

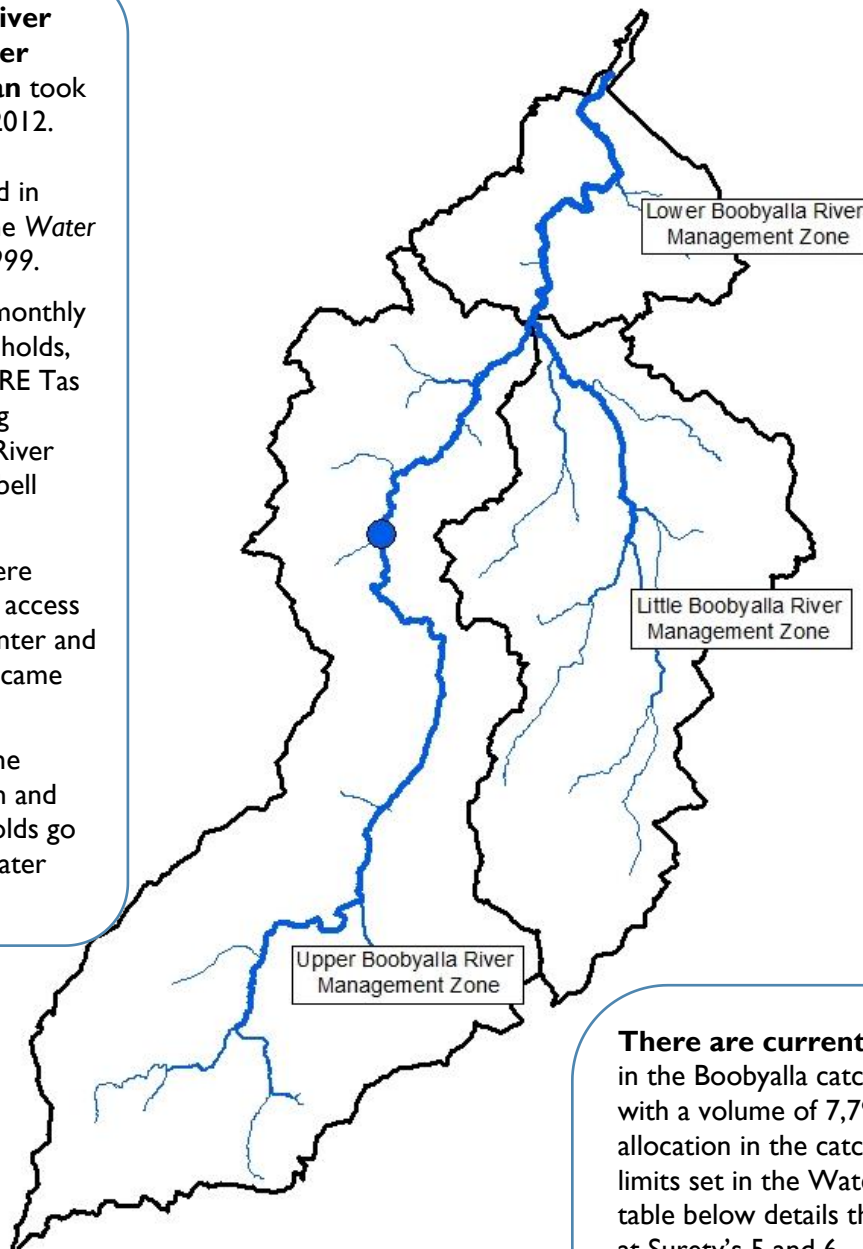
# BOOBYALLA RIVER CATCHMENT ANNUAL REPORT 2022/23

**The Boobyalla River Catchment Water Management Plan** took effect in October 2012. The Plan is a legal document prepared in accordance with the *Water Management Act 1999*.

The Plan sets out monthly cease to take thresholds, measured at the NRE Tas stream flow gauging station: Boobyalla River upstream of Campbell Creek.

CTT thresholds were reviewed to assess access to water during winter and revised thresholds came into effect in 2017.

For full details of the current Water Plan and the revised thresholds go to the NRE Tas Water website.



**The Boobyalla River catchment** is located in the north-east of Tasmania and flows north approximately 43 km from Mount Horror to Ringarooma Bay. The catchment covers a total area of 298 km<sup>2</sup>.

The river system is unregulated with a largely natural flow regime that shows a strong seasonal flow pattern (wetter in winter and drier in summer). The average annual water yield is 23,630 ML/year based on the historical flow record at the Boobyalla River upstream Campbell Creek stream flow gauge.

