

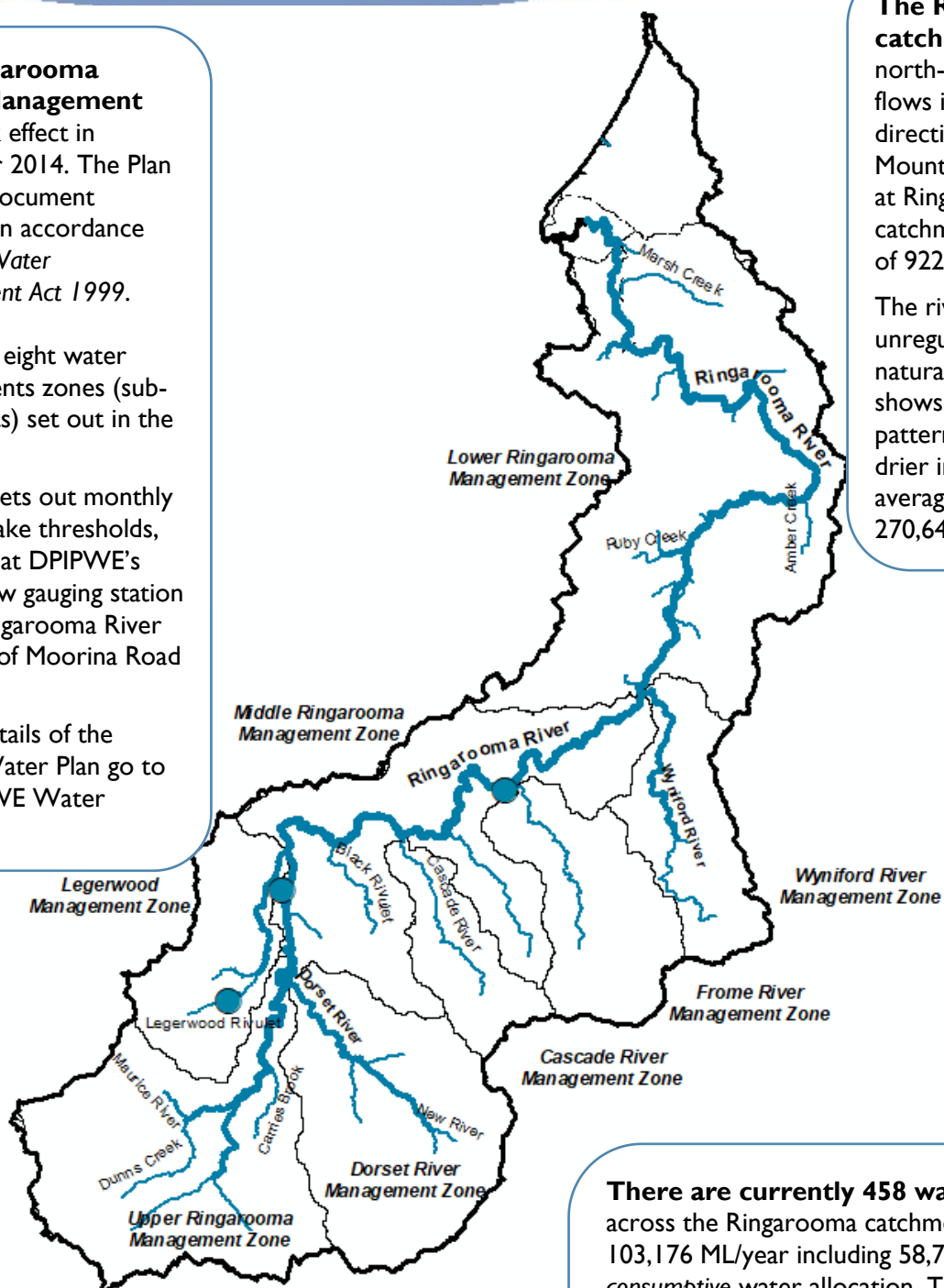
RINGAROOMA RIVER CATCHMENT ANNUAL REPORT 2020/21

The Ringarooma Water Management Plan took effect in December 2014. The Plan is a legal document prepared in accordance with the *Water Management Act 1999*.

There are eight water management zones (sub-catchments) set out in the Plan.

The Plan sets out monthly cease to take thresholds, measured at DPIPWE's stream flow gauging station on the Ringarooma River upstream of Moorina Road bridge.

