Department of Primary Industries and Regional Development
GOVERNMENT OF WESTERN AUSTRALIA

MOOLA BULLA STATION - Remotely Sensed Information for June 2024: Vegetation, Ground Cover and Rainfall

Introduction

This Pastoral Remote Sensing Report is a summary of information derived from the Pastoral Remote Sensing application. It provides information on: normalised difference vegetation index (NDVI), a measure of greenness; total green biomass (TGB); total ground cover (TGC); total dry matter (TDM) and rainfall to date.

Vegetation estimates are based on general assumptions derived from satellite data and are not accurate enough to use for setting exact stocking rates on your property. Use your own observations or measurements to calibrate the information.

The charts in this report give a good indication of trends and value compared to other years, which provides a guide for pasture and grazing management.

The online Pastoral Remote Sensing application has maps and detail at the land system (paddock) level. A good internet connection with adequate bandwidth is required to use the application at prs.dpird.wa.gov.au.

Current Situation Summary

Vegetation and rainfall traffic light rating and percentile dashboard

	NDVI	TGB	TGC	TDM	Rainfall
Traffic Rating and Percentile[#]	89.4	94.7	78.9	78.9	73.6

[#]The percentile figure is the percentage of years since 2004 that had values lower than the current year at the same time of the year. Green indicates the current value is in the highest 33% of all years, orange indicates the current value is in the middle 33% of all years and red is in the lowest 33% of all years.

Ground Cover Dashboard

	Green Vegetation	Dry Vegetation	Bare Ground	Total Vegetation
Percentage Cover	24	54	22	78

The above table shows the percentage of green vegetation, dry/dead vegetation, bare ground and the total vegetation cover. Red indicates the current value of total vegetation cover is less than 30%, green indicates the current value is greater than 50% and orange is in between.

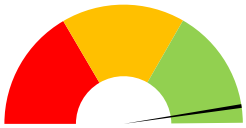
Summary	**Season to Date Percentile***			**Season to Date**
	10th (low)	**50th (median)**	**90th (high)**	
Total Dry Matter (kg/ha)	2123	2830	4242	3881
Rainfall (mm)	449	684	931	845

*A percentile is used to indicate where a value lies within the range of historically measured records.