**There are currently 89 water allocations** in the Boobyalla catchment under Surety's 5-6 with a volume of 7,799 ML. The volume of allocation in the catchment has reached the limits set in the Water Management Plan. The table below details the consumptive allocations at Surety's 5 and 6

**CONSUMPTIVE WATER ALLOCATION**

Surety Level	Summer Vol. (ML)	Winter Vol. (ML)	Overall Vol. (ML)
S 5	657	5,060	5,717
S 6	0	2,082	2,082
Total	657	7,142	7,799

## CATCHMENT LAND USE

Approximately 19% of the catchment is under production native forests and plantation forestry. A further 28% is used for agricultural purposes with the remaining area supporting a diversity of land uses including mining, and conservation land. No townships sit within the Boobyalla catchment with the town of Winnaleah just to the south of the surface water catchment boundary. The land use layer was last updated in 2019.

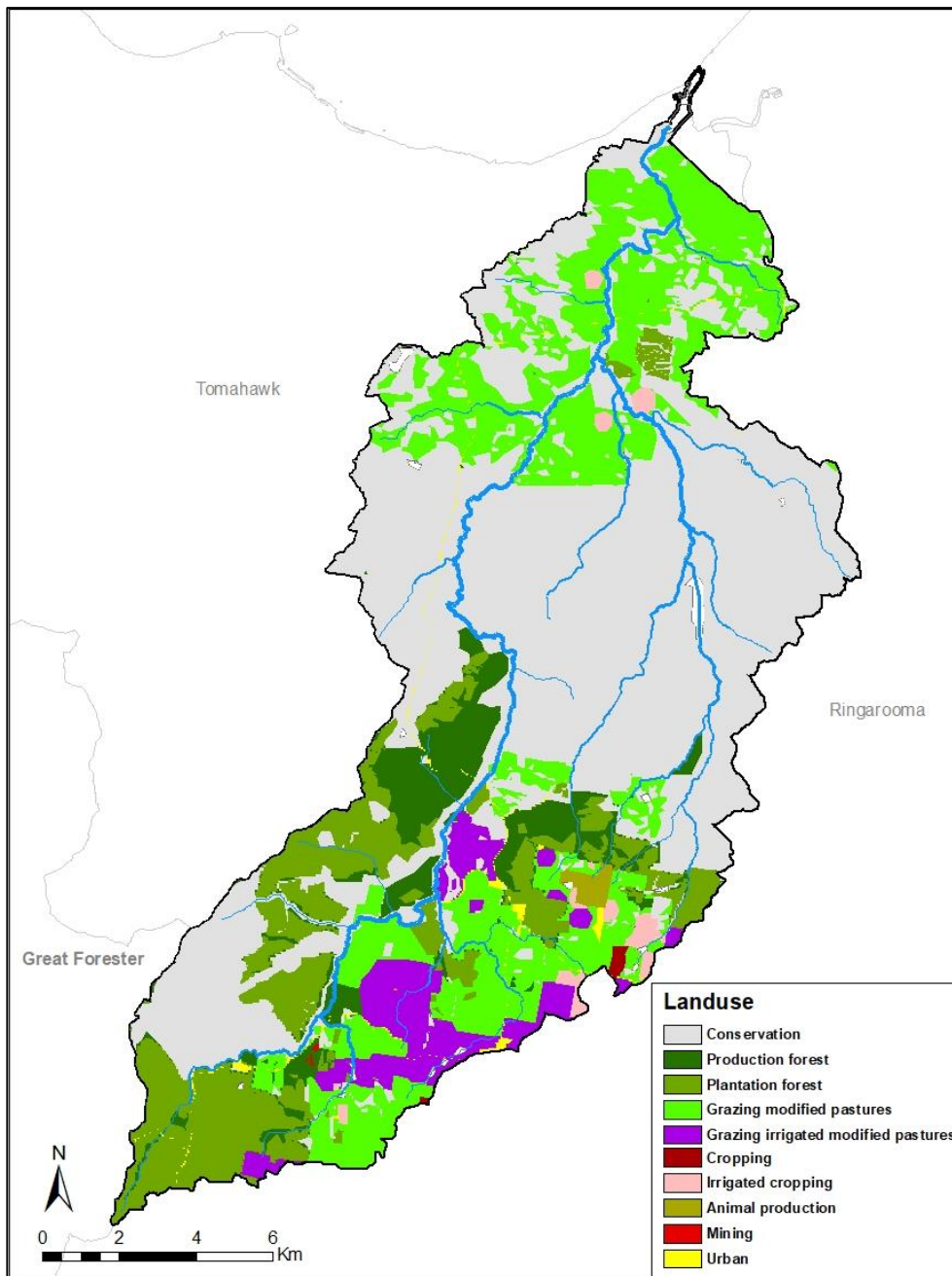


Figure 1. Boobyalla River catchment land use

## RIVER HEALTH

Waterbugs are used globally to monitor the health of rivers as they are sensitive to pressures on river systems (e.g. poor water quality, sedimentation). River health monitoring by NRE Tas focuses on the composition of waterbug (macroinvertebrate) communities on the riverbed; however, other values that are not monitored can also contribute to the health of rivers (e.g. water plants, fish, riverbank vegetation).

