



Goulburn Catchment Information Session

3 August 2023



**GOLDBURN
BROKEN**
CATCHMENT
MANAGEMENT
AUTHORITY



Contents

Bureau of Meteorology - *Jonathan Pollock, Senior Climatologist*

- Climate drivers, long range forecast, recent observed rainfall

Goulburn-Murray Water - *Andrew Shields, River Operations Manager*

- Catchment map, Lake Eildon and Waranga Basin operations, Loch Garry update

Goulburn Broken Catchment Management Authority - *Guy Tierney, Statutory Planning & Floodplain Manager*

- Flood plain management plans, flood intelligence, using the flood portal

Victoria State Emergency Service - *Jule Syme, Community Resilience Coordinator*

- What warnings mean, preparedness, resources

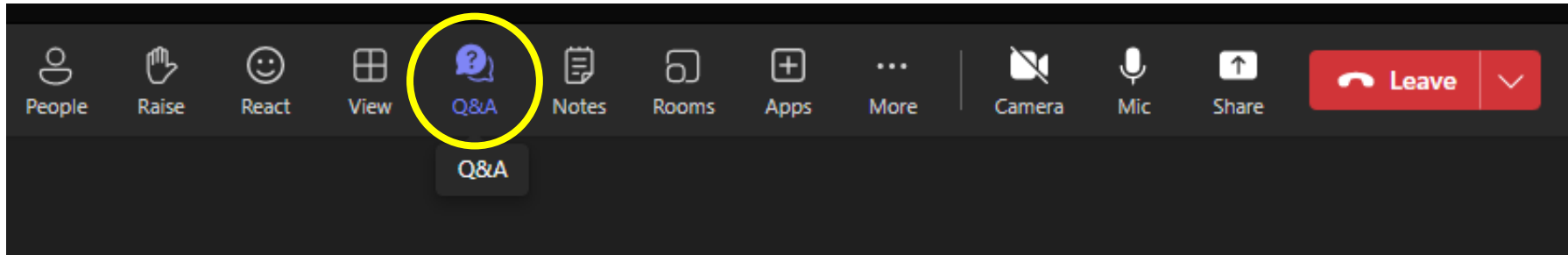
Question and answer session

- See next slide how to send through questions

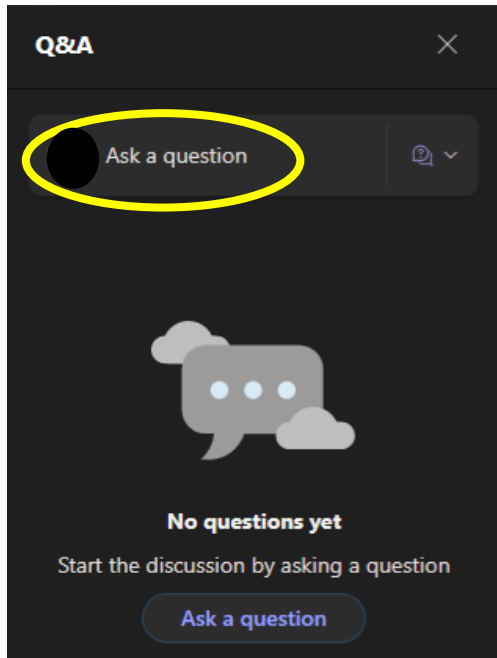
Question and answer options

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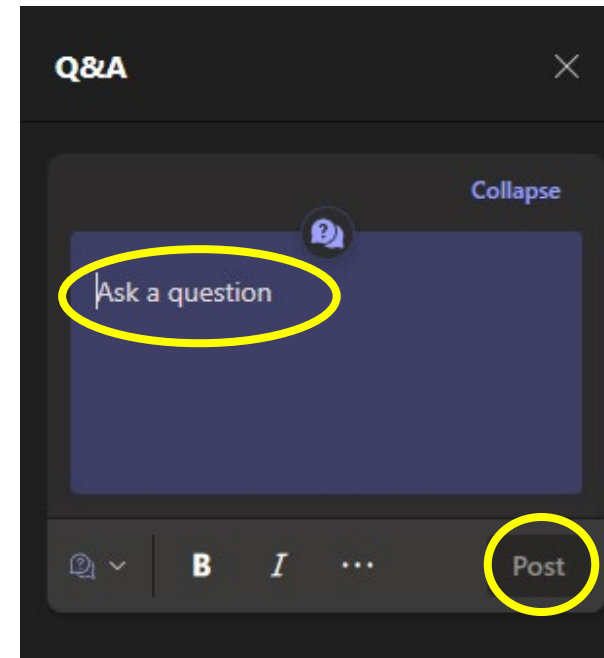
Question and answer function – MS Teams



1. Click the Q&A button at the top of the screen



2. A side menu will pop out. Click 'Ask a question'



3. Type your question into the box and click 'Post'.

Bureau of Meteorology

Jonathan Pollock, Senior Climatologist



Climate briefing

Recent conditions and long-range forecasts

Jonathan Pollock

3 August 2023



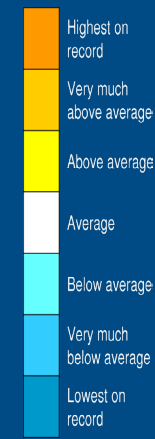
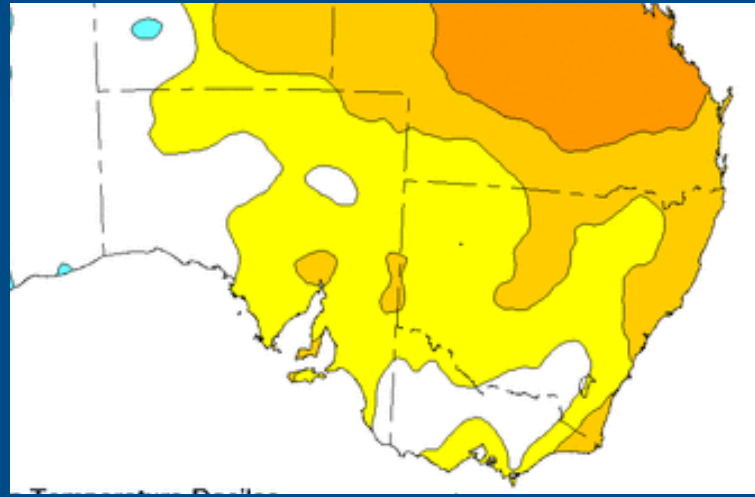
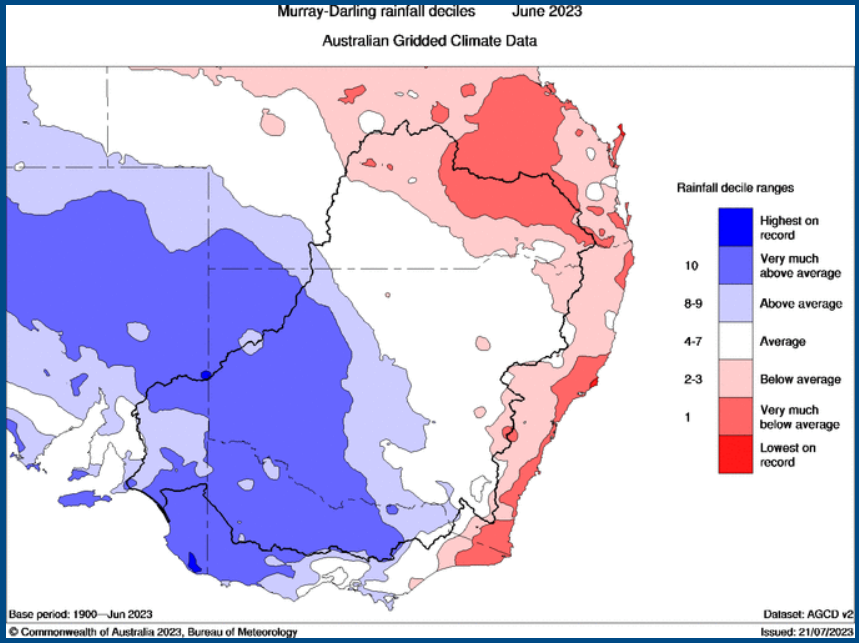