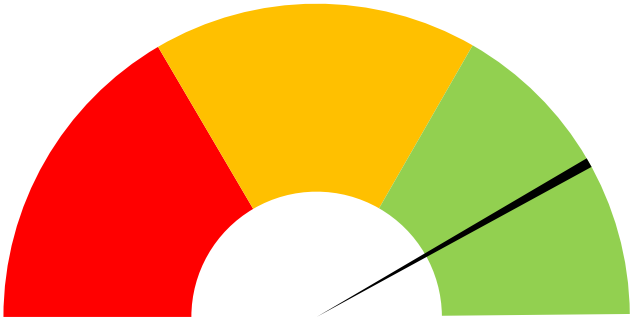
Dashboard

Normalised Difference Vegetation Index

Estimated Total Green Biomass



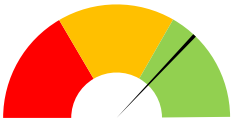
Overall



Estimated Total Ground Cover

Modelled Cumulative Total Dry Matter

Cumulative Estimated Rainfall

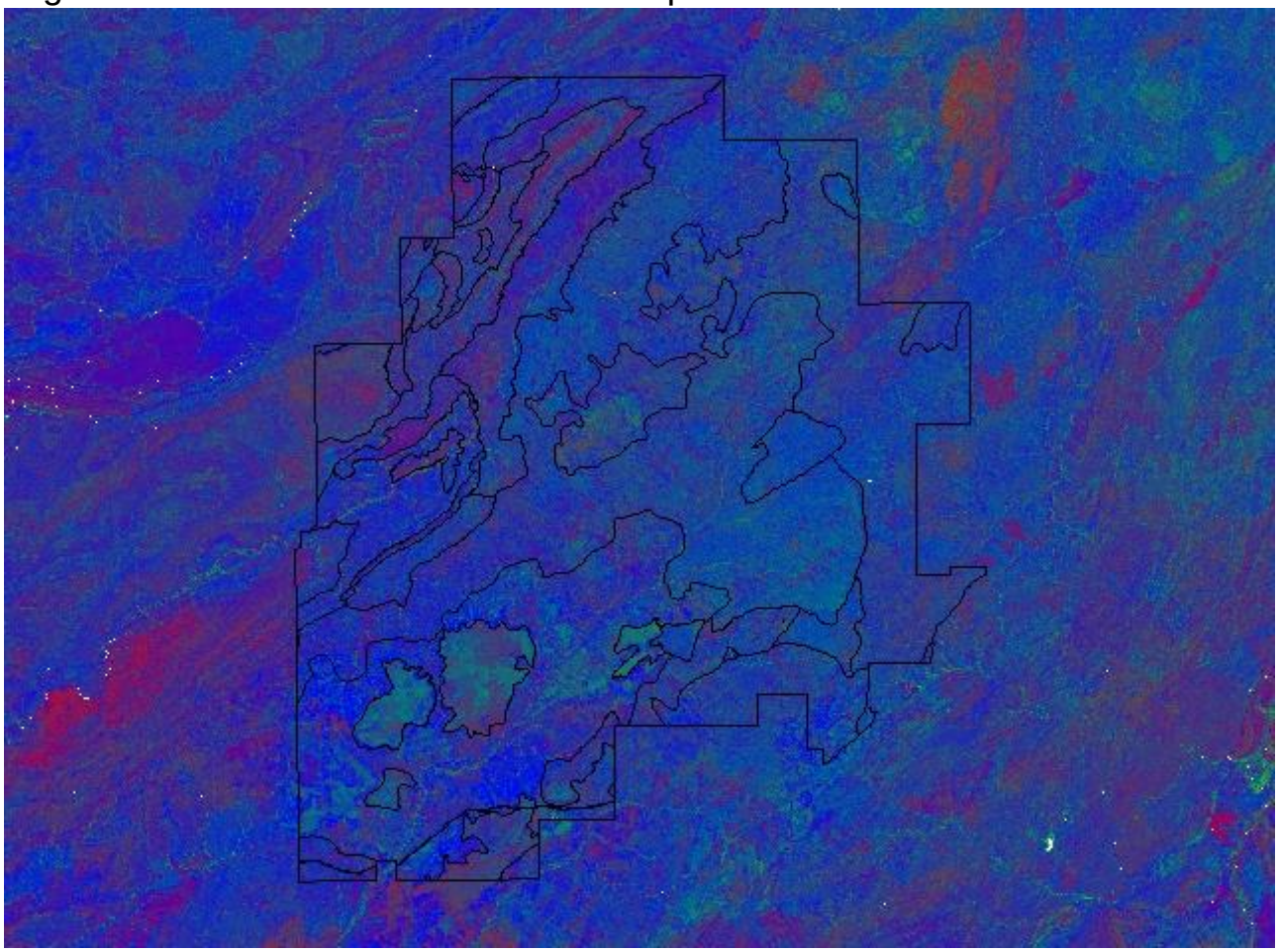


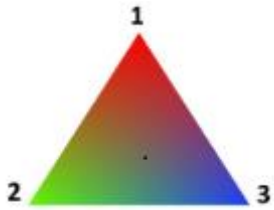
Images and Charts of season to date compared to previous seasons

Definitions

Normalised Difference Vegetation Index (NDVI): a satellite-derived index of greenness seen by the satellite. Essentially, NDVI is an indication of the amount of green vegetation.
Total Green Biomass (TGB): an estimation of how much green vegetation (in kg dry matter per hectare) is available.
Total Ground Cover (TGC): an estimate of the percentage of the ground that is covered in vegetation (both green and dry).
Total Dry Matter (TDM): an estimate of the gross primary production, or the total amount of vegetation (in kg dry matter per hectare) that was grown over the growing season.