Since 2019, river health has been monitored by NRE Tas in the Boobyalla River at Banca Road in the mid-reaches of the river downstream of Winnaleah. The results of the monitoring (shown in Figure 2) indicate that the mid-reaches of the Boobyalla River are in moderate to good condition, with river health scores (O/E scores) equating to band B (significantly impaired) and band A (equivalent to reference condition) being recorded at this site.

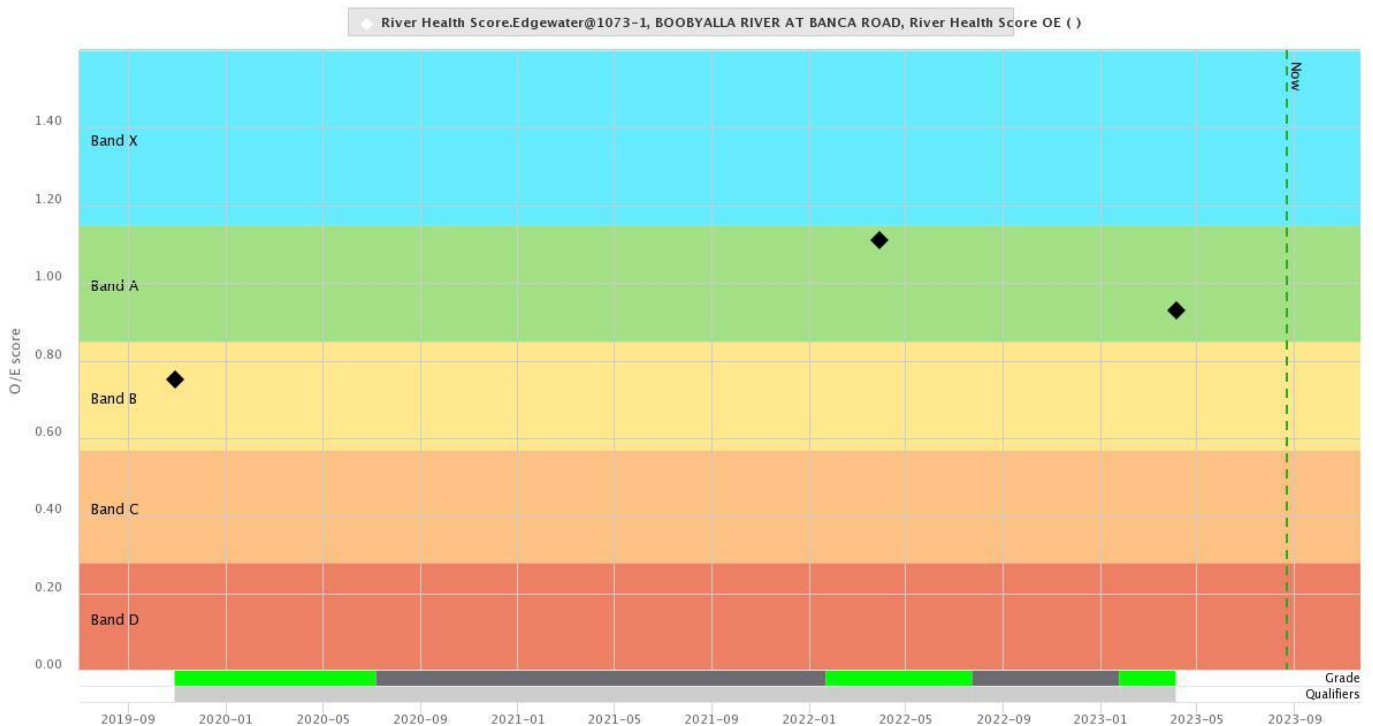


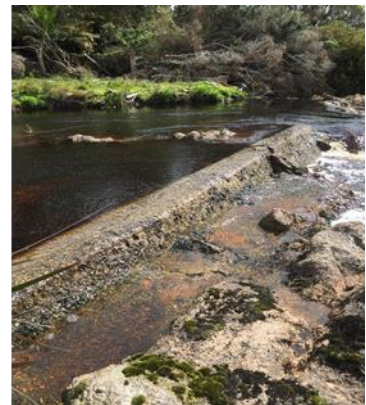
Figure 2. River Health Observed/Expected score at the Boobyalla River at Banca Road site, whole of record.

## HYDROLOGY SUMMARY

The following pages show plots of long-term streamflow (full period of available record), short term flow and rainfall (last 5 water years), and last year's flow, rainfall and restriction data, split into winter (May 2022 – November 2022) and summer (December 2022 – April 2023) seasons.

Over the period from May 2022 to April 2023:

- Annual yield was well above average with the second highest flow volume on record.
- Annual rainfall at the Bureau's (BoM) Tomahawk at Carisbrooke gauge was average, however the upstream BoM gauge, Tomahawk at Wyambi, recorded 35% more rainfall over the same period.
- The third largest flood event across the whole period of available record occurred on the 14<sup>th</sup> October 2022.
- The climate drivers included La Nina and negative IOD conditions during 2022, which eased in early 2023 and shifted to an El Nino watch by March 2023.
- There were no water restrictions in the catchment, with flows remaining well above the restriction levels throughout the year.