June 2023

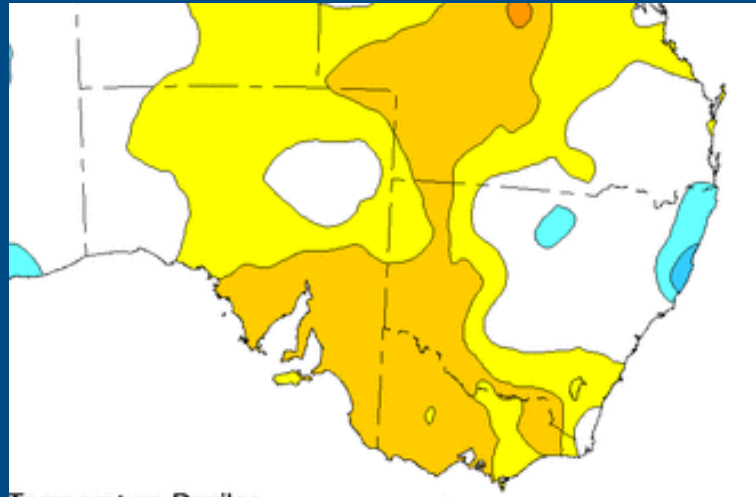
Rainfall

Maximum temperature

Minimum temperature

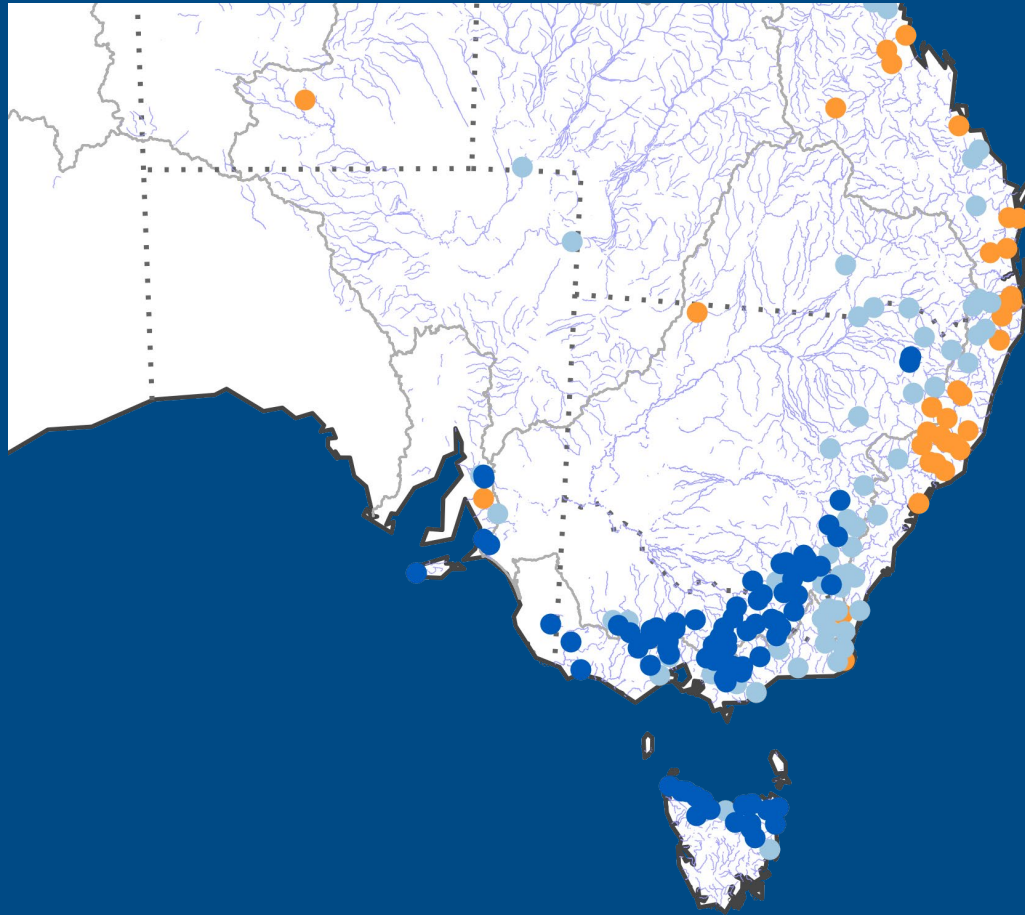


Deciles Compared to 1910–2023





Observed streamflow: 7 July 2023

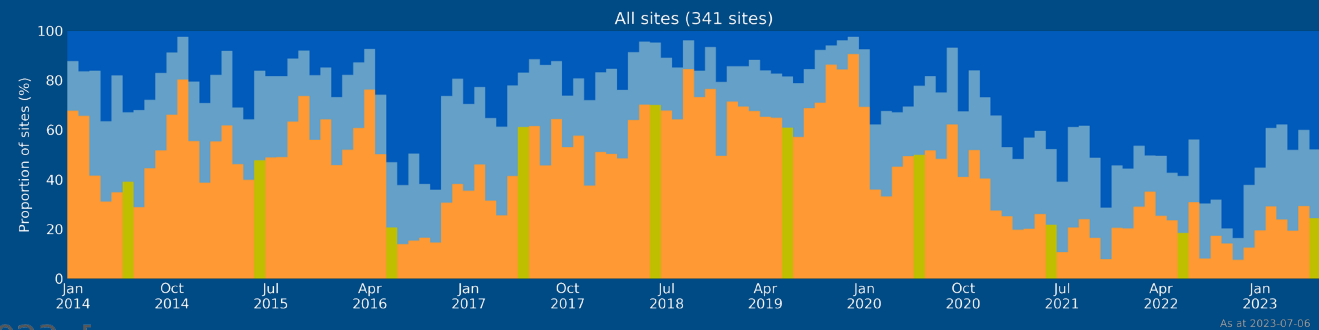


- high flow
- near-median flow
- low flow
- normal

Flow Category	Locations
Low	54
Near-median	90
High	116

Data for all Australian locations

Observed streamflow summary: Jan 2014 – June 2023

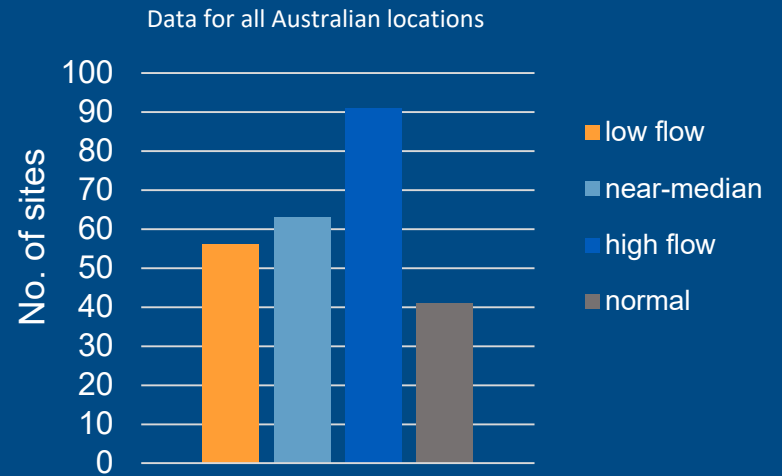
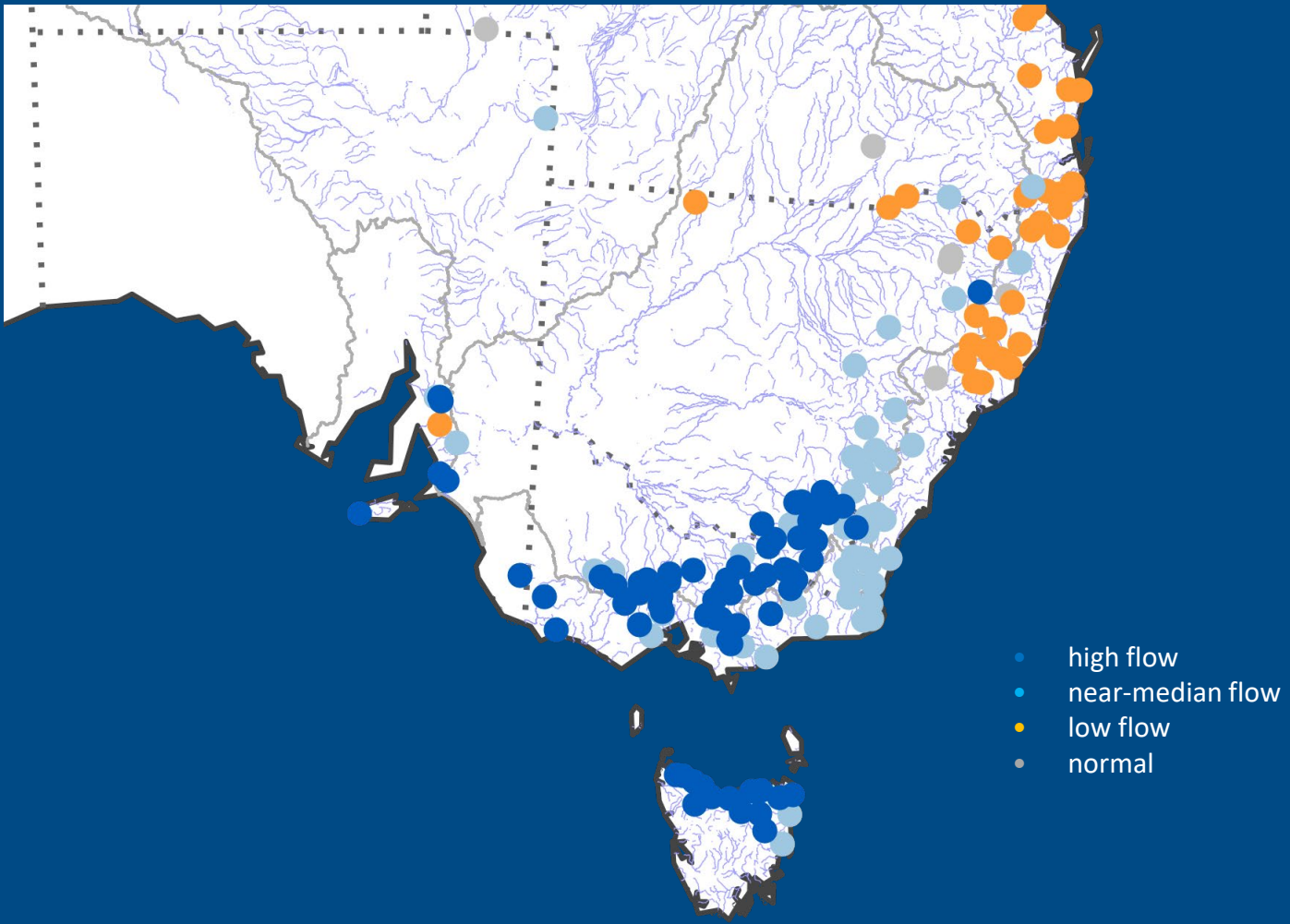


As at 2023-07-06





Streamflow forecast: July – September 2023



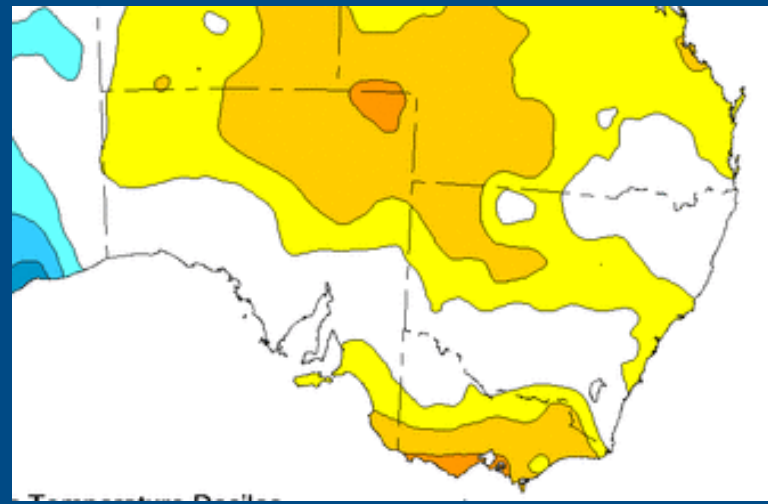
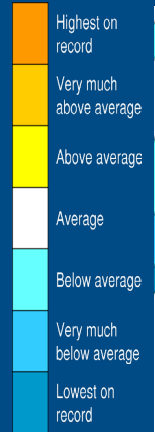
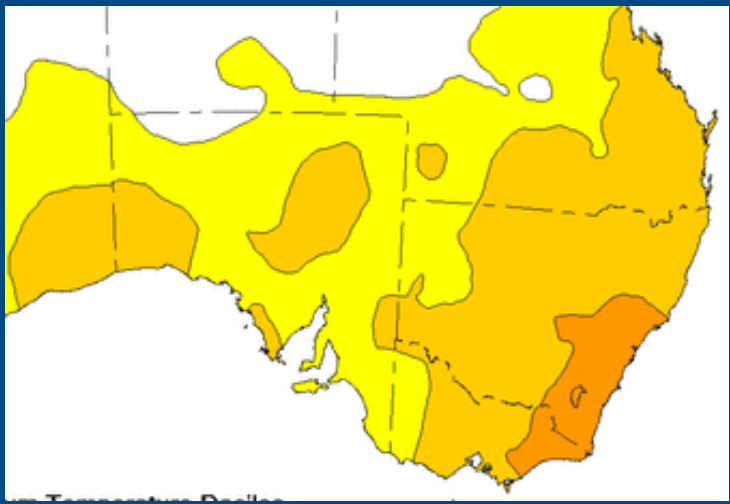
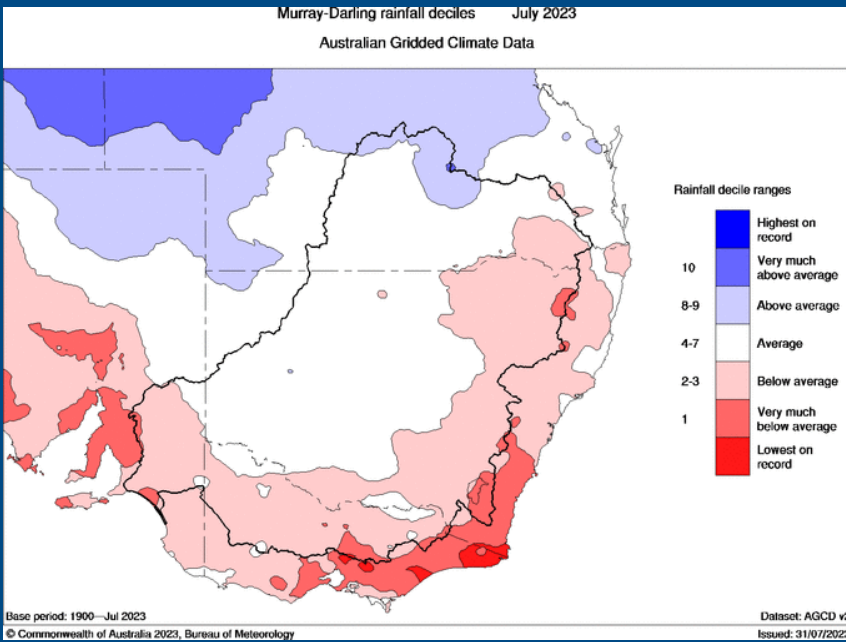


July 2023

Rainfall

Maximum temperature

Minimum temperature



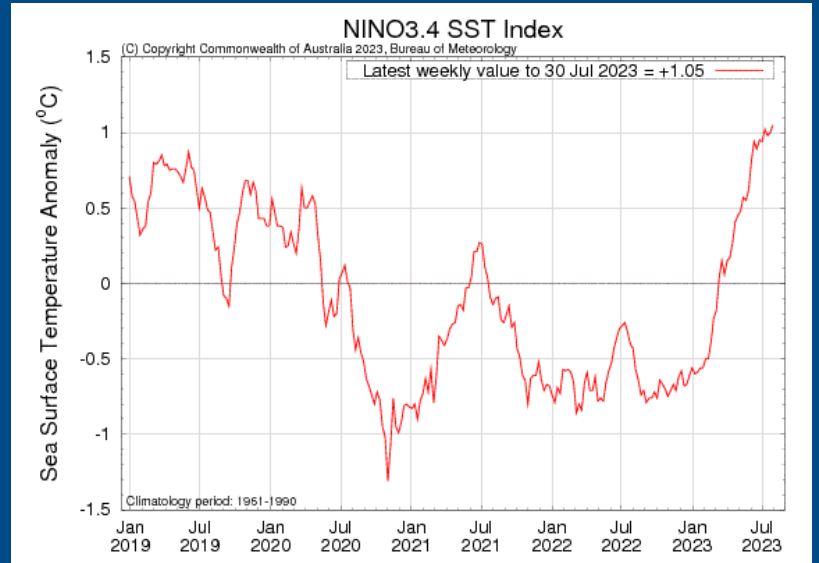
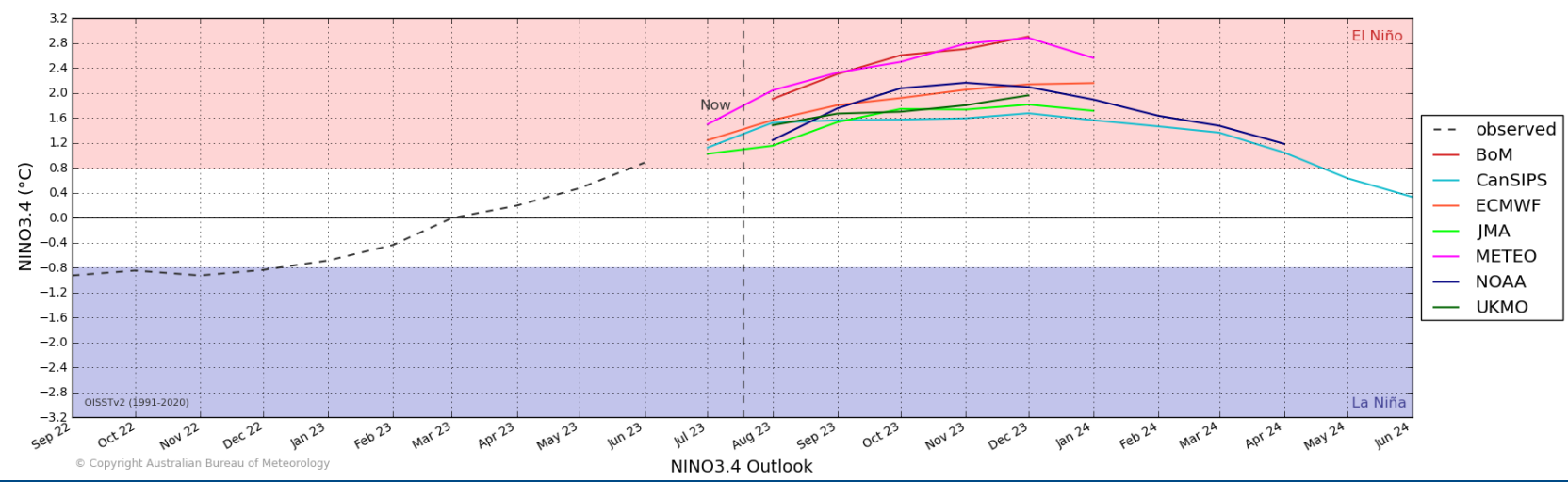
Deciles
Compared to
1910–2023