Figure 1 Estimated Fractional Cover Map

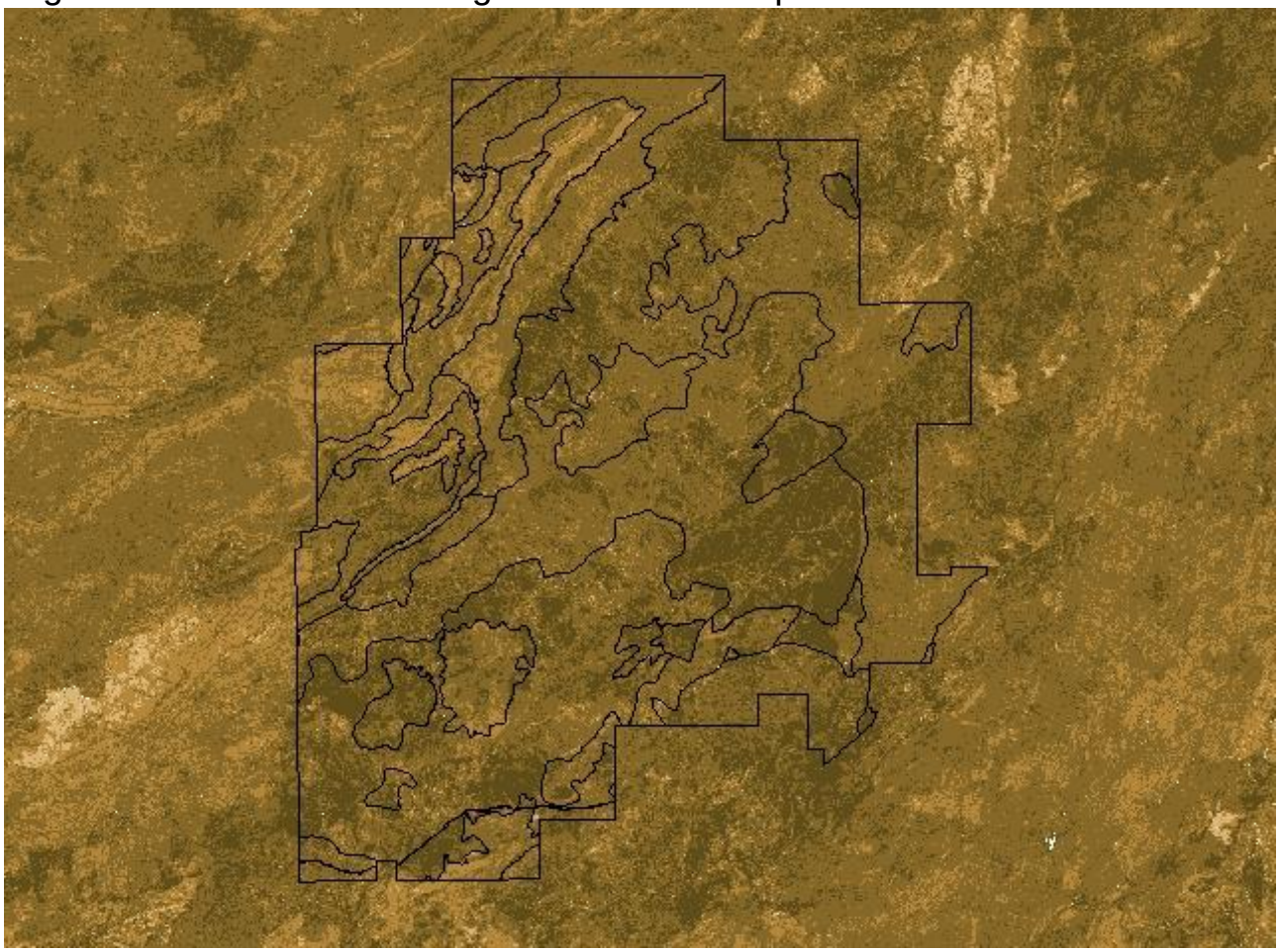




1 100% bare soil
2 100% green vegetation
3 100% dry vegetation

Regions in white were obscured by cloud or covered by water when the satellites were overhead.

Figure 2 Estimated Total Vegetation Cover Map



Vegetation Cover Levels	< 15%	15-30%	30-50%	50-70%	70-90%	> 90%
Percentage of Total Area	0.0	0.0	0.2	8.1	59.9	31.8

Regions in white were obscured by cloud or covered by water when the satellites were overhead.