For full details of the current Water Plan go to the DPIPWE Water website.



The Ringarooma River catchment is located in the north-east of Tasmania and flows in a north-easterly direction from Ben Nevis and Mount Maurice to Bass Strait at Ringarooma Bay. The catchment covers a total area of 922 km².

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 270,643 ML/year.

There are currently **458 water allocations** across the Ringarooma catchment with a volume of 103,176 ML/year including 58,716 ML/year of *non-consumptive* water allocation. The table below details the consumptive allocations at Surety's 5 and 6..

CONSUMPTIVE WATER ALLOCATION

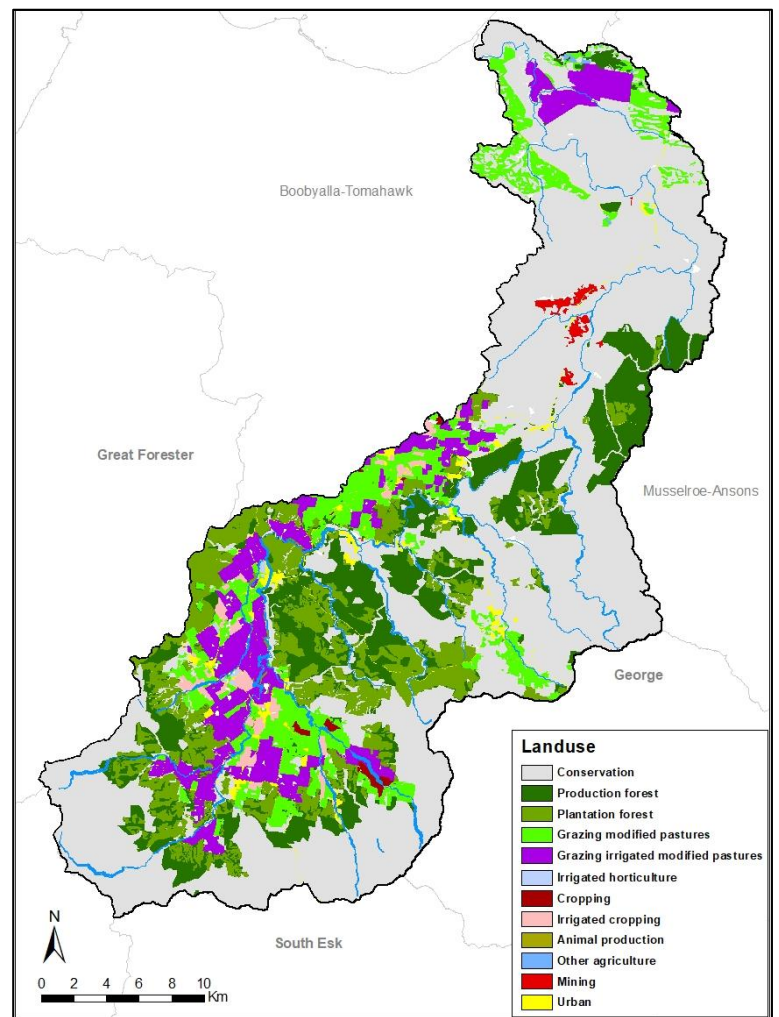
Surety Level	Summer Vol.(ML)	Winter Vol. (ML)	Overall Vol. (ML)
S 5	8072	32383	40455
S 6	833	2806	3639
Total	8905	35189	44094

CATCHMENT LAND USE

Approximately 26% of the catchment is under production native forests and plantation forestry. A further 18% is used for agricultural purposes with the remaining area supporting a diversity of land uses including mining, urban areas and conservation land. The catchment includes the townships of Branxholm, Derby, Gladstone and Ringarooma.

RIVER HEALTH

DPIPWE have 3 long-term river health monitoring sites in the catchment. These sites are on the Dorset River (at Ruby Flats), the upper Ringarooma River (at Trenah) and the middle Ringarooma River (at Branxholm). Long-term monitoring indicates that the condition of the Dorset River at Ruby Flats Road has varied over time but has typically been in healthy condition and is in reasonable condition currently. The upper Ringarooma River at Trenah is in excellent condition currently, whereas the condition of the Ringarooma River at Branxholm has a significant declining trend (particularly between 2006 and 2018), and is currently in poor condition. Due to the COVID-19 situation, no field work was undertaken in the 2020/21 year.