For further information contact your local **Regional Water Management Officer** at the **Department of Natural Resources and Environment Tasmania:**

Phone: 1300 368 550

Email: [Water.Operations@nre.tas.gov.au](mailto:Water.Operations@nre.tas.gov.au)

[nre.tas.gov.au/water](http://nre.tas.gov.au/water)

October 2023

Full flow record, 1981 - 2023

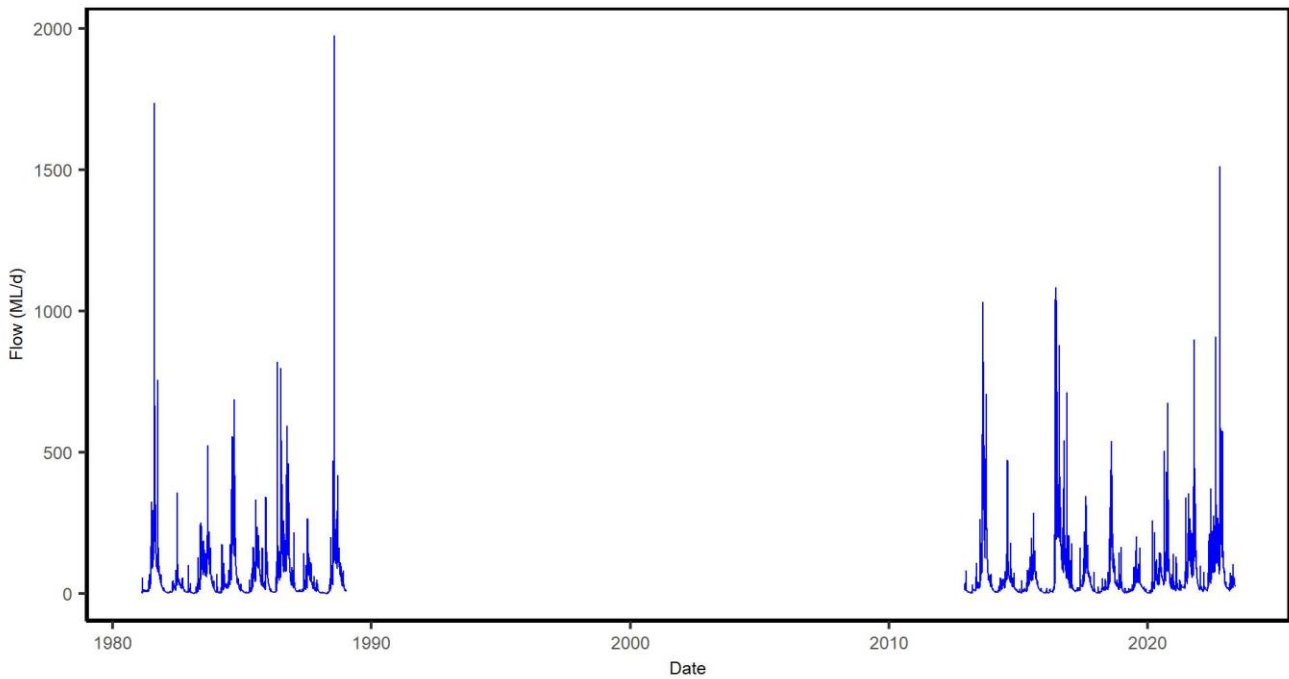


Figure 3. Mean daily flow at the Boobyalla River upstream Campbell Creek streamflow gauging station, whole of record.