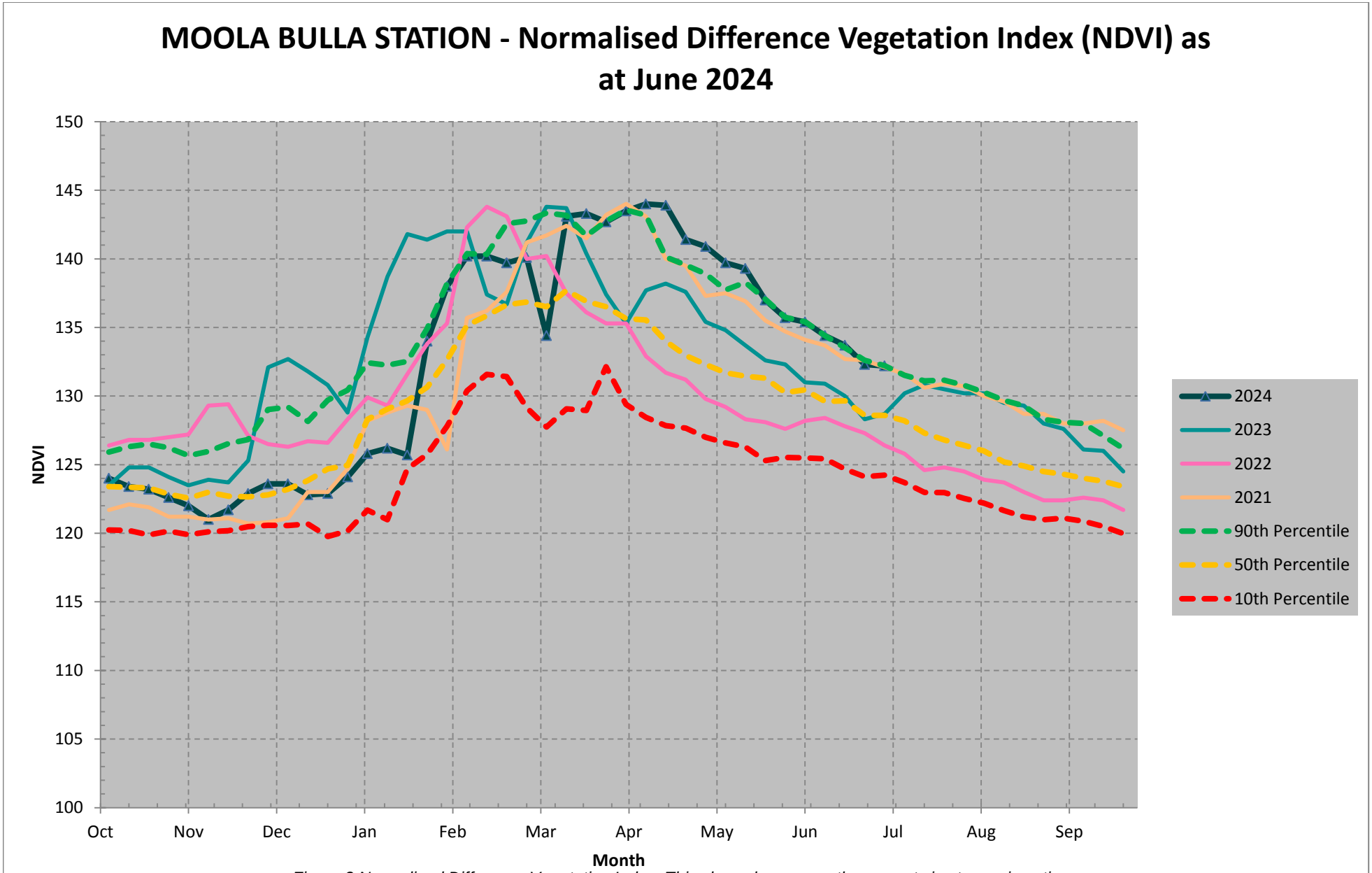


Figure 3 Normalised Difference Vegetation Index: This shows how green the property is at any given time.