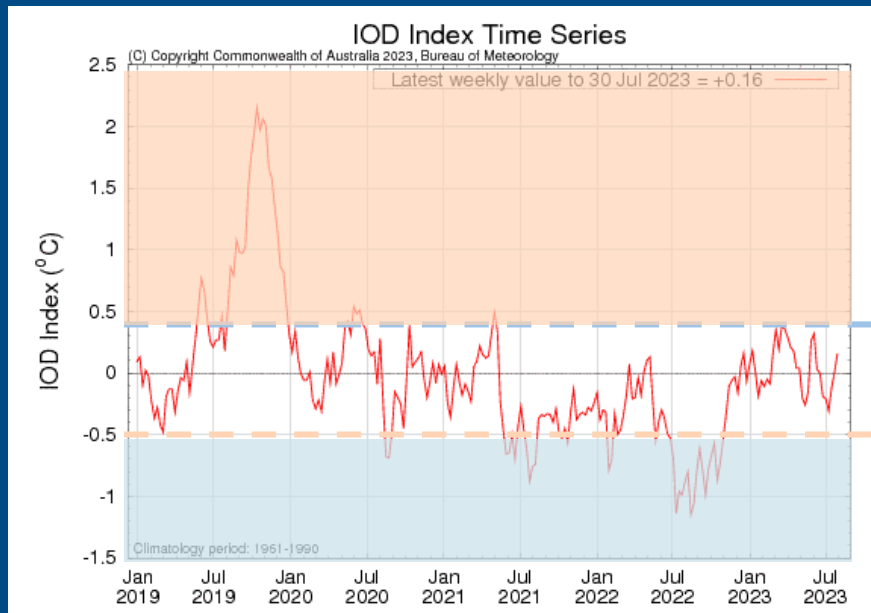
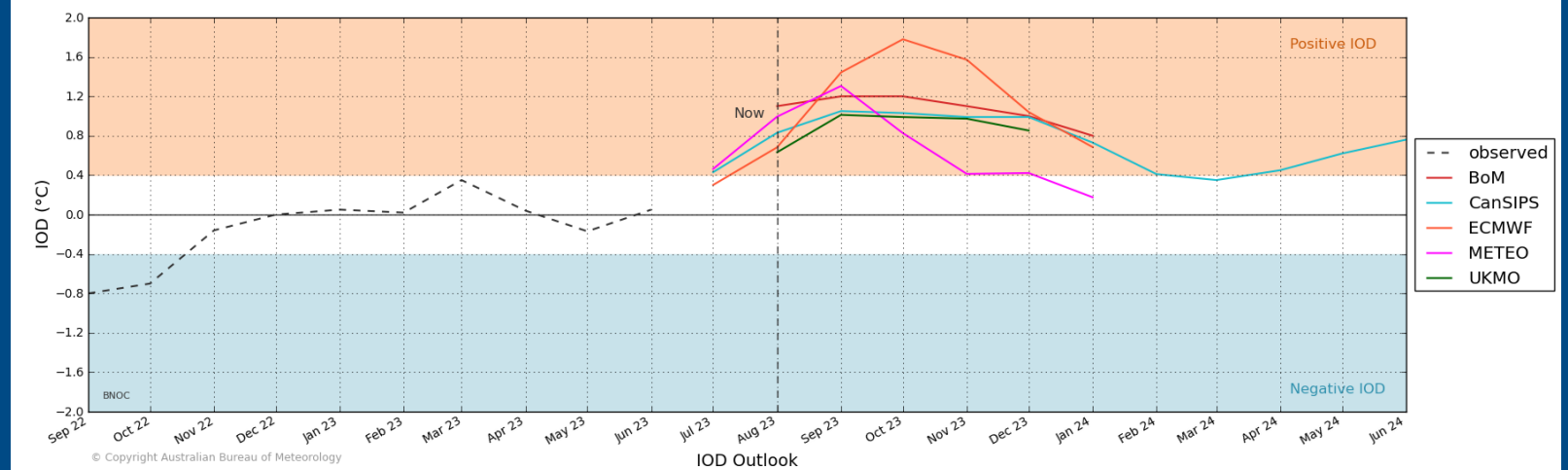


Climate Drivers

El Niño—Southern Oscillation Outlook - July 2023

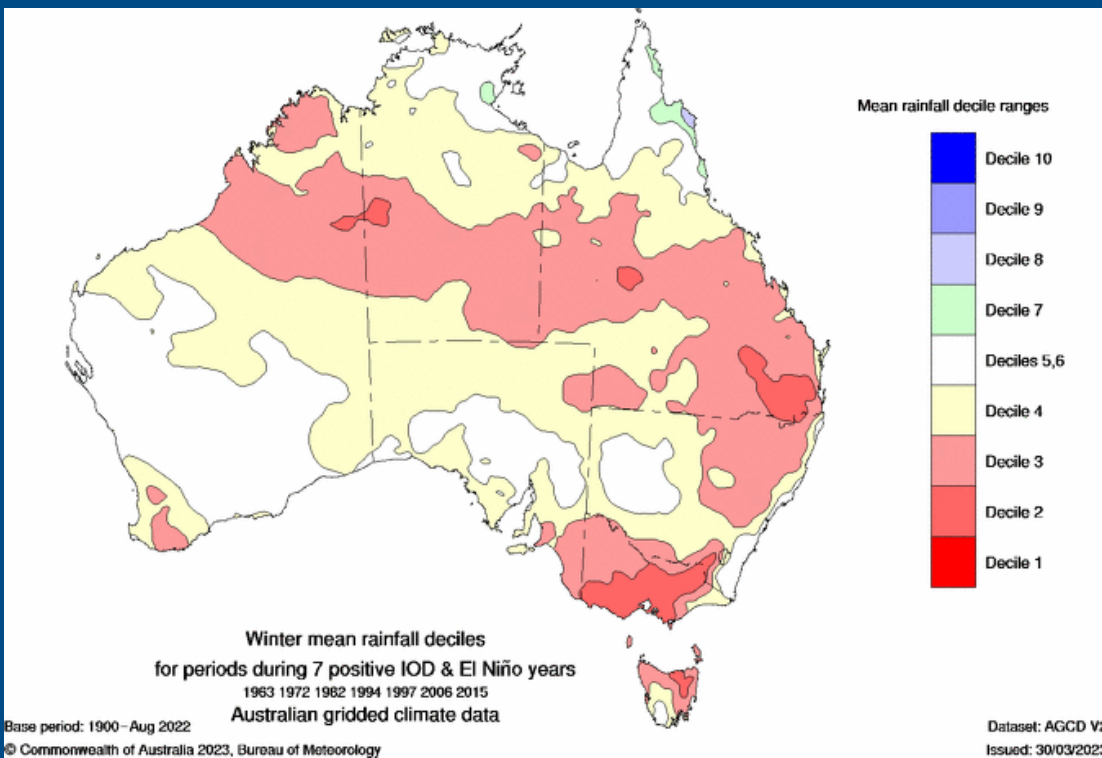


Indian Ocean Dipole Outlook - July 2023

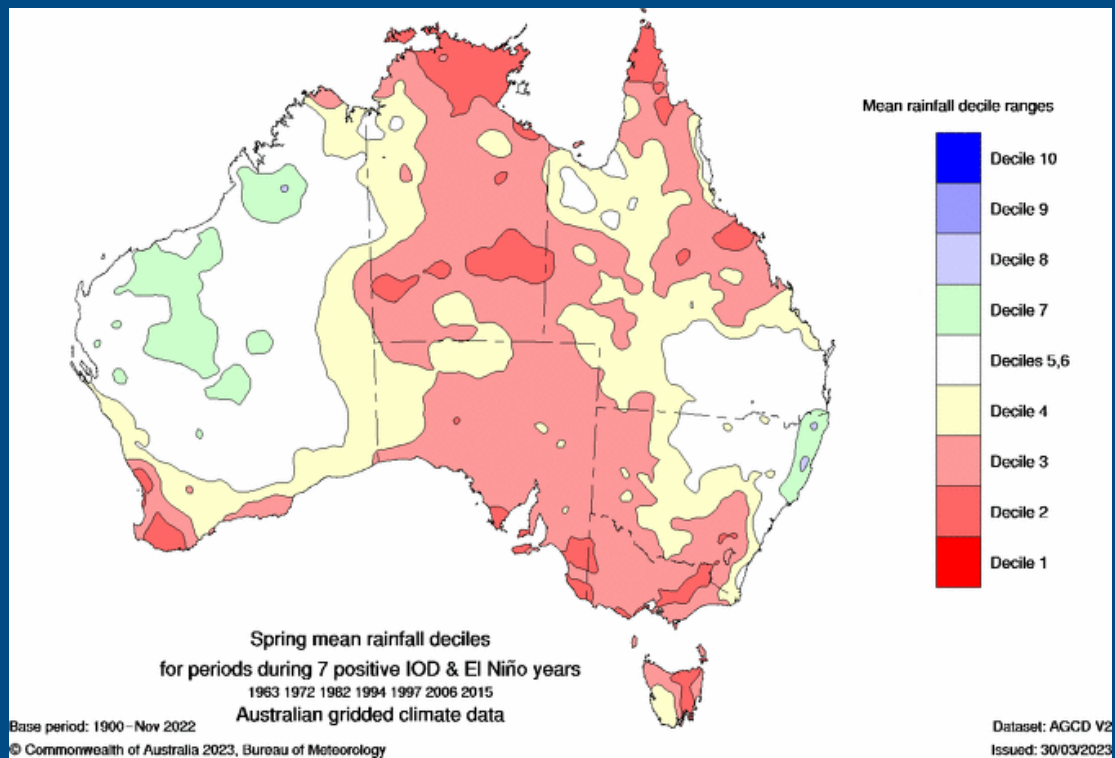




El Niño & positive IOD past influence rainfall



Winter



Spring





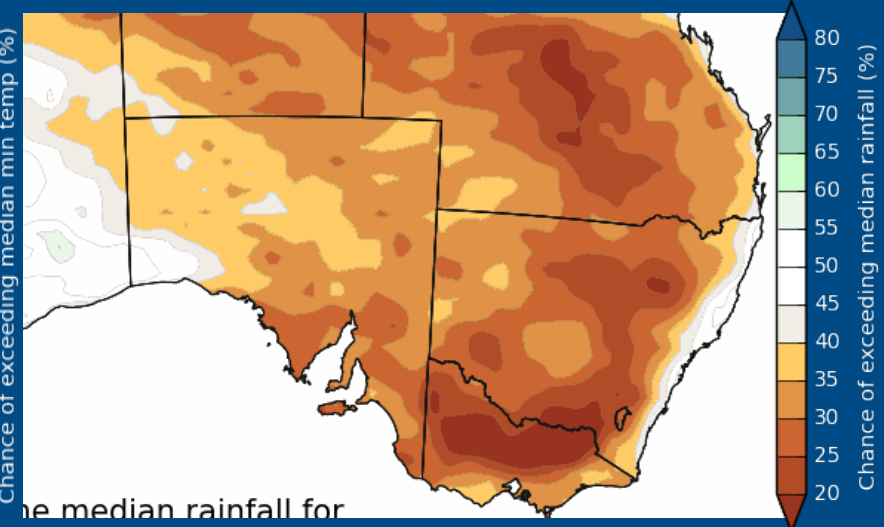
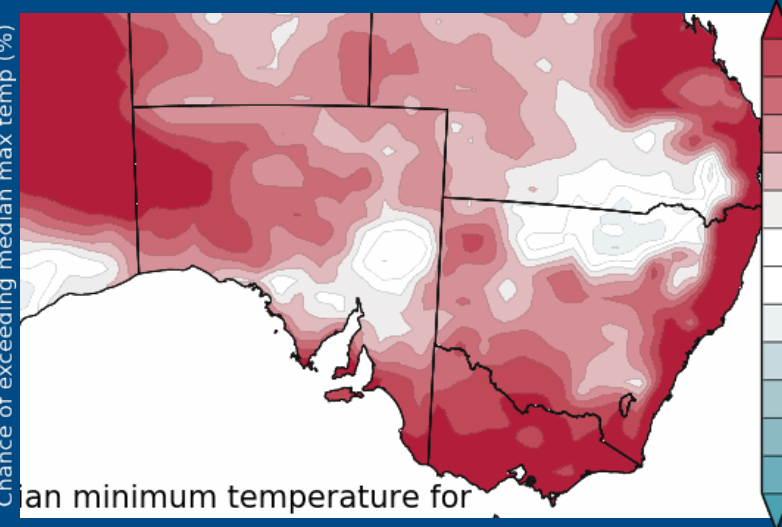
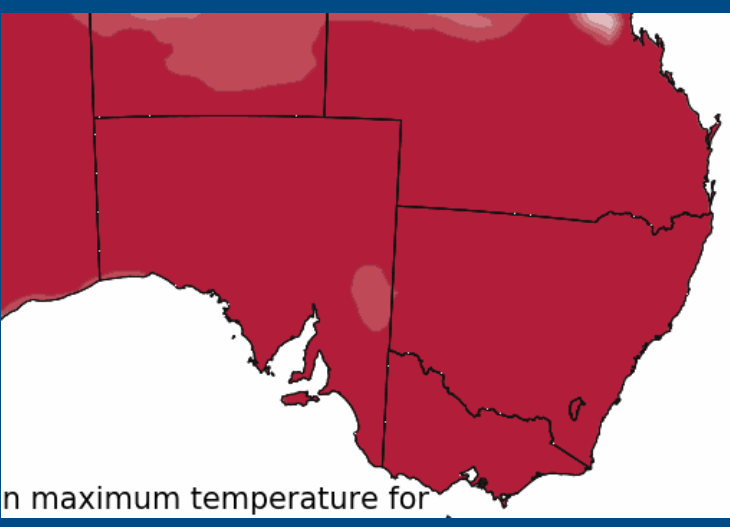
August 2023 long-range forecast