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 years flow, rainfall and restriction data, split into winter (May 2020 – November 2020) and summer (December 2020 – April 2021) seasons.



For further information contact your local Regional Water Management Officer at the Department of Primary Industries, Parks, Water and Environment:
Phone: 1300 368 550
Email: Water.Operations@dPIPWE.tas.gov.au
dPIPWE.tas.gov.au/water

Full flow record, 1977 - 2021

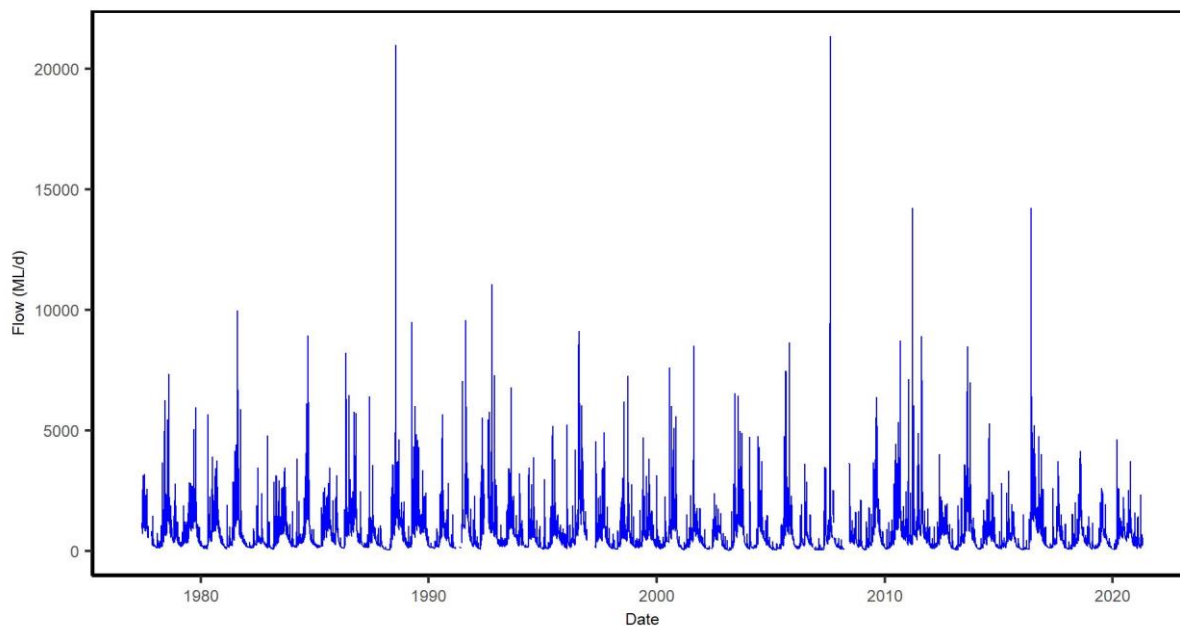


Figure 1. Mean daily flow in the Ringarooma River at the Moorina streamflow gauging station, whole of record.