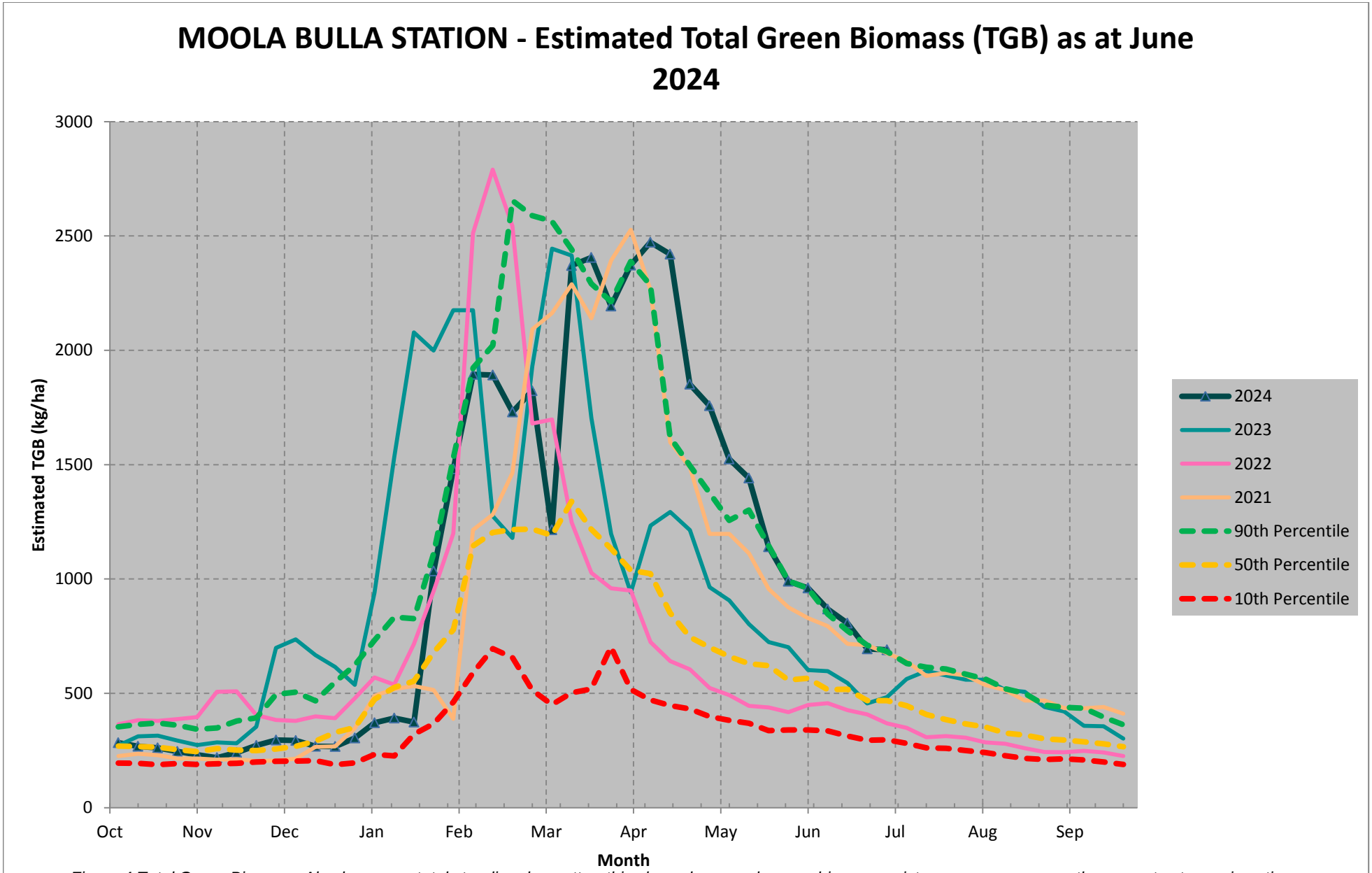


Figure 4 Total Green Biomass: Also known as total standing dry matter, this shows how much green biomass exists on average across the property at any given time.