Full record of yields in water years 1981 - 2022

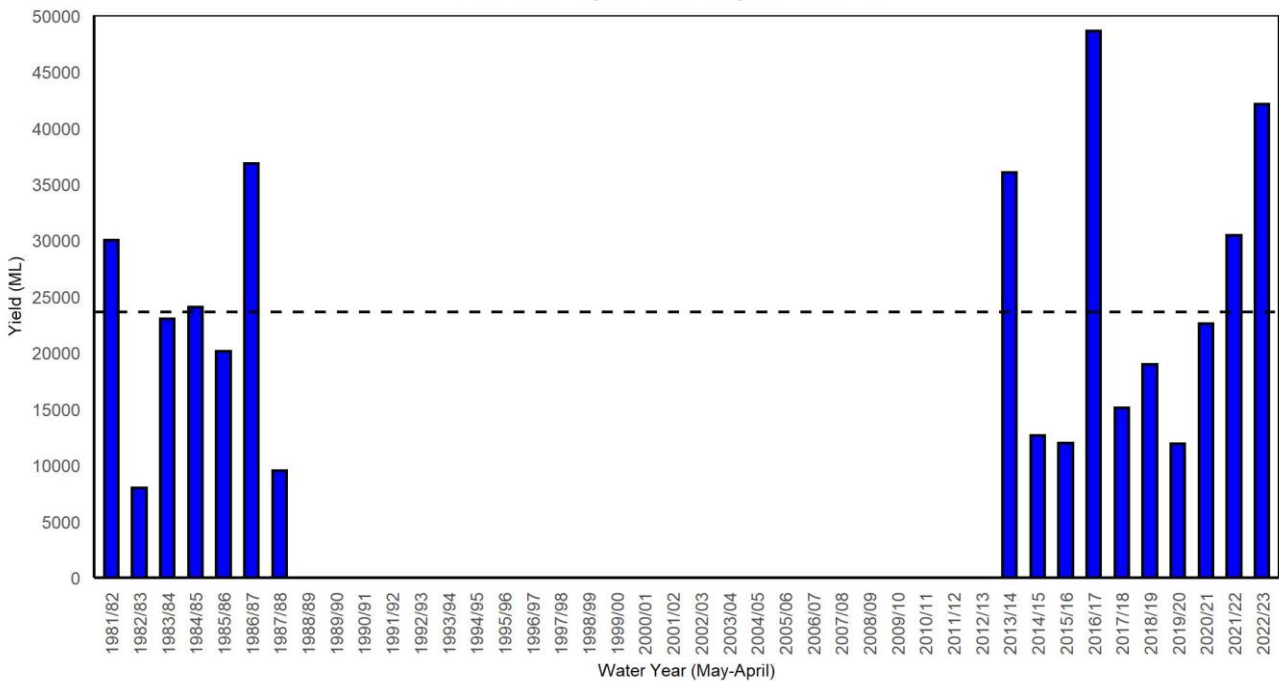
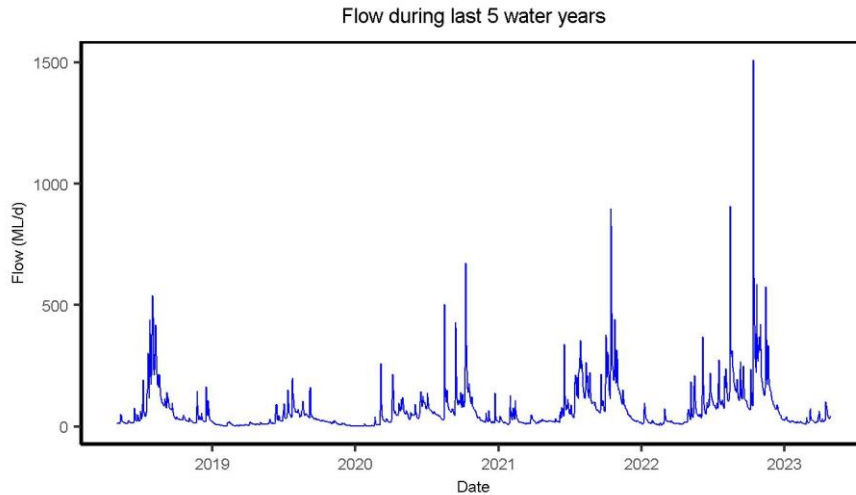
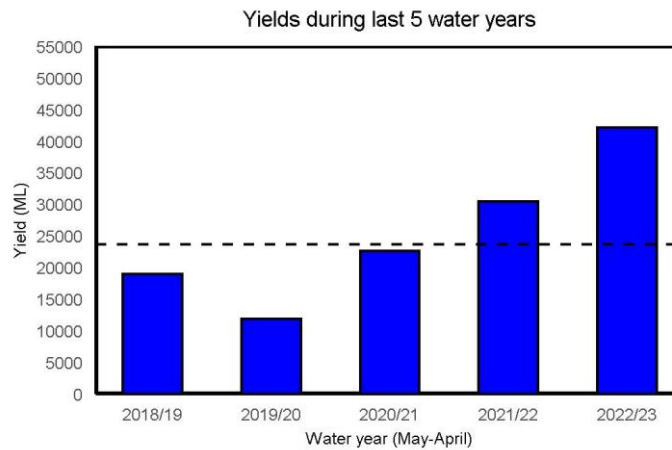


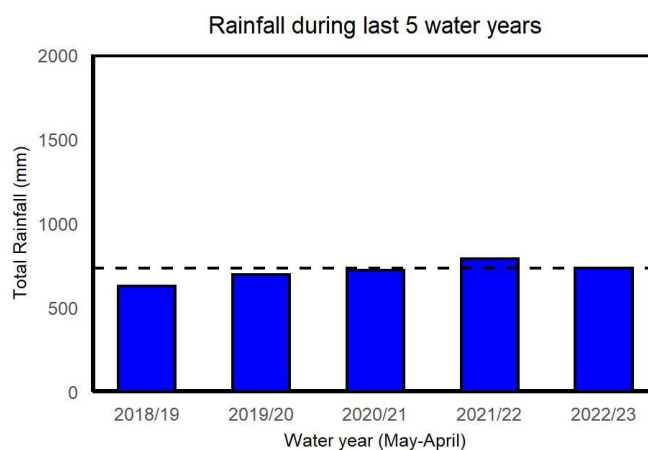
Figure 4. Yields in the Boobyalla River upstream Campbell Creek streamflow gauging station. Water years with <95% of the daily flow record available are excluded. The long-term mean yield is shown as the dashed horizontal black line (23,630 ML).