Chance of above median

Maximum temperature

Minimum temperature

Rainfall





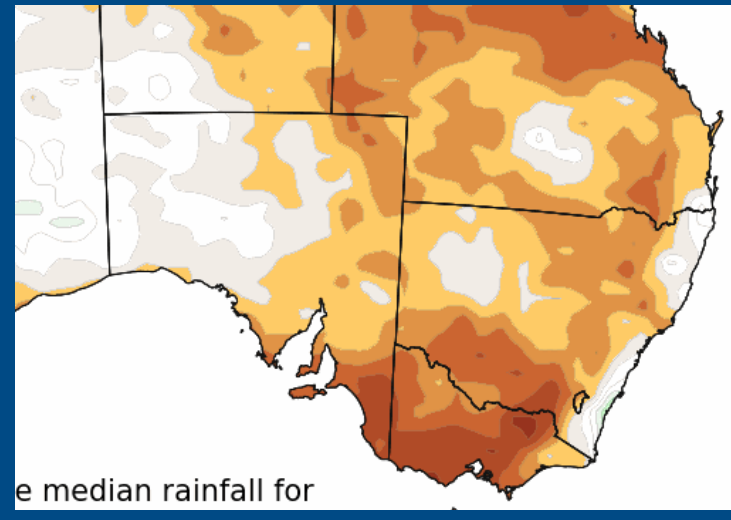
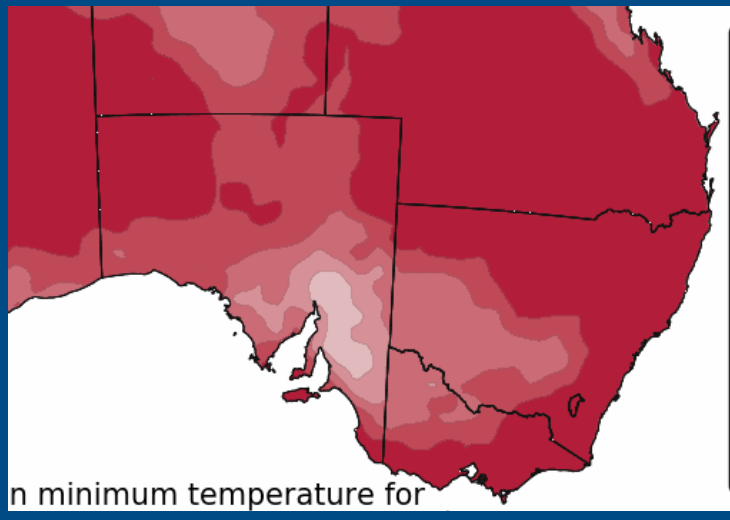
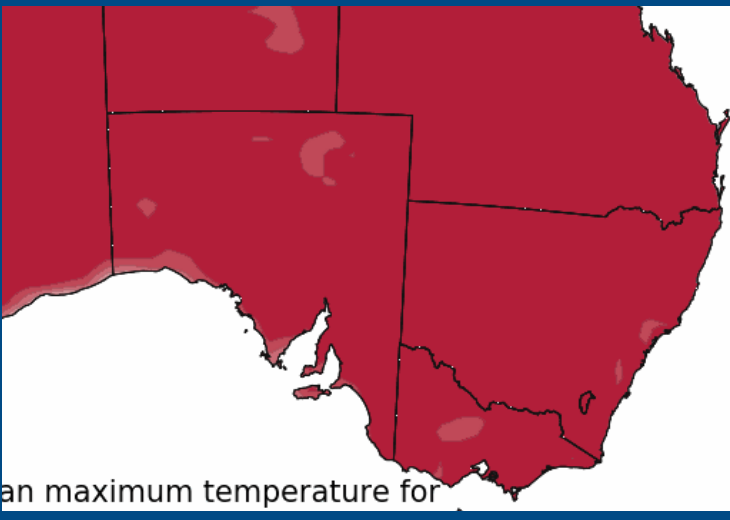
September – November 2023 long-range forecast

Chance of above median

Maximum temperature

Minimum temperature

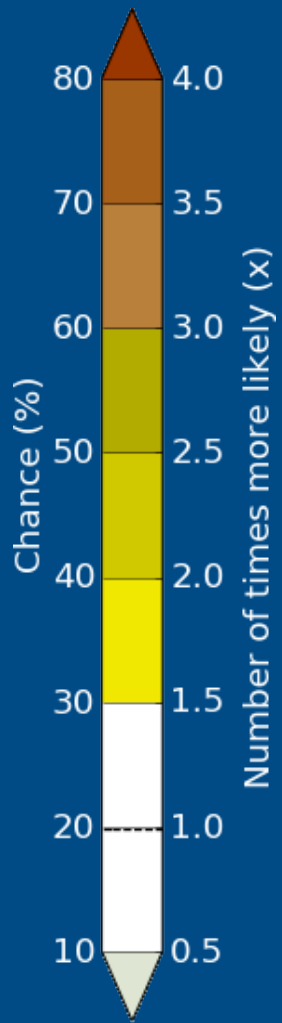
Rainfall



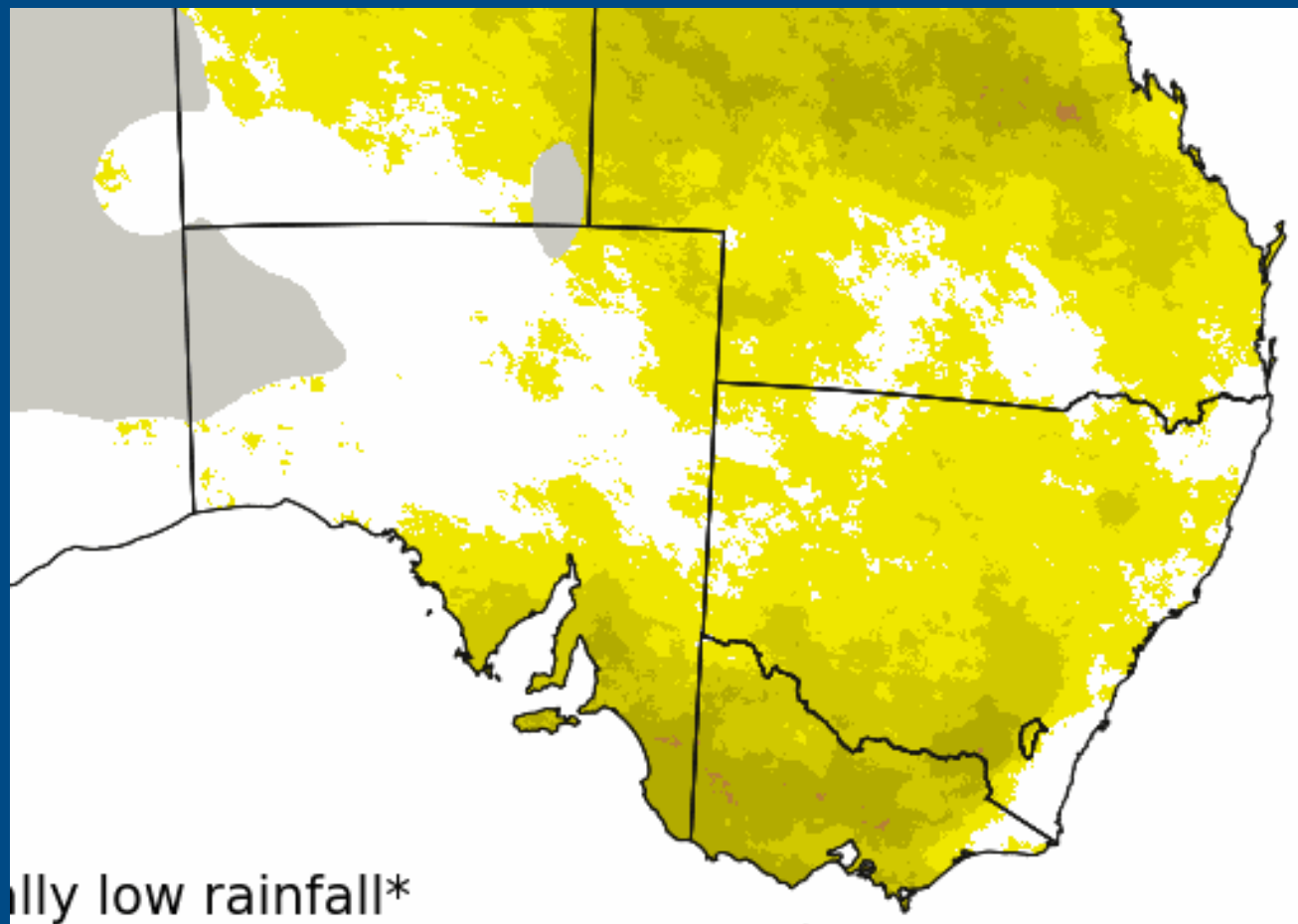


August – October 2023 long-range forecast

Chance of unusually dry



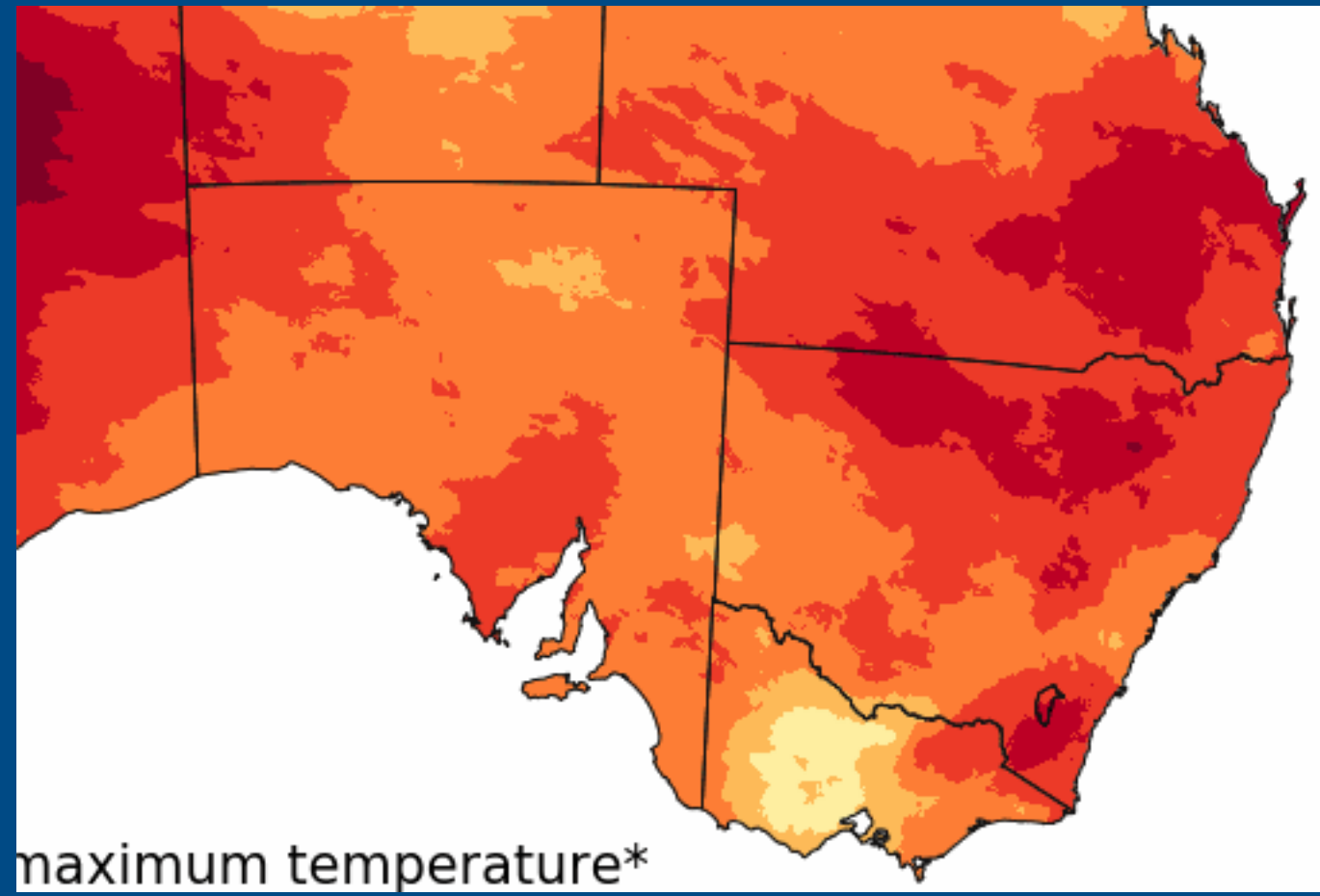
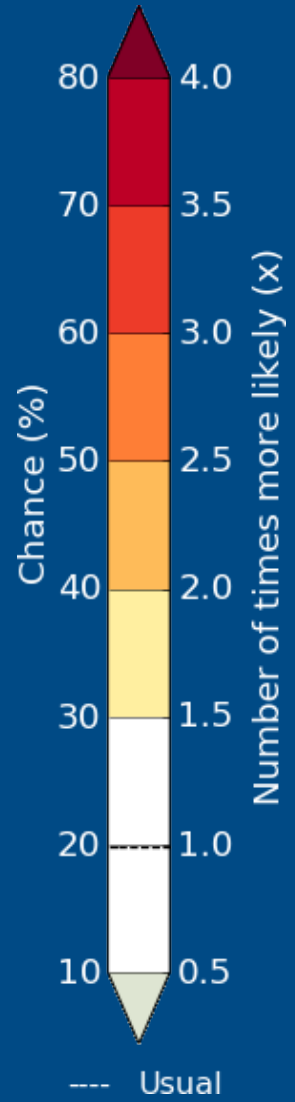
No data
 Usual