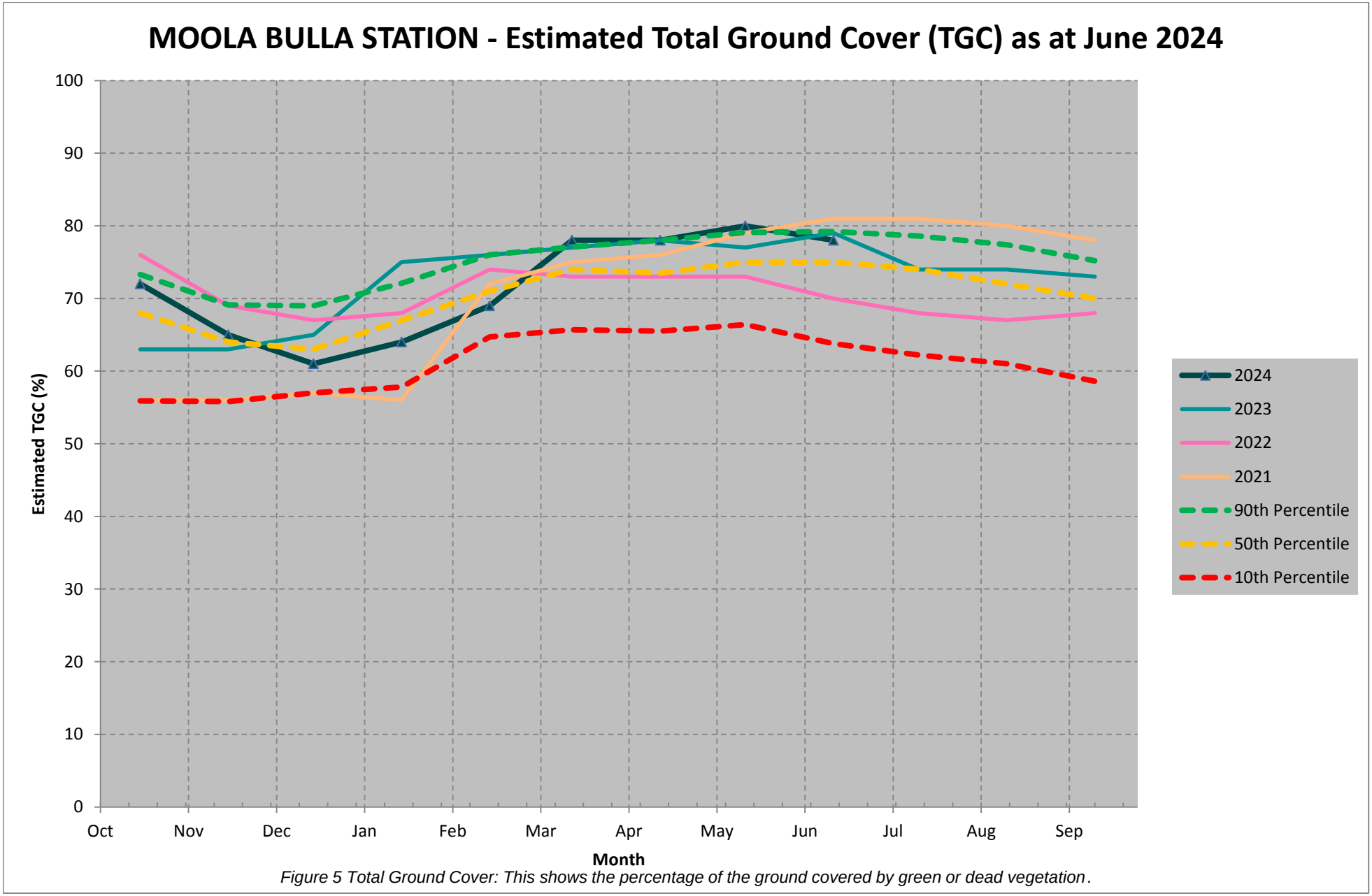


Figure 5 Total Ground Cover: This shows the percentage of the ground covered by green or dead vegetation.

