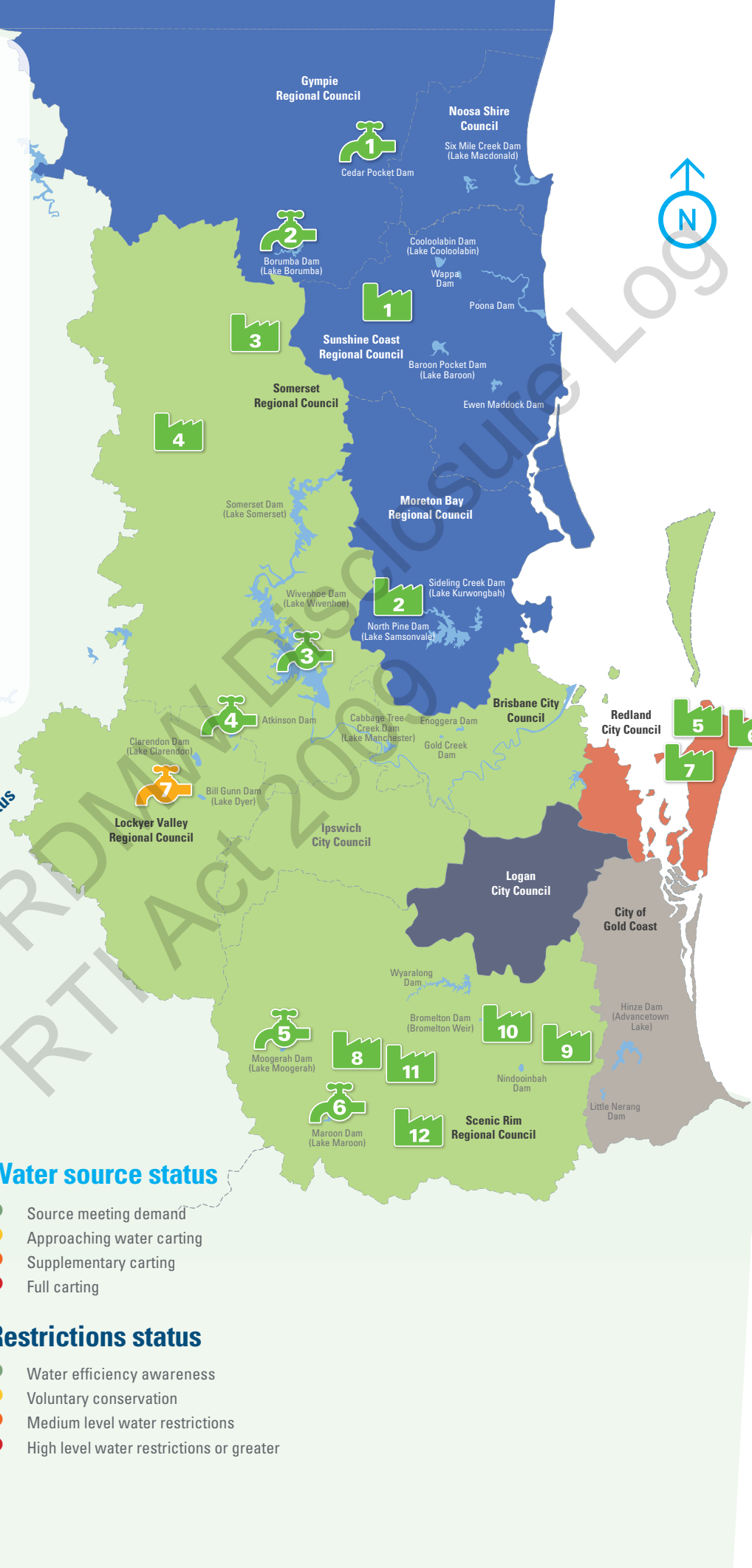
12 Rathdowney ● ●

Water source status

- Source meeting demand
- Approaching water carting
- Supplementary carting
- Full carting

Restrictions status

- Water efficiency awareness
- Voluntary conservation
- Medium level water restrictions
- High level water restrictions or greater



Water supply scheme status

Seqwater supplies water to rural landholders and businesses that are licensed to take water from dams and waterways via water supply schemes. The amount of water that can be extracted by licensed irrigators varies according to local water conditions. In times of drought or low flows, irrigation entitlements may be restricted or suspended.

*as at 30 April 2022

- Full allocation
- Restricted
- Suspended

1 Cedar Pocket Water Supply Scheme
Cedar Pocket Dam currently 100% (Down 0.9% from last month)
Announced Allocations Medium Priority 100%

2 Mary Valley Water Supply Scheme
Borumba Dam currently 100% (Down 1.4% from last month)
Announced Allocations Medium Priority 100% (also supplies high priority)

3 Central Brisbane Water Supply Scheme
Wivenhoe Dam/Somerset Dam currently 87.7% (Same as last month)
Announced Allocations Medium Priority 100% (also supplies high priority)

4 Lower Lockyer Water Supply Scheme
Atkinson Dam currently 99.7% (Down 0.3% from last month)
Announced Allocations Medium Priority 100%

5 Warrill Valley Water Supply Scheme
Moogerah Dam currently 100% (Down 3.1% from last month)
Announced Allocations Medium Priority 100% (also supplies high priority)

6 Logan River Water Supply Scheme
Maroon Dam currently 100% (Down 1.3% from last month)
Announced Allocations Medium Priority 100% (also supplies high priority)

7 Central Lockyer Water Supply Scheme
Clarendon Dam & Bill Gunn Dam currently 84.7% (Up 18.6% from last month)
Announced allocation (surface water) Morton Vale 100%, Medium Priority Zones 87%
Announced allocation (groundwater) Medium Priority 100%, Low Priority 100%