**Figure 5.** Mean daily flow in the Boobyalla River upstream Campbell Creek streamflow gauging station for the last five years.

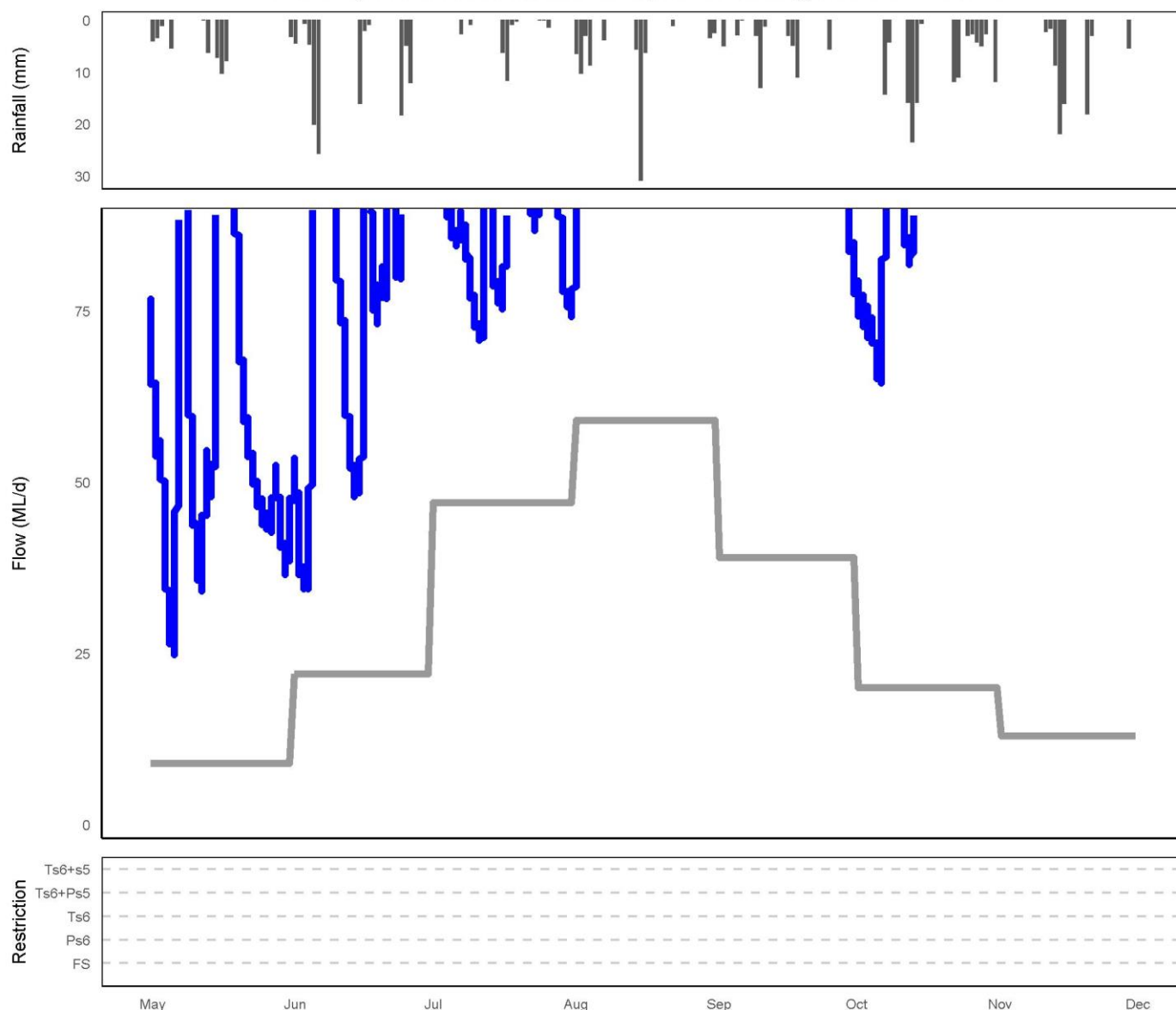


**Figure 6.** Yields in the Boobyalla River upstream Campbell Creek streamflow gauging station for the last five years. The long-term mean yield is shown as the dashed horizontal black line (23,630 ML).