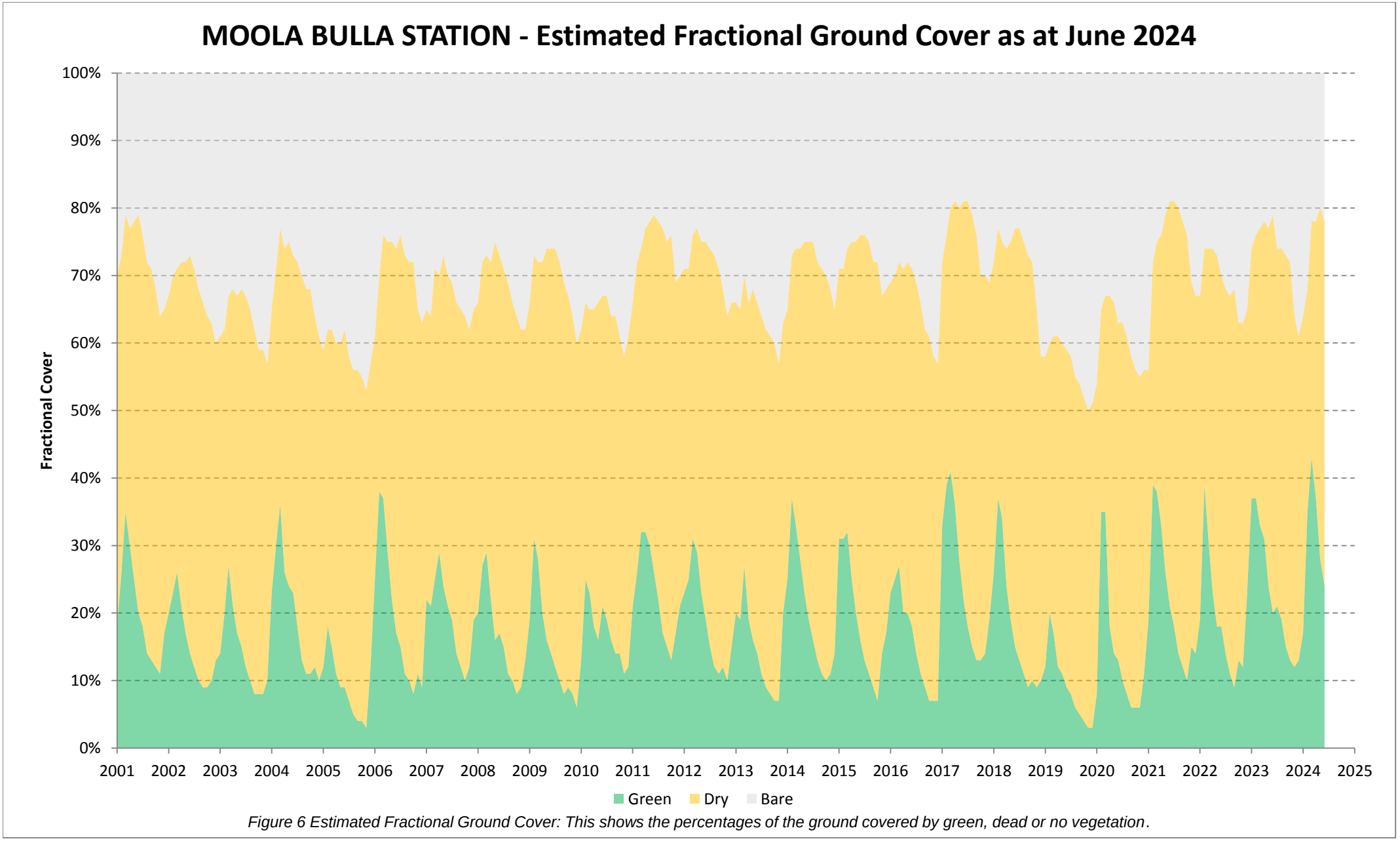


Figure 6 Estimated Fractional Ground Cover: This shows the percentages of the ground covered by green, dead or no vegetation.

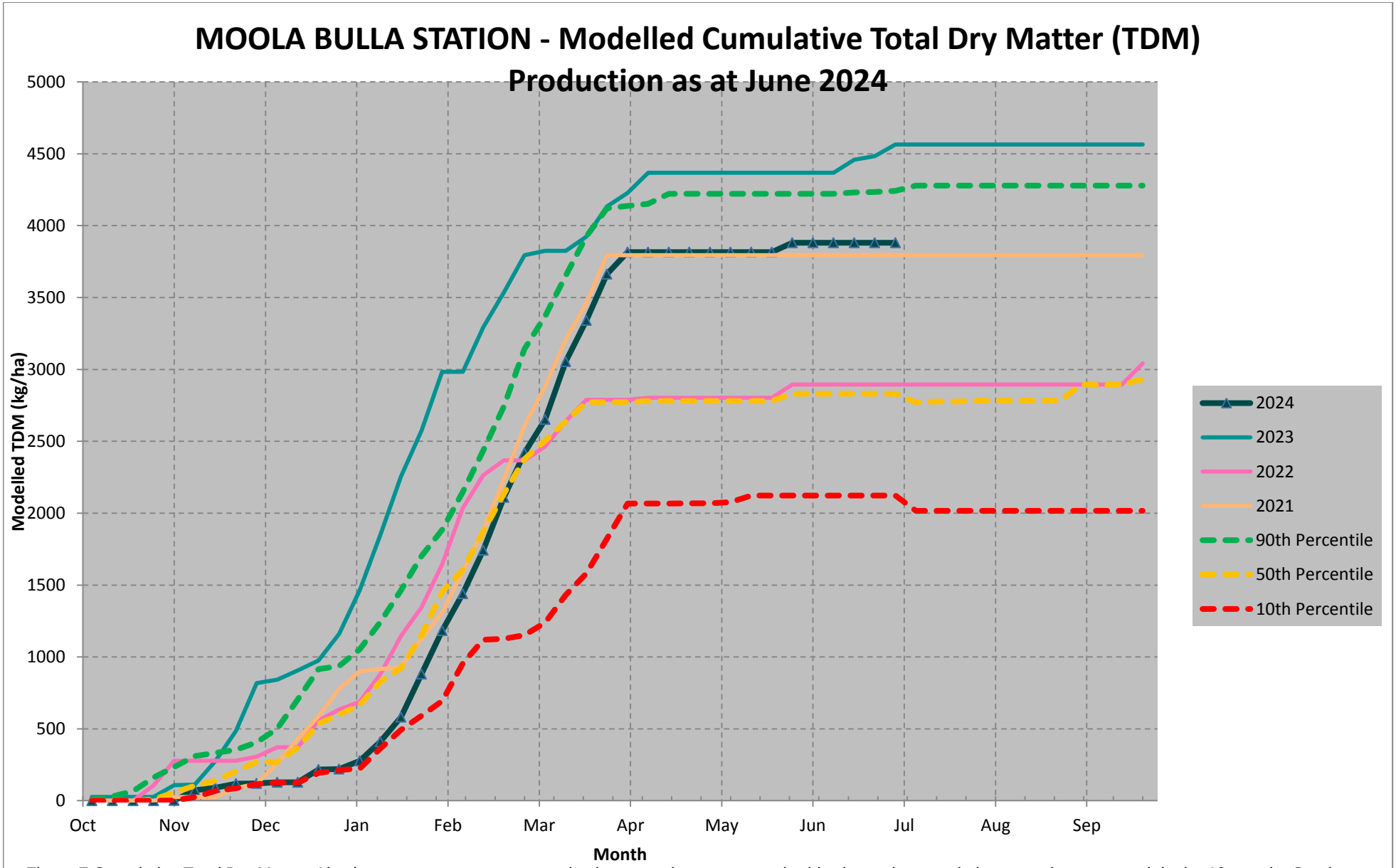


Figure 7 Cumulative Total Dry Matter: Also known as gross pasture production or total pasture growth, this shows the cumulative or total grass growth in the 12 months October to September.