Full record of yields in water years 1977 - 2020

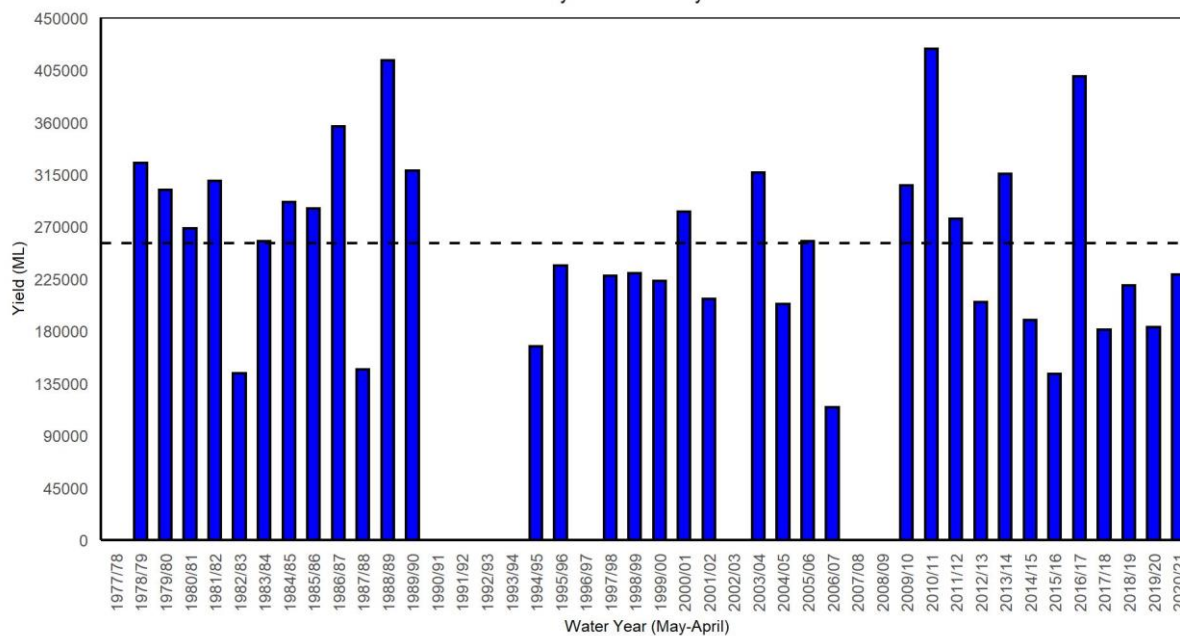


Figure 2. Yields in the Ringarooma River at the Moorina streamflow gauging station. Water years with <95% of the daily flow record available are excluded. The long-term mean yield is shown as the dashed horizontal black line (255,700 ML).

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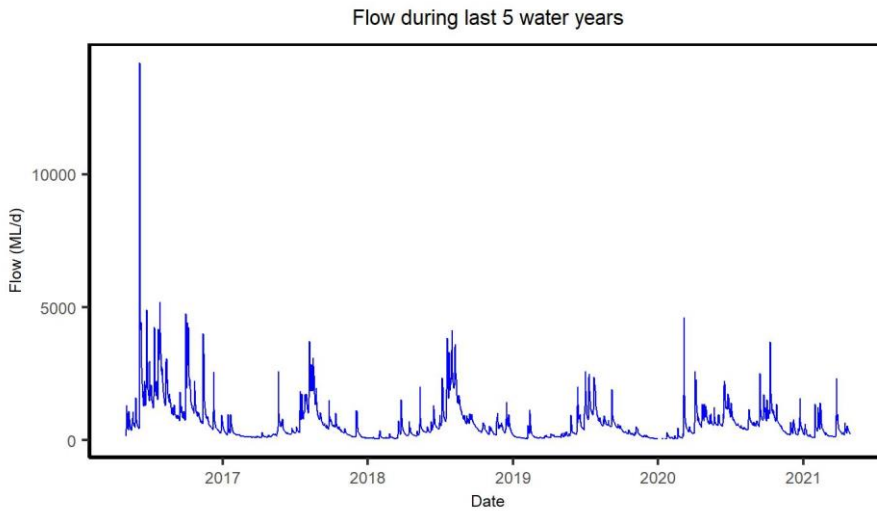


Figure 3. Mean daily flow in the Ringarooma River at the Moorina streamflow gauging station, last five years.

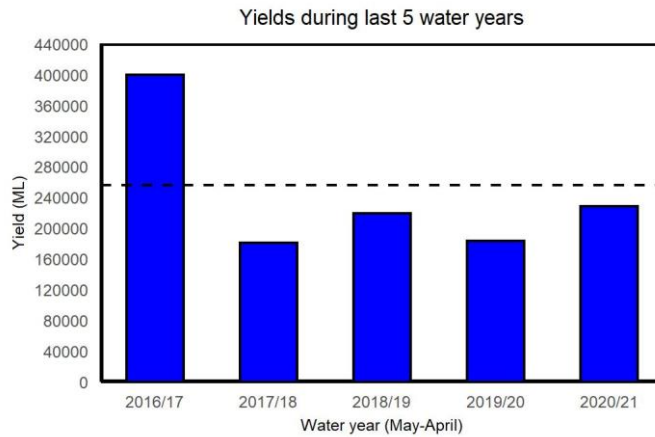


Figure 4. Yields in the Ringarooma River at the Moorina streamflow gauging station for the last five years. The long-term mean yield is shown as the dashed horizontal black line (255,700 ML).