August – October 2023 long-range forecast

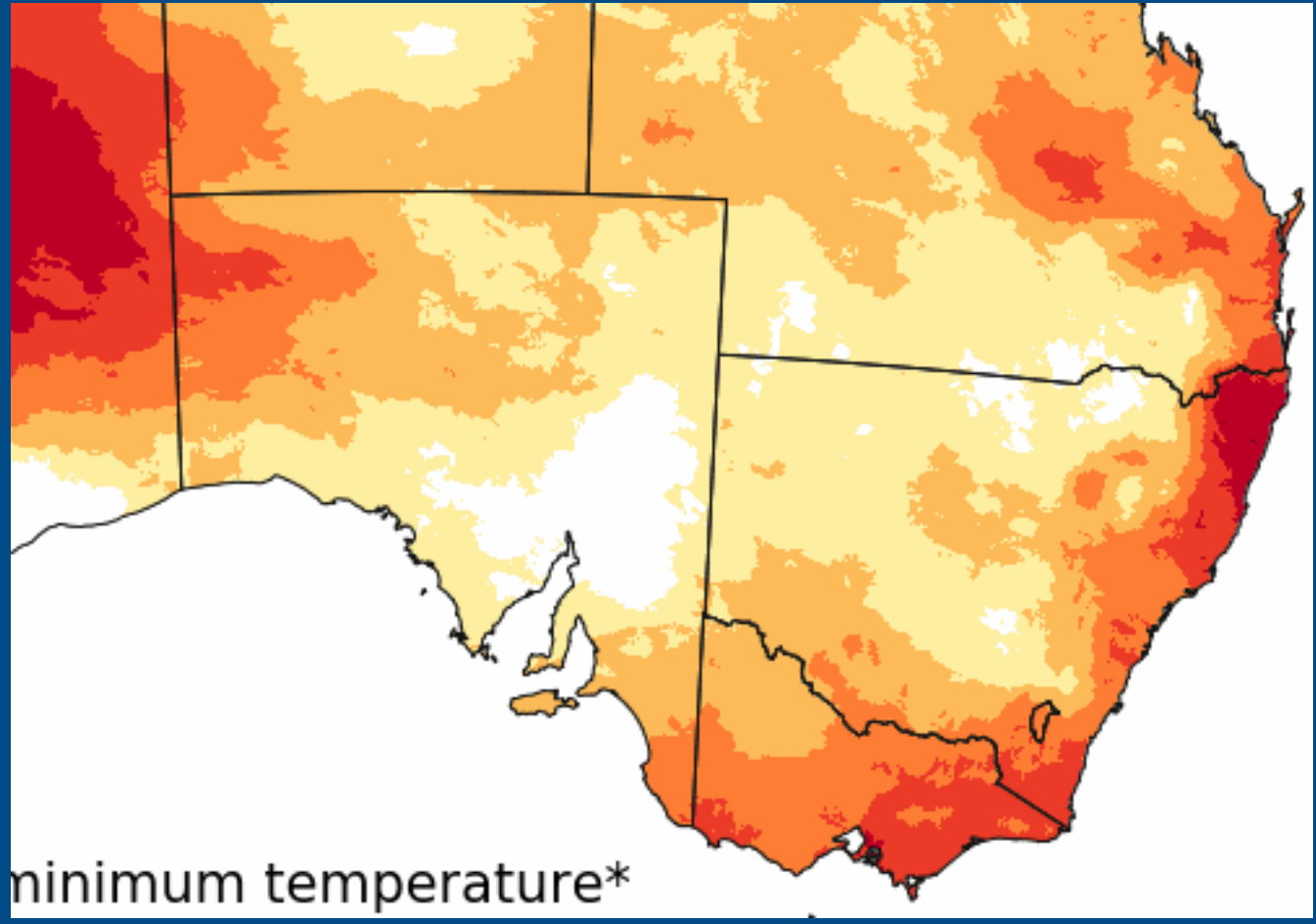
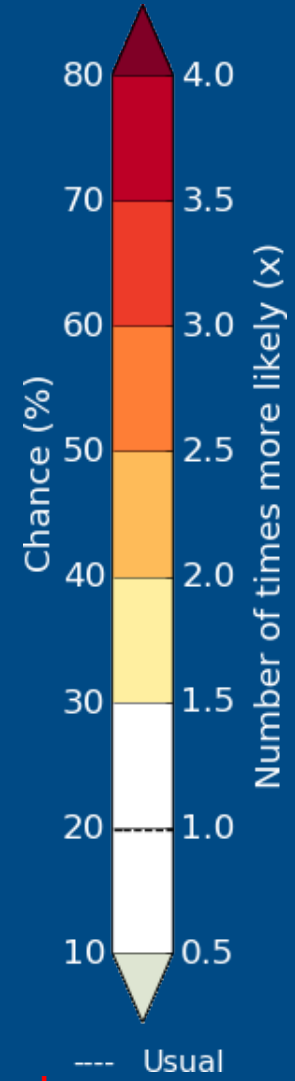
Chance of unusually warm/cool maximum temperatures