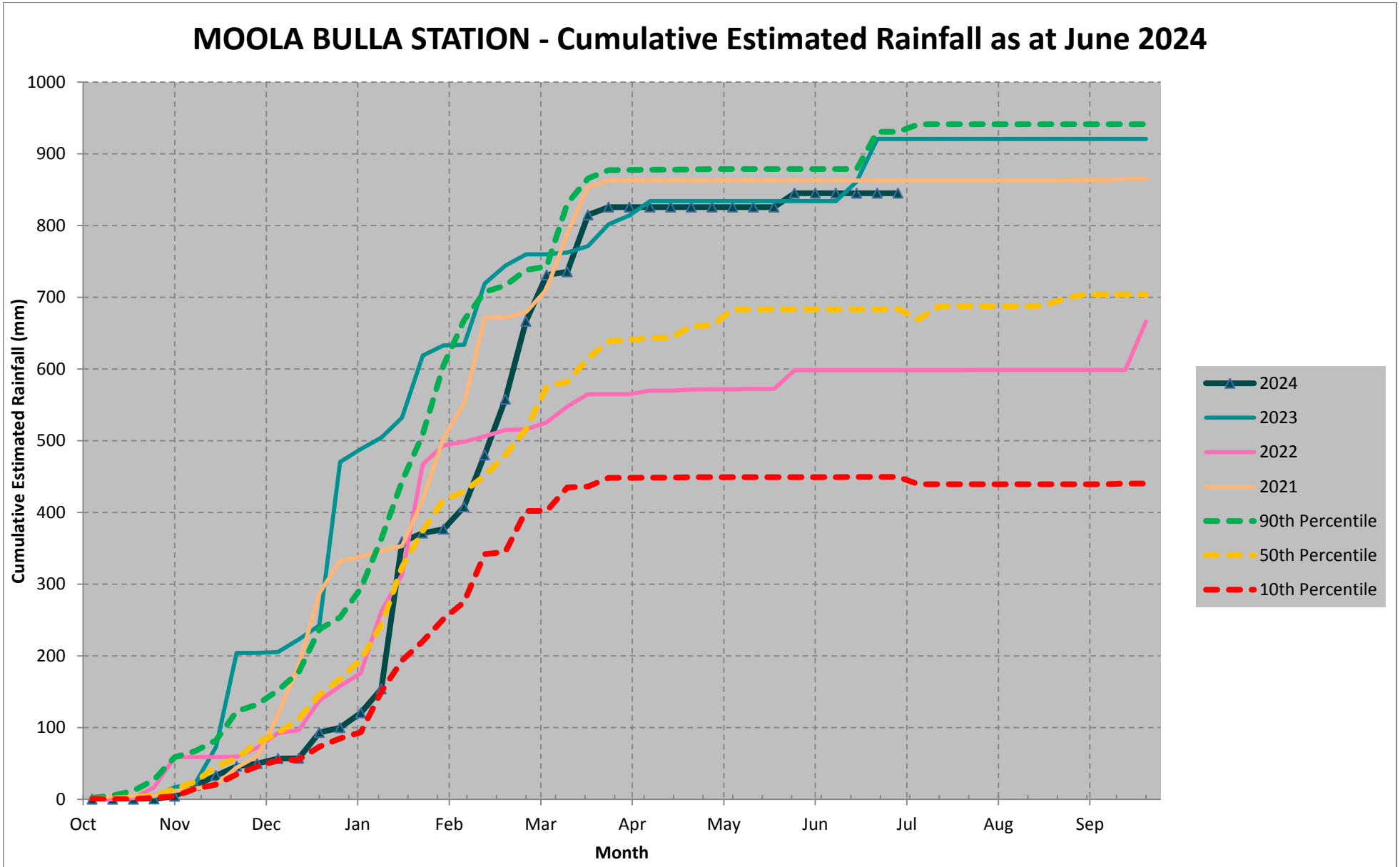


Figure 8 Cumulative Estimated Rainfall: This shows the total rainfall that fell in the 12 months October to September. The rainfall data is interpolated from the nearest rain gauge locations.

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Imagery/maps are provided to assist in the location of pastoral stations and land systems only. They do not provide real-time information and should not be relied on as such.