**Figure 7.** Total rainfall at the Tomahawk (Carisbrooke) BoM weather station during the last five water years. The long-term (1965-2023) mean total rainfall (731 mm) is shown as the black horizontal dashed line.

Rainfall, low flows and restriction periods during winter 2022/2023



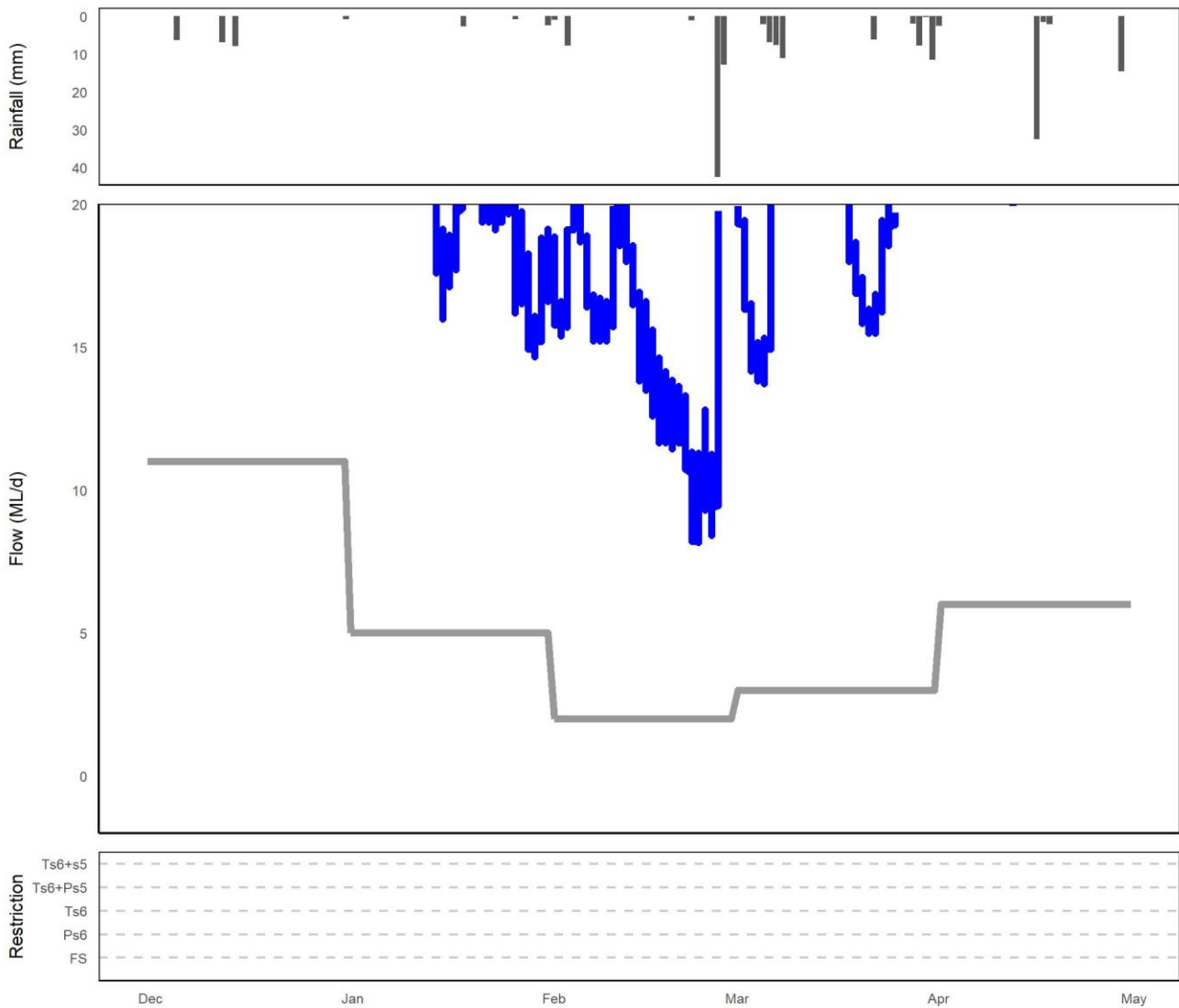
**Figure 8.** Summary of rainfall, low flows and restrictions in the Boobyalla River catchment during winter (May-November) 2022.  
 Top plot: daily rainfall (Tomahawk (Carisbrooke) BoM site).  
 Middle plot: instantaneous flow (<80 ML/d) Boobyalla River upstream Campbell Creek station (compliance flow site).  
 Bottom plot: days when restrictions were in place.