August – October 2023 long-range forecast

Chance of unusually warm/cool minimum temperatures



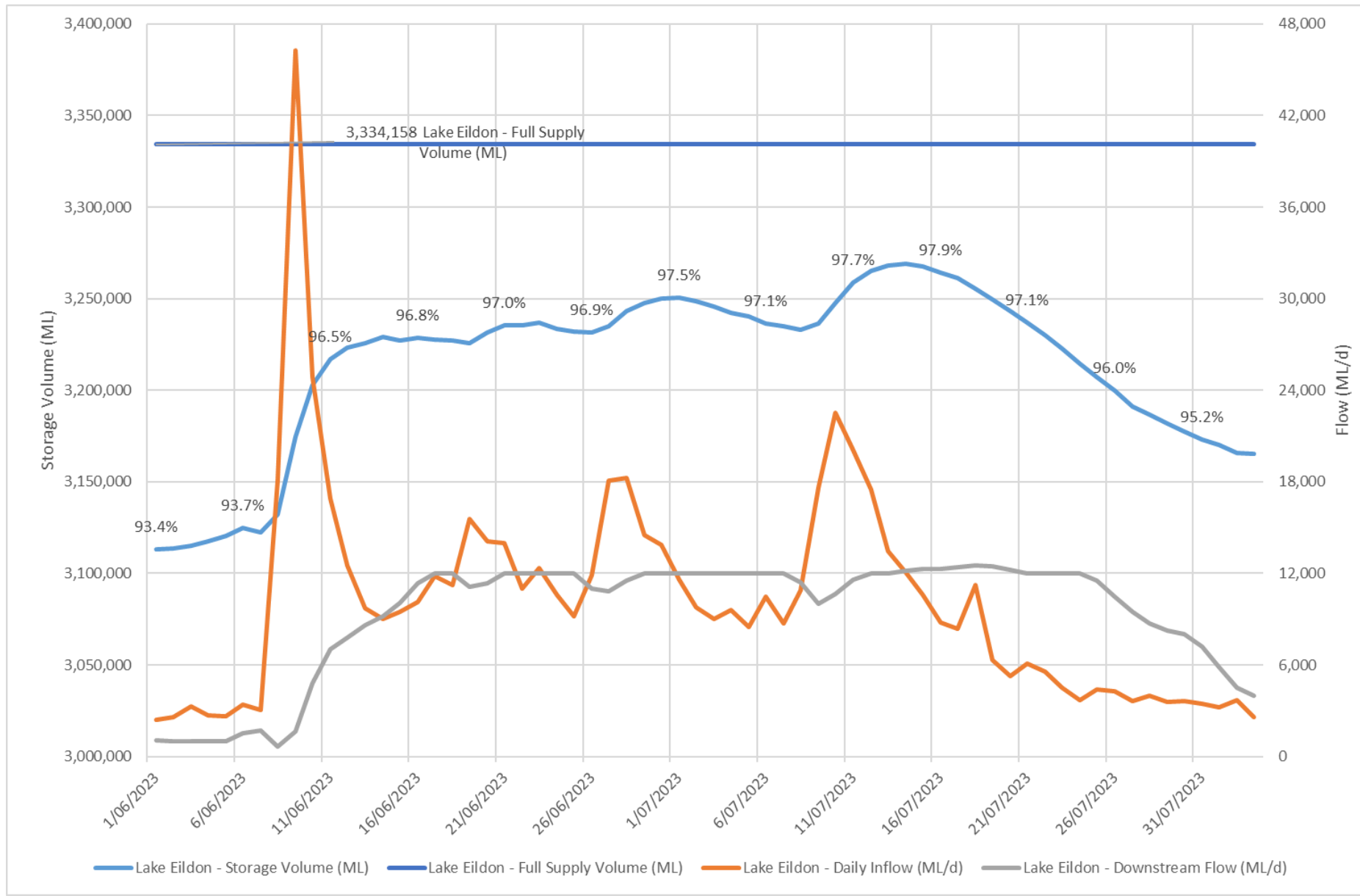
Goulburn-Murray Water

Andrew Shields, River Operations Manager

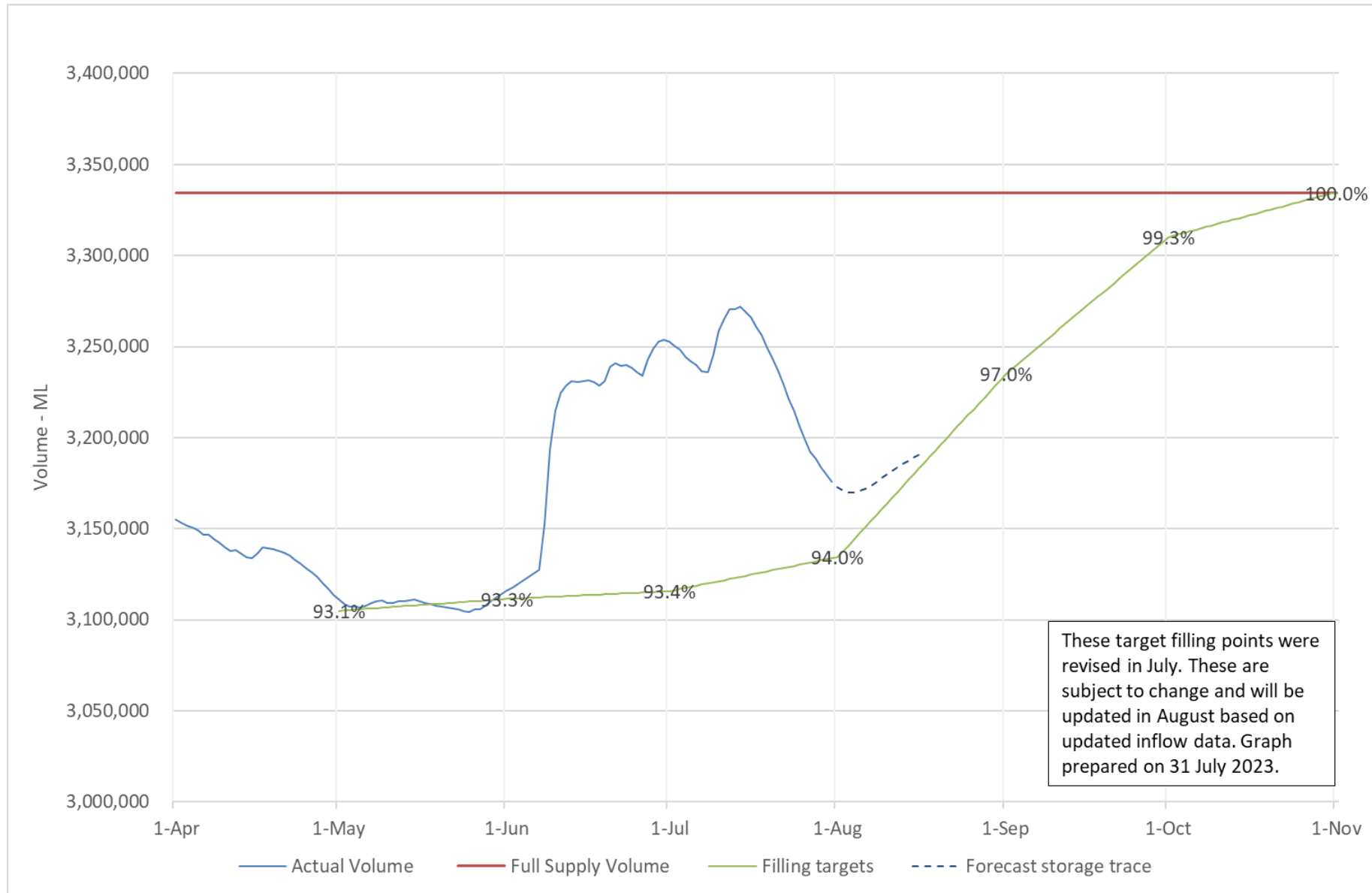
Goulburn catchment



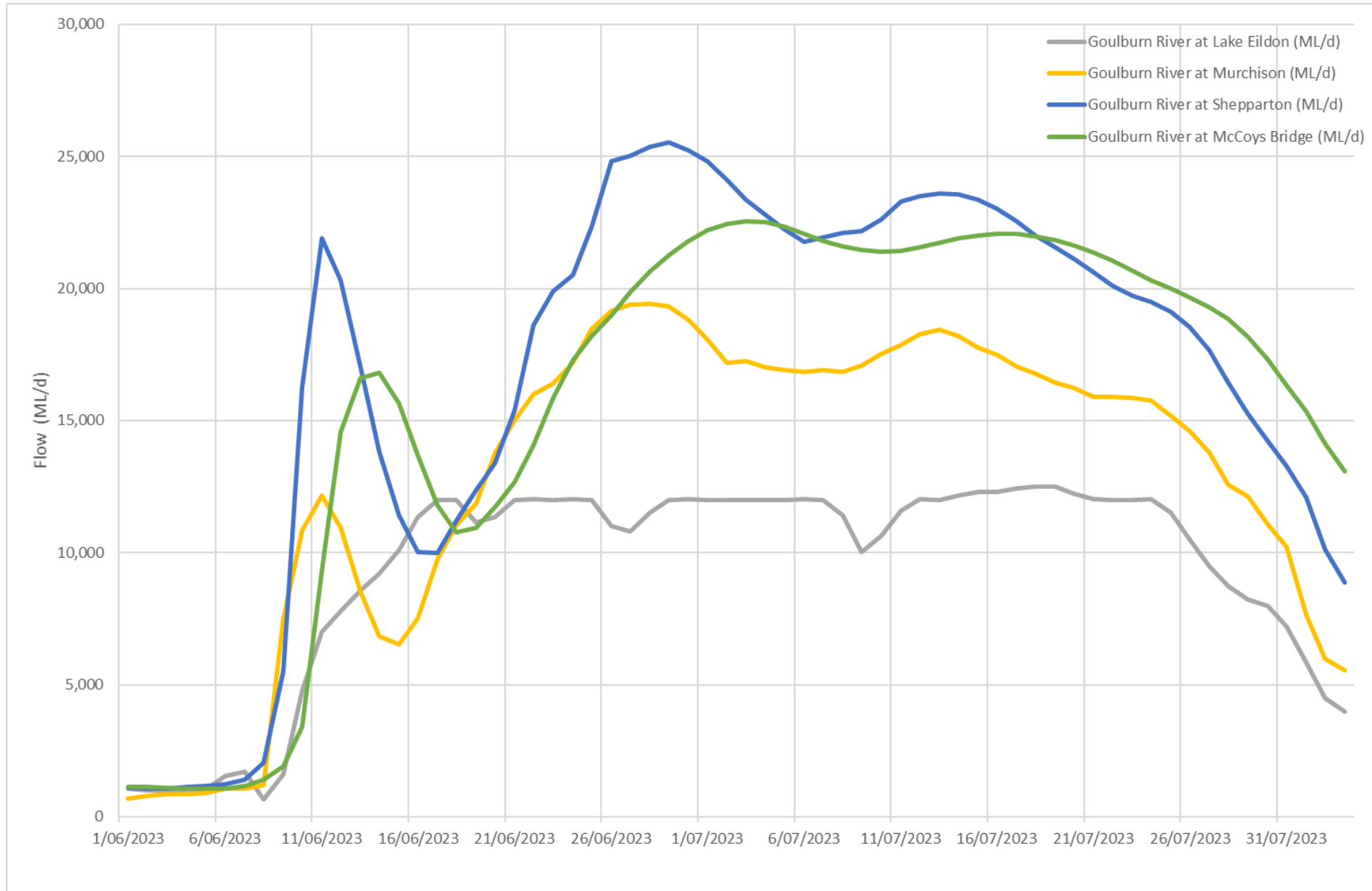
Lake Eildon recent observations



Lake Eildon filling targets



Recent Goulburn River flows



Loch Garry update



- Levee structure was damaged during the October floods
- Works to repair the levee structure are complete



Further information



- We will continually update information on the GMW website:
www.g-mwater.com.au
- Subscribe to daily storage level updates via the GMW website:
www.g-mwater.com.au/subscribe
- Storage levels and river flows/levels
 - GMW website: www.g-mwater.com.au/storage-levels
 - BOM website: www.bom.gov.au
 - Water Measurement Information System (WMIS):
<https://data.water.vic.gov.au/>

Goulburn Broken Catchment Management Authority

Guy Tierney, Statutory Planning & Floodplain Manager

Flood Intelligence Project 2022-2023

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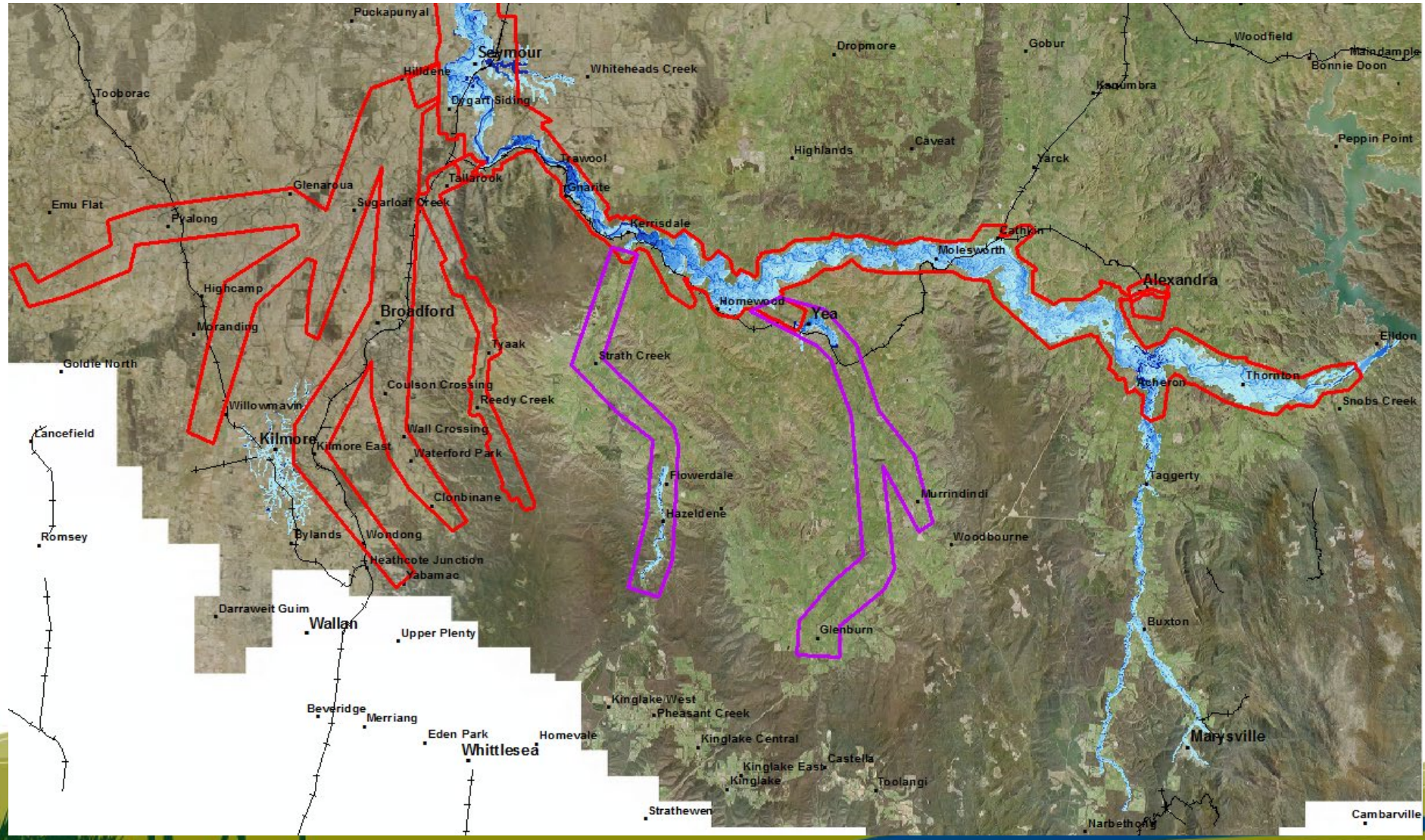
Across Goulburn Broken Catchment, VICSES in partnership with Local Councils and Goulburn Broken CMA, is working to update flood intelligence to be included in:

- Municipal Flood Emergency Plans (MFEPs), and
- Local Flood Guides.

Healthy landscapes, resilient communities.



Flood Mapping – Upstream of Seymour



Key

Blue – Completed flood studies

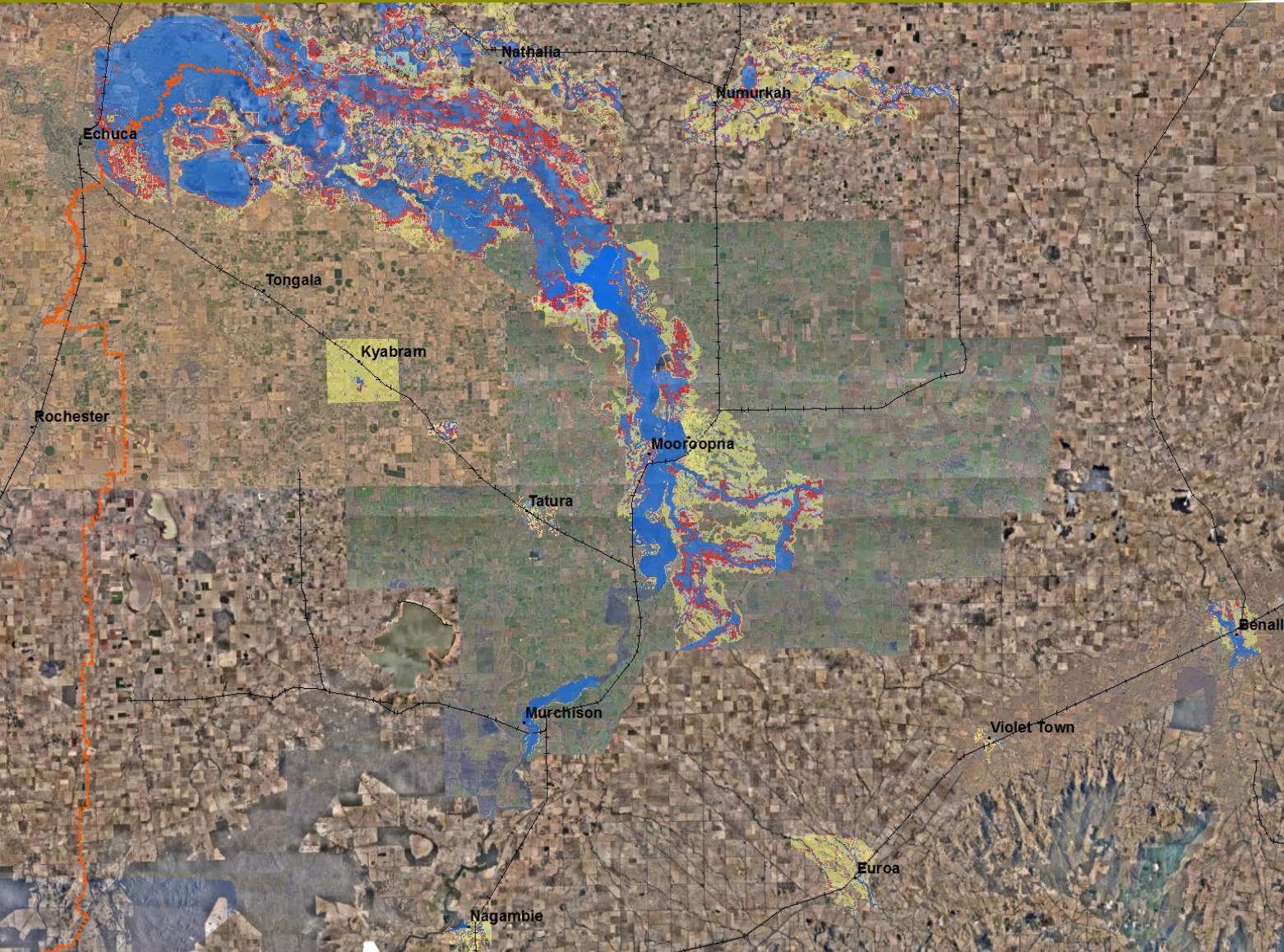
Red – Flood studies currently in progress