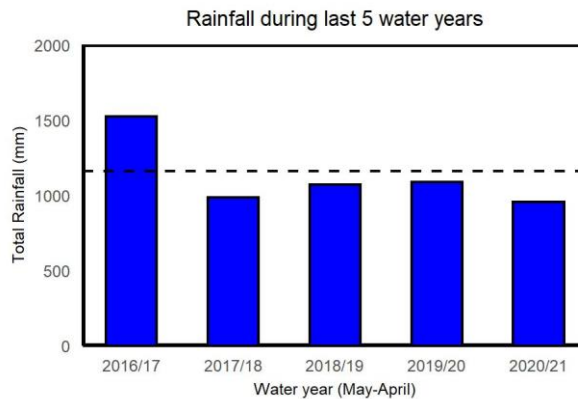


Figure 5. Total rainfall at the Ringarooma BoM weather station during the last five water years. The long-term (1899-2020) mean total rainfall (1,159 mm) is shown as the black horizontal dashed line.

Rainfall, low flows and restriction periods during winter 2020/2021

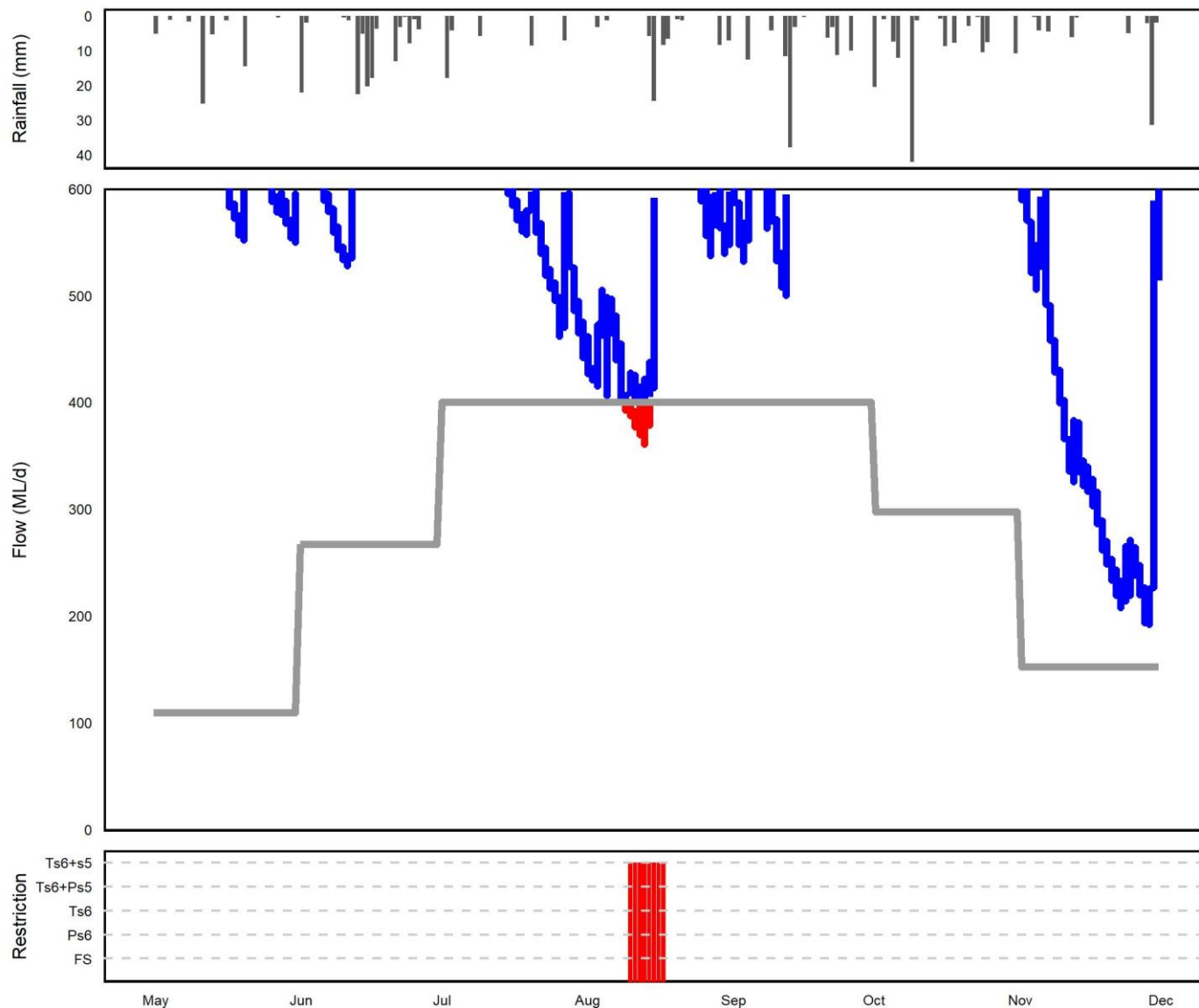


Figure 6. Summary of rainfall, low flows and restrictions in the Ringarooma catchment during winter (May-November) 2020.
 Top plot: total daily rainfall (Ringarooma BoM site).
 Middle plot: instantaneous flow (<600 ML) Ringarooma River at the Moorina station (compliance flow site).
 Bottom plot: days 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 (May - November 2020).