**NOTE:** Refer to the last page for a 'legend' and description on how to interpret these plots

**Table 1.** Restriction levels and total days at each level for the winter period (214 days: May - November 2022).

Restriction Type	Days at restriction level in 2021/22	Days at restriction level in 2022/23
Total Surety 6 + Total Surety 5	<b>12</b>	<b>0</b>

### Rainfall, low flows and restriction periods during summer 2022/2023



**Figure 9.** Summary of rainfall, low flows and restrictions in the Boobyalla River catchment during summer 2022/23 (Dec-April).  
 Top plot: daily rainfall (Tomahawk (Carisbrooke) BoM site).  
 Middle plot: instantaneous flow (<20 ML/d) Boobyalla River upstream Campbell Creek station (compliance flow site).  
 Bottom plot: days when restrictions were in place.

**NOTE:** Refer to the last page for a 'legend' and description on how to interpret these plots

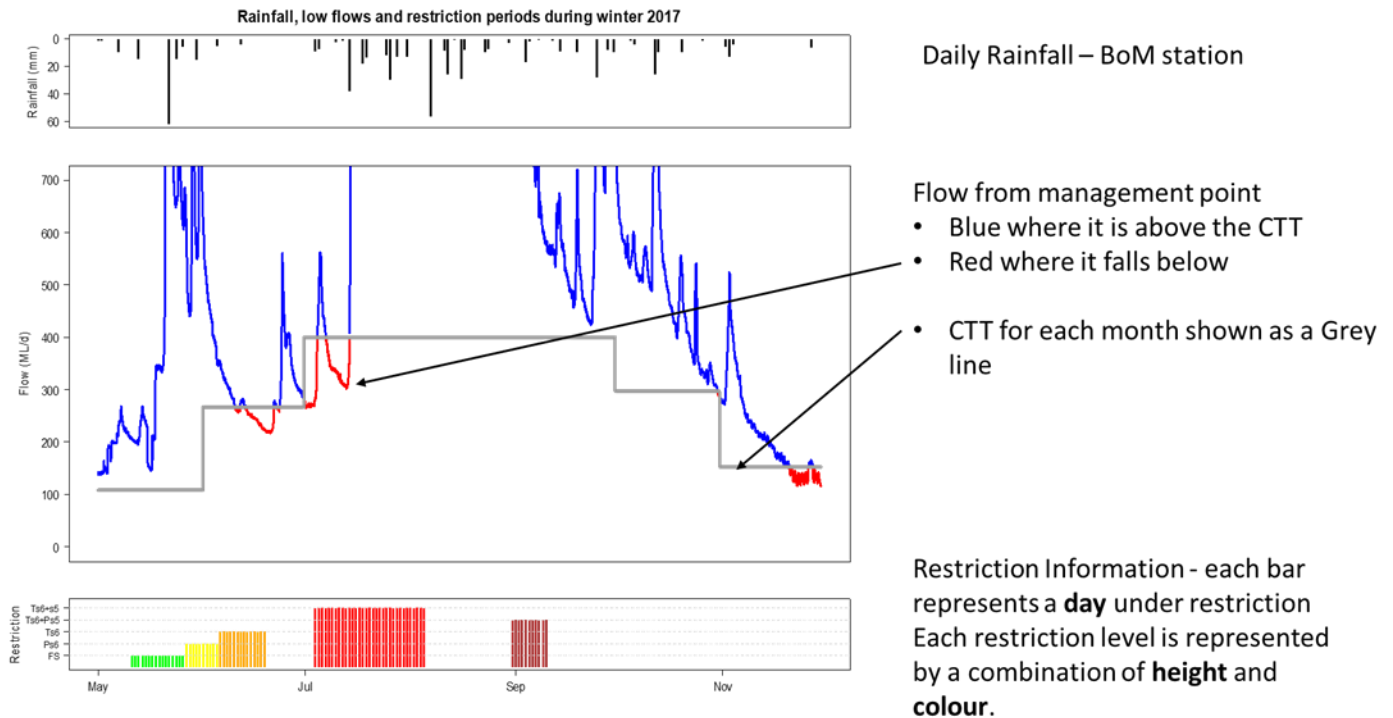
**Table 2.** Restriction levels and total days at each level for the summer period (151 days: Dec 2022 – April 2023).

Restriction Type	Days at restriction level in 2021/22	Days at restriction level in 2022/23
Total Surety 6 + Total Surety 5	0	0

## EXAMPLE ONLY

# Rainfall, flow and restriction plot legend

**NOTE:** This is a hypothetical example to assist in interpreting the plots in the main body of this document.



### Flow Restriction definitions:

FS = flow sharing (only some catchments), shown in GREEN

Ps6 = partial surety 6 ban, shown in YELLOW

Ts6 = total surety 6 ban, shown in ORANGE

Ts6+Ps5 = total surety 6 and partial surety 5 ban, shown in BROWN

Ts6+s5 = total surety 5 and 6 ban, shown in RED

## EXAMPLE ONLY

For further information contact your local Regional Water Management Officer  
at the Department of Natural Resources and Environment Tasmania:

Phone: 1300 368 550

Email: [Water.Operations@nre.tas.gov.au](mailto:Water.Operations@nre.tas.gov.au)

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October 2023