Purple – Future flood studies (identified in RFMS)



Flood Mapping – Downstream of of Seymour

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Other Completed Goulburn Rv Studies:

- Lower Goulburn
- Shepparton, Mooroopna & Kialla
- Murchison

Other Studies (near the Goulburn Rv):

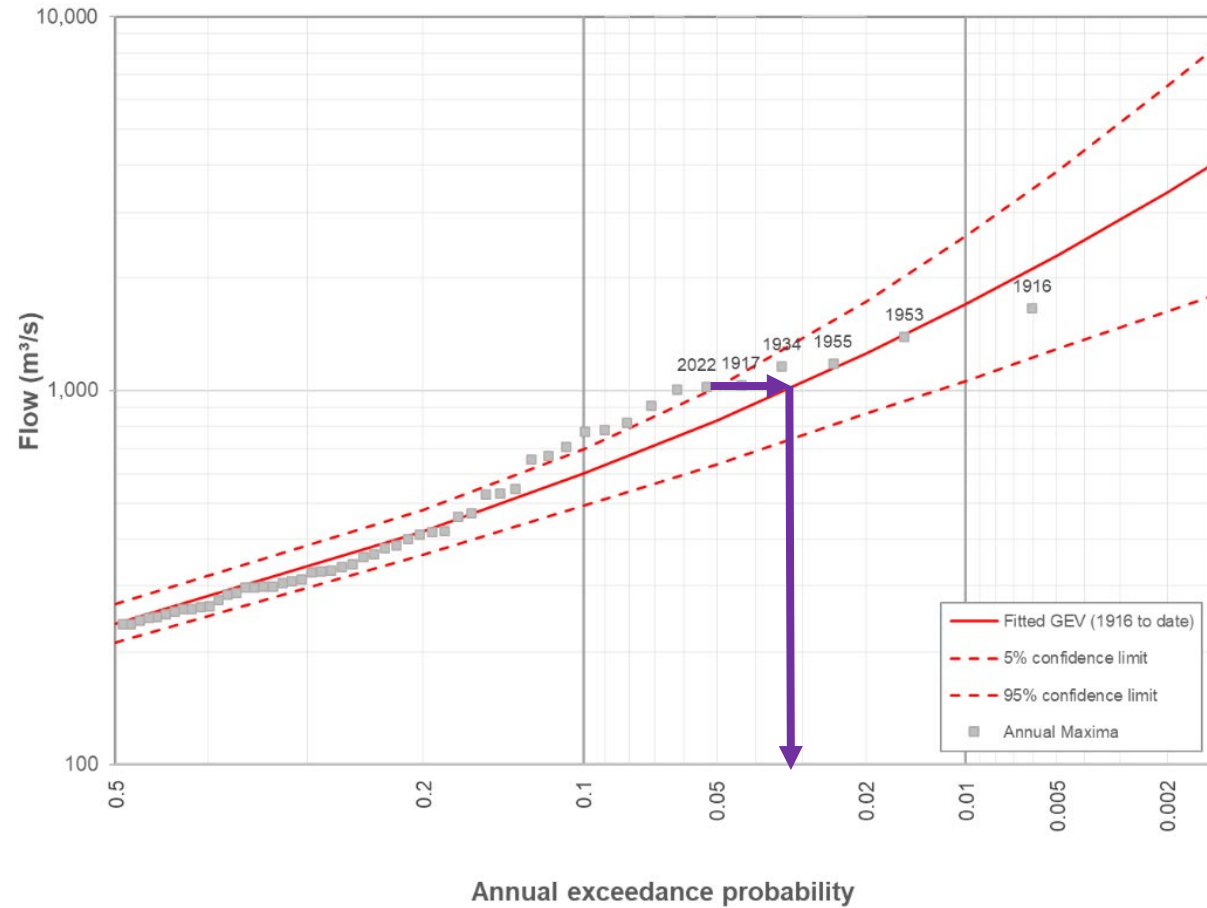
- Kyabram
- Nagambie
- Nathalia
- Numurkah
- Merrigum
- Shepparton East
- Tatura



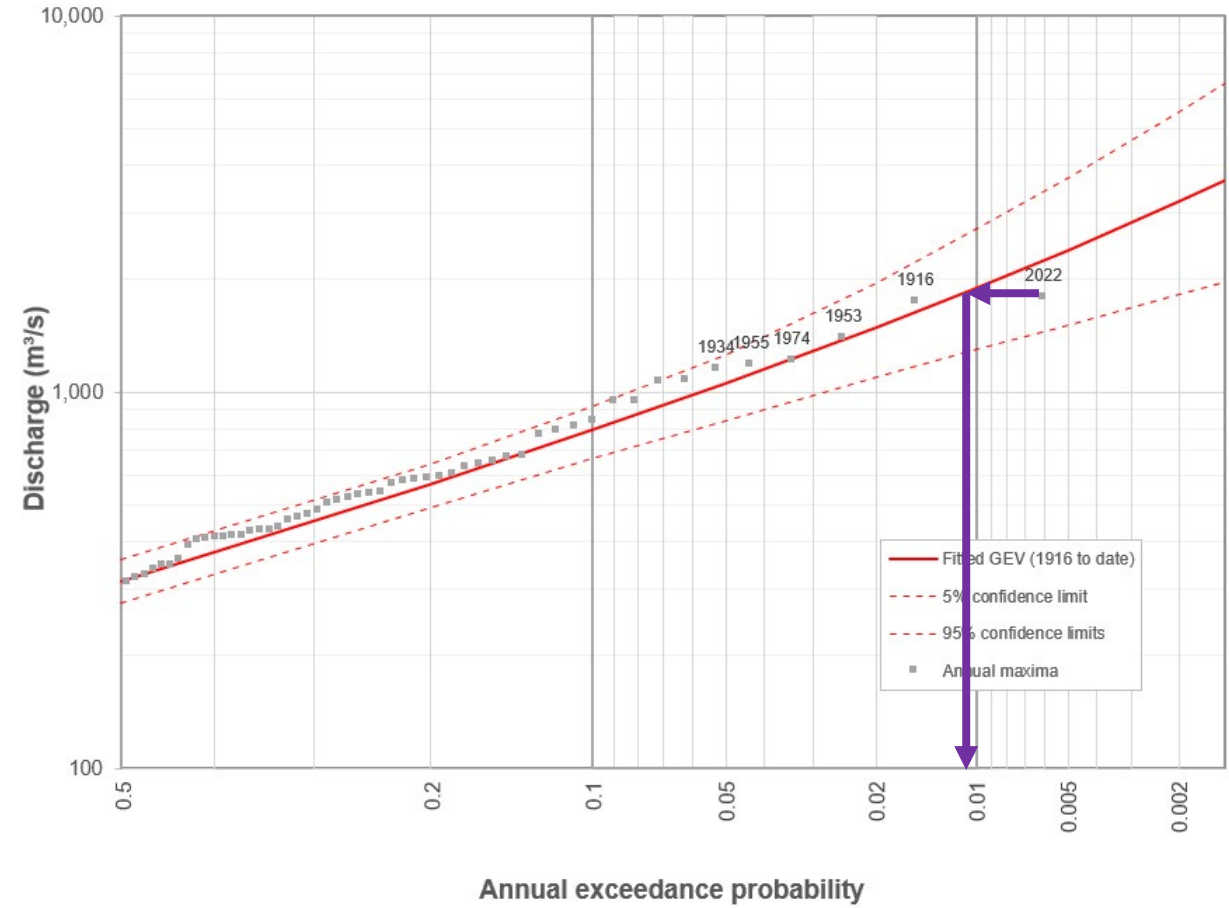
2022 Flood Analysis

OFFICIAL

Trawool – 1 in 27 AEP (3.7% AEP)



Seymour – 1 in 80 AEP (1.2% AEP)



Victoria State Emergency Service

Jule Syme, Community Resilience Coordinator

Warnings

- WARNINGS COME FROM - Bureau of Meteorology (BOM)
If you have close interest and understanding, use the BOM website / river data levels actively to monitor your local catchment.
- Emergency Service Officers publish warnings + safety information & local impacts onto VICEMERGENCY Channels.
- Website - App - Authorised RADIO - HOTLINE **1800 226 226**. Incl **press 9** for **interpreters to hear warnings** if you find the written information complex or are hearing impaired.

Understanding warnings

Warning levels

There are three different levels of warning:



Emergency warning

- You are in imminent danger and need to take action immediately. You will be impacted.

Understanding warnings



Warning (Watch and Act)

- An emergency is developing nearby. You need to take action now to protect yourself and others.

Understanding warnings



Advice

- An incident is occurring or has occurred in the area. Access information and monitor conditions.
- Can also be used as a notification that activity in the area has subsided and is no longer a danger to you.

Flood warnings



VicEmergency

November 4, 2022 · 🌐



WATCH & ACT - RIVERINE FLOOD - Avoid the Flooded Area

Incident Location: Goulburn River Seymour to Shepparton

Issue Date: Friday 04 November 2022, 05:14 pm

Next Update: Saturday 05 November 2022, 12:30 pm

More details at

<http://emergency.vic.gov.au/respond/...>

This Moderate Flood Warning is being issued for Goulburn River Seymour to Shepparton.

- Minor flooding is occurring along the Goulburn River Seymour to Shepparton.

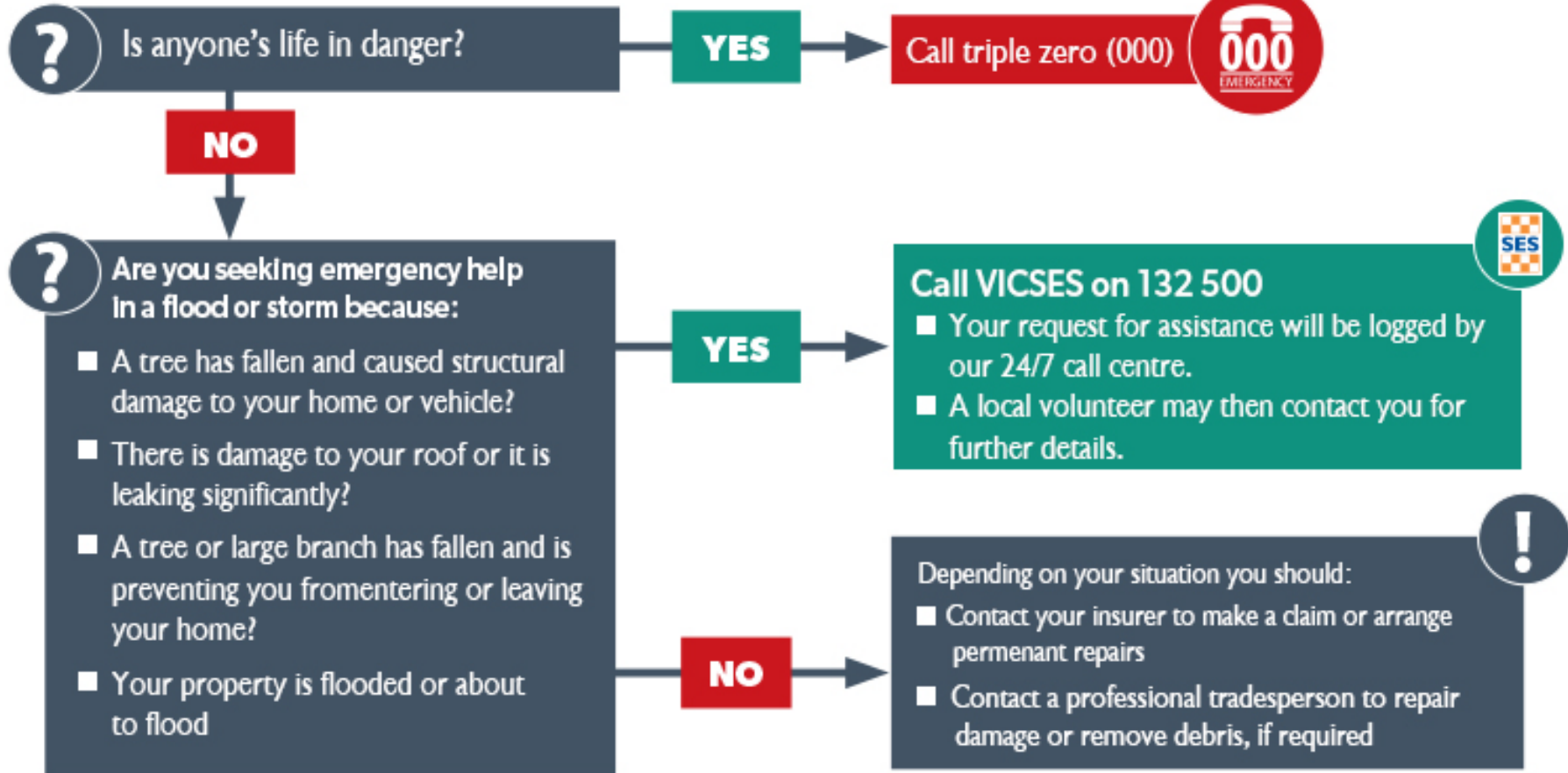
- The Goulburn River at Murchison is currently at 9.82 metres and steady, with minor flooding. The Goulburn River at Murchison is expected to remain above the minor flood level (9.00 m) overnight Friday into Saturday.