Restriction Type	Days at restriction level in 2019/20	Days at restriction level in 2020/21
Flow Sharing		
Partial Surety 6		
Total Surety 6		
Total Surety 6 + Partial Surety 5		
Total Surety 6 + Total Surety 5	20	8

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Rainfall, low flows and restriction periods during summer 2020/2021

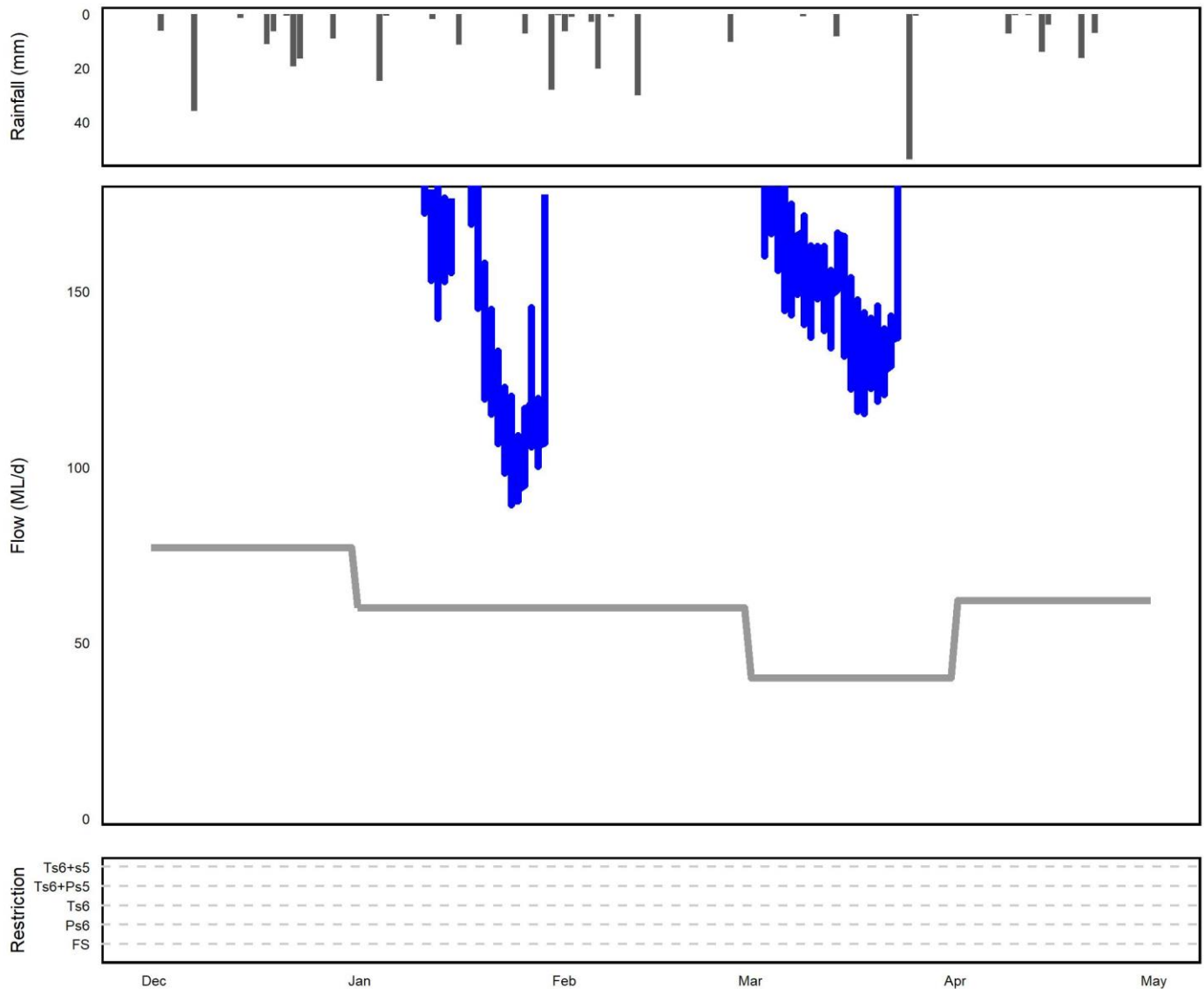


Figure 7. Summary of rainfall, low flows and restrictions in the Ringarooma catchment during summer 2020/21 (Dec-April).