- The Goulburn River at Shepparton is currently peaking around 10.60 metres, with minor flooding. The Goulburn River at Shepparton is likely to remain around 10.60 metres overnight Friday into Saturday, with minor flooding.

Stay safe - avoid the flooded area. Be aware of potential hazards caused by flooding and never enter floodwater. [See less](#)



When should I call VICSES during a flood or storm?



VICSES is an emergency agency and may undertake emergency temporary repairs if required.

For minor leaks, superficial damage, removal of debris and cutting down of trees that are still standing, please contact a professional tradesperson.



Safer Communities - Together

Know your risk – Mitchell Shire

Flood

Preparing for Floods

NOW – before a flood

- Check if your home or business is subject to flooding for more information contact Mitchell Shire Council.
- Develop an emergency plan.
- Check if you could be cut off by floodwaters.
- Secure important things you need to take from your property and plan an escape route.
- Check your household contents insurance. Many properties are not covered for flood damage.
- Keep a list of emergency numbers near the telephone.
- Get together an emergency kit.

When a flood is likely

- Take action, follow your emergency plan.
- Listen to your radio for information and advice.
- Check your neighbours safety and know about their flood.
- Check your water, electricity and telephone electrical goods in the highest place.
- Secure objects that are likely to float and cause damage.
- Move valuables, documents and photos to the highest place.
- Get important papers, valuables, photos and other special personal items into your emergency kit.
- Business owners should secure stock, business records and equipment before hand and lock.
- If you are likely to be isolated, have enough food, clothing and medicine for you and your animals at least three days.
- Do not forget pet food and water.

Plan time for you to evacuate before

Prepare a plan

Your emergency plan

Emergency can happen many times a year. It is important to have a plan in place for emergencies before they happen.

Doing this can help you think about what you need to do before a disaster strikes and what you need to do after.

Your emergency plan should identify

- The types of emergencies that might affect you.
- How these emergencies might affect you.
- What you will do before, during and after an emergency.
- Where to get more information.
- Where you will go if you are in trouble and the best way to get to different circumstances.
- A list of phone numbers you will need, including emergency services, your insurance company, friends and family.



Visit www.ses.vic.gov.au to obtain a copy of your Home Emergency Plan workbook.

Evacuation

Home is where it is important to have a plan in place for emergencies. During a flood, it is important to have a plan in place for emergencies. It is important that you follow the plan.

The main things you should do are to have a plan in place for emergencies before a flood starts.

- Prepare in advance** - you should have a plan in place for emergencies before a flood starts.
- Evacuate immediately** - you should have a plan in place for emergencies before a flood starts.

Remember you are best prepared if you have a plan in place for emergencies before a flood starts.



Know your risk – Murrindindi Shire



Local Flood Guide

Yea

Yea

The Yea township is located north-east of Melbourne in the Murrindindi Shire. Significant riverine floods (water overflowing from the river or creeks) have occurred in 1934, 1974, 1989, 1996 and 2010. The 1934 then 1974 floods are known to be the town's largest, however the 1989 flood is the highest officially recorded at 4.30 metres at the Devilin's Bridge river gauge since the gauge began operation. Flooding in Yea usually lasts from one to three days or longer in low-lying or rural areas.

In the Yea area, flash flooding can occur more often within the township due to locally hilly terrain resulting in flows of floodwater across the land, along roads and on rural farmland after heavy rain or thunderstorms at any time of year.

The following map shows the expected flooding in a 1% flood in Yea. A 1% flood means there is a 1% chance of a flood measuring 4.75 metres on the Court Street gauge at Yea.



Disclaimer
This map is a guide to be used in conjunction with the Victorian State Emergency Service (SES) for flood emergency assistance. The content is of the best information available at the time of printing and is subject to change without notice. The Victorian State Emergency Service (SES) is not responsible for any damage, loss or injury caused by reliance on this information or for any action taken by any person in reliance on it. Flood risk information is provided by the Victorian State Emergency Service (SES) in conjunction with the Victorian State Government.



Yea

Local Flood Guide

Riverine and flash flood information for the Yea River, Boundary Creek and Murrindindi River at Yea



For flood emergency assistance call
VICSES on 132 500



Revised: 1 January 2015



Community Engagement Project

- Simple Plan to show Residents
- How to be more resilient.
- Keeping an eye on water levels
- Knowing what to do
- Using sandbags in a more practical way.



Safer Communities - Together

What's Your Plan?

Flood and storm emergencies
Get ready, have a plan, know what to do.

ses.vic.gov.au

Before

- 1. Learn whether you're at risk**
To find out whether flooding could impact your home, go to ses.vic.gov.au and download your local Flood Guide.
- 2. Set up emergency notifications**
Ensure your mobile phone is set up to receive emergency alerts. Download the SES app to your mobile phone.
- 3. Keep your property safe**
Do what you can to help prevent damage to your home:
 - Clear your gutters, downspouts and drains to ensure water can flow away from your home.
 - Check that loose items around your home are securely stored.

Get organised
If you need to evacuate your home, consider what important information and items you would need to take with you...

- Make an emergency plan for family, pets, etc.
- Know what you have: important documents, including your passport, ID and bank account details.
- Separate your medical information, including the location of your emergency kit (food, water, first aid, etc.).
- Take steps to protect what is important to you - review your insurance cover.

For more information, download the RediPlan app or visit redcross.org.au to download a RediPlan.

**EMERGENCIES HAPPEN:
PROTECT
WHAT
MATTERS
MOST**

Your Emergency
RediPlan
redcross.org.au/prepare

the power of humanity

AUSTRALIAN RED CROSS

**THESE FOUR
EASY STEPS
HELP YOU
PLAN FOR
EMERGENCIES**

**STEP 1:
GET IN THE KNOW**

**STEP 2:
GET CONNECTED**

**STEP 3:
GET ORGANISED**

**STEP 4:
GET PACKING**

Your Emergency
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the power of humanity

AUSTRALIAN RED CROSS

**EMERGENCIES HAPPEN:
PREPARE
YOUR
MIND**

Your Emergency
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the power of humanity

AUSTRALIAN RED CROSS



Home Emergency Plan

- Emergencies can happen at any time, with little warning. People who plan and prepare for emergencies reduce the impact and recover faster.
- Taking the time to think about emergencies and make your own plan helps you think clearly and have more control to make better decisions when an emergency occurs.
- Check out the VICSES webpage for more information: [Plan and Stay Safe](#)
- Visit <https://www.redcross.org.au/prepare> start creating your plan.



Safer Communities - Together

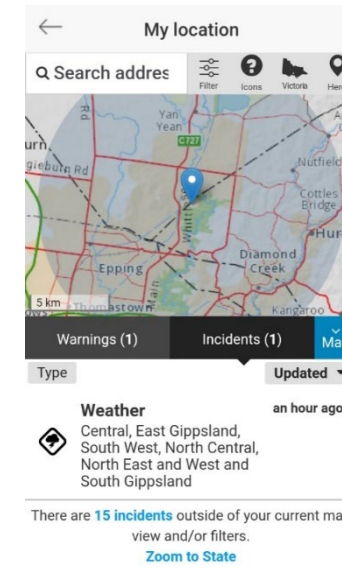
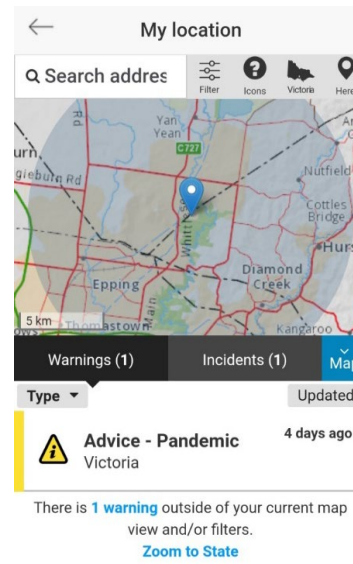
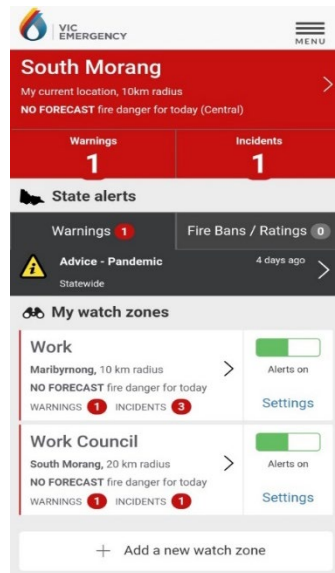
Emergency Kit



Safer Communities - Together

Do one thing

- Do you have the VicEmergency and VicTraffic apps on your phone? Both are available to download from the App Store or Google Play.



Local Resources

- Local Flood Guides
- Municipal Storm Flood Emergency Plan
- Local SES units
- SES Website
SES.VIC.GOV.AU

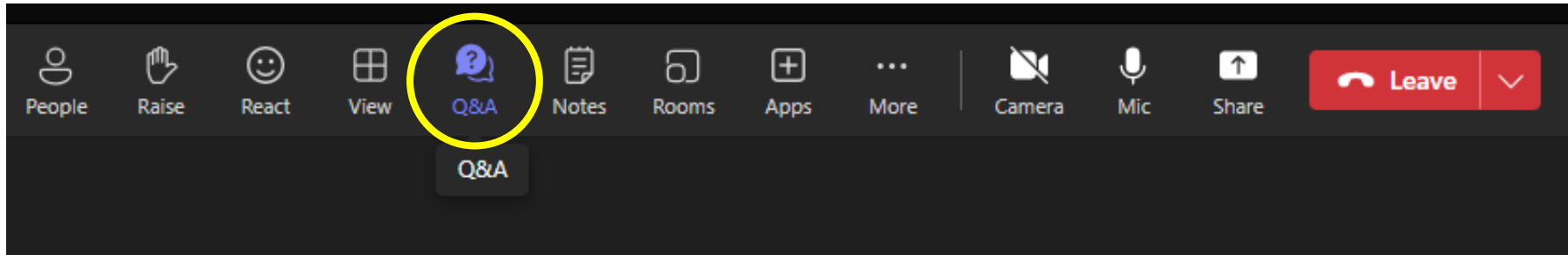


Question and answer session

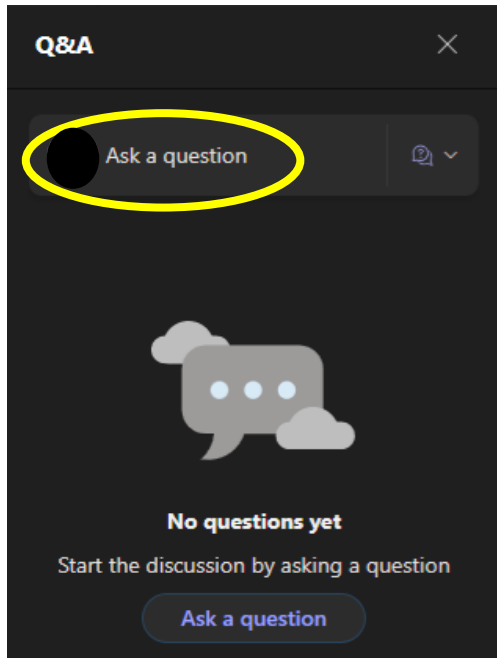
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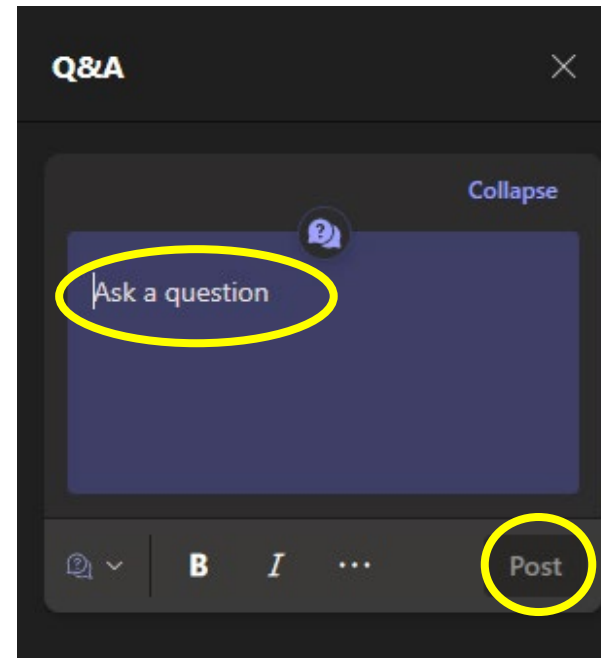
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