Top plot: total daily rainfall (Ringarooma BoM site).

Middle plot: instantaneous flow (<180 ML) Ringarooma River at the Moorina 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

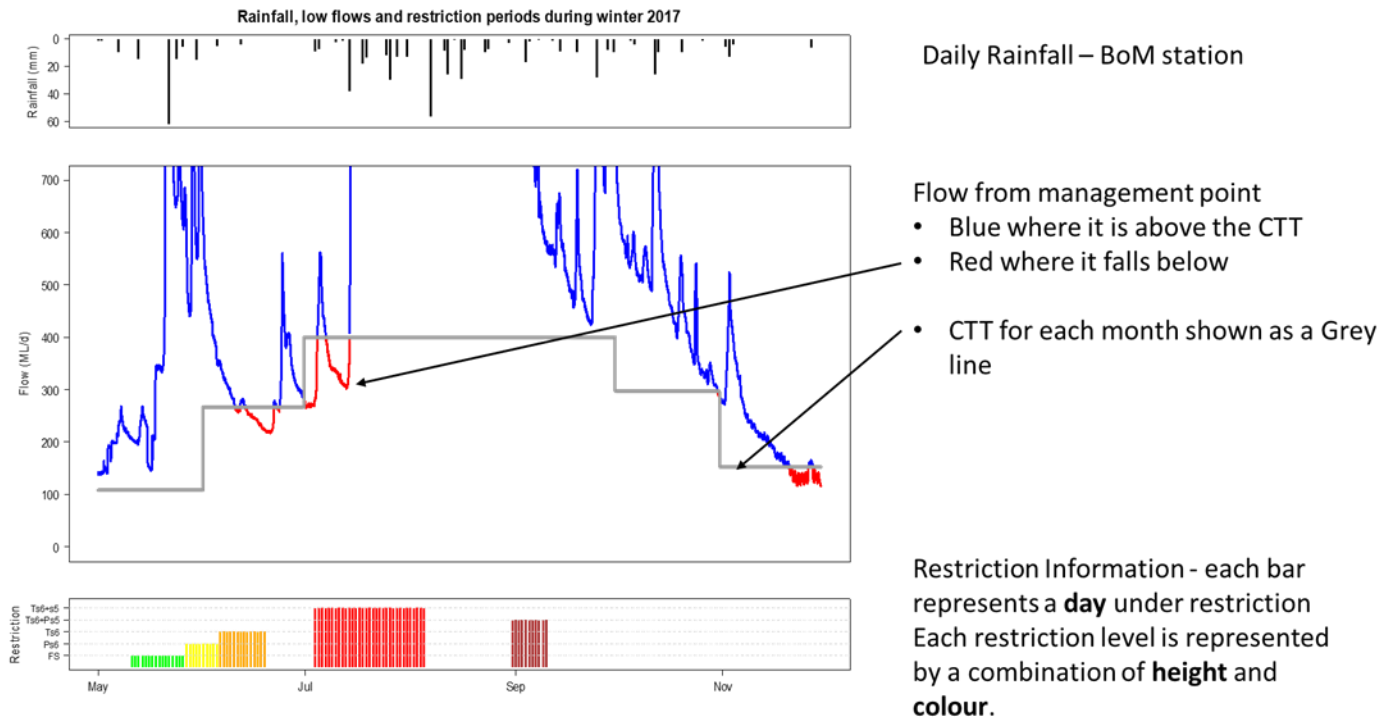
Table 2. Restriction levels and total days at each level for the summer period (Dec 2020 – April 2021).

Restriction Type	Days at restriction level in 2019/20	Days at restriction level in 2020/21
Flow Sharing	16	
Partial Surety 6		
Total Surety 6	8	
Total Surety 6 + Partial Surety 5	8	
Total Surety 6 + Total Surety 5		

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

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