

# VIRGINIA 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](http://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 <sup>#</sup> |  100 |  100 |  100 |  63.1 |  84.2 |

<sup>#</sup>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<br>Vegetation | Dry<br>Vegetation | Bare<br>Ground | Total<br>Vegetation  |
|------------------|---------------------|-------------------|----------------|--|
| Percentage Cover | 45                  | 38                | 17             |  83 |

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<br>Date |
|-------------------------------------|----------------------------|------------------|----------------|-------------------|
|                                     | 10th<br>(low)              | 50th<br>(median) | 90th<br>(high) |                   |
| <b>Total Dry Matter<br/>(kg/ha)</b> | 64                         | 327              | 480            | 396               |
| <b>Rainfall (mm)</b>                | 112                        | 202              | 323            | 314               |

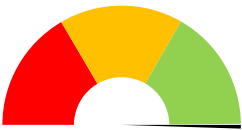
\*A percentile is used to indicate where a value lies within the range of historically measured records.

# Dashboard

## Normalised Difference Vegetation Index



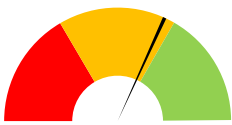
## Estimated Total Green Biomass



## Estimated Total Ground Cover



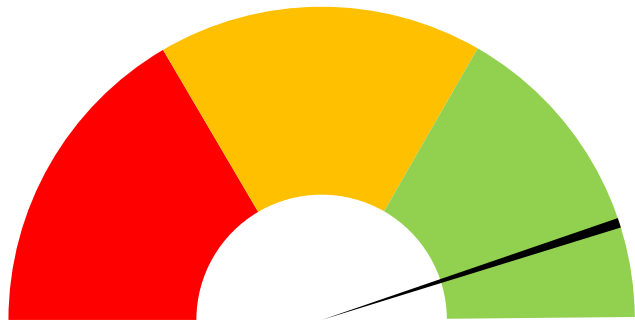
## Modelled Cumulative Total Dry Matter



## Cumulative Estimated Rainfall



## Overall



## Images and Charts of season to date compared to previous seasons

Figure 1 Estimated Fractional Cover Map

Figure 2 Estimated Total Vegetation Cover Map

Figure 3 Normalised Difference Vegetation Index

Figure 4 Estimated Total Green Biomass

Figure 5 Estimated Total Ground Cover

Figure 6 Estimated Fractional Ground Cover

Figure 7 Modelled Cumulative Total Dry Matter

Figure 8 Cumulative Estimated Rainfall

## Definitions

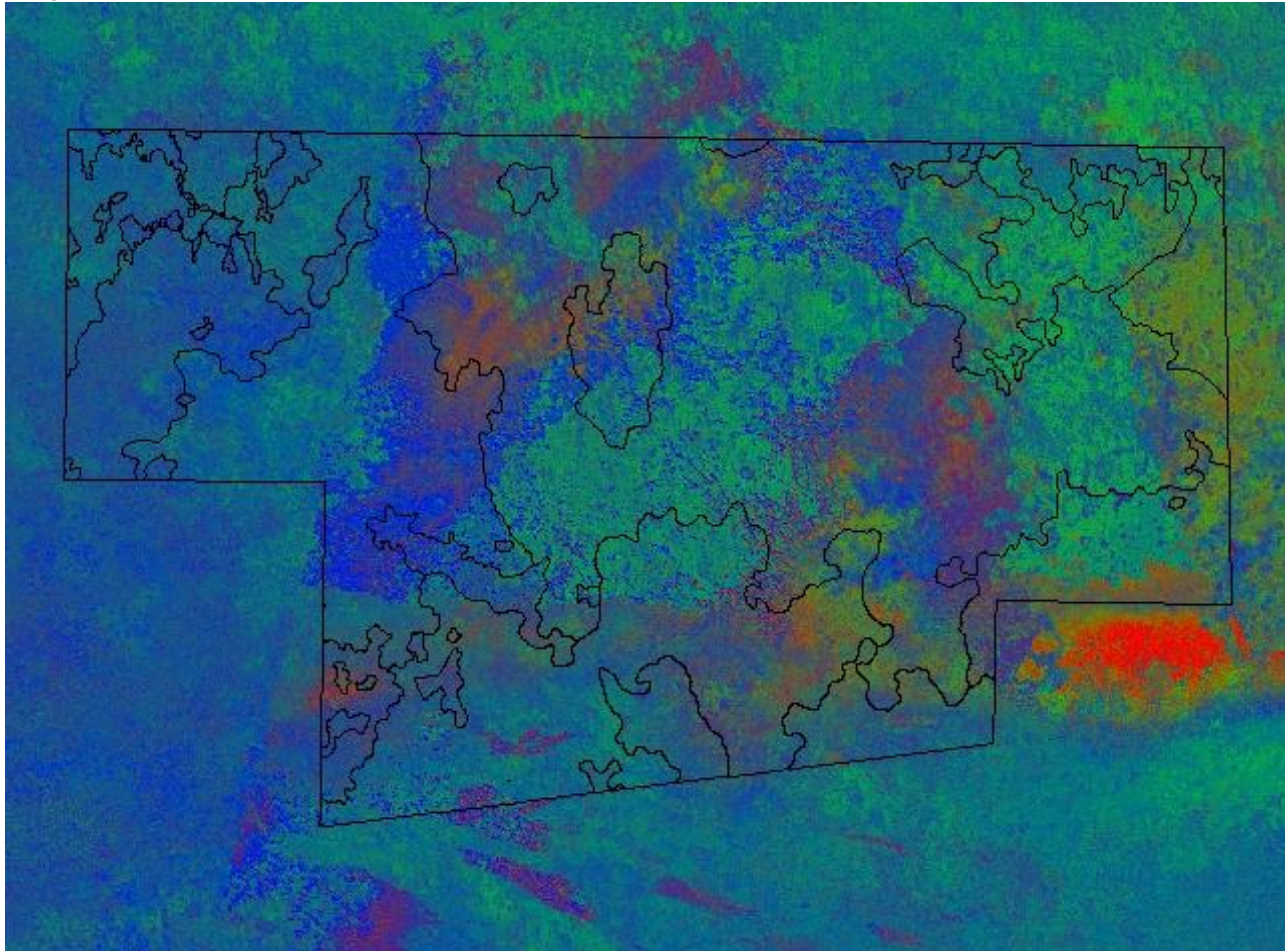
Normalised Difference Vegetation Index (NDVI): a satellite-derived index of greenness seen by the satellite. Essentially, NDVI is an indication of the amount of green vegetation.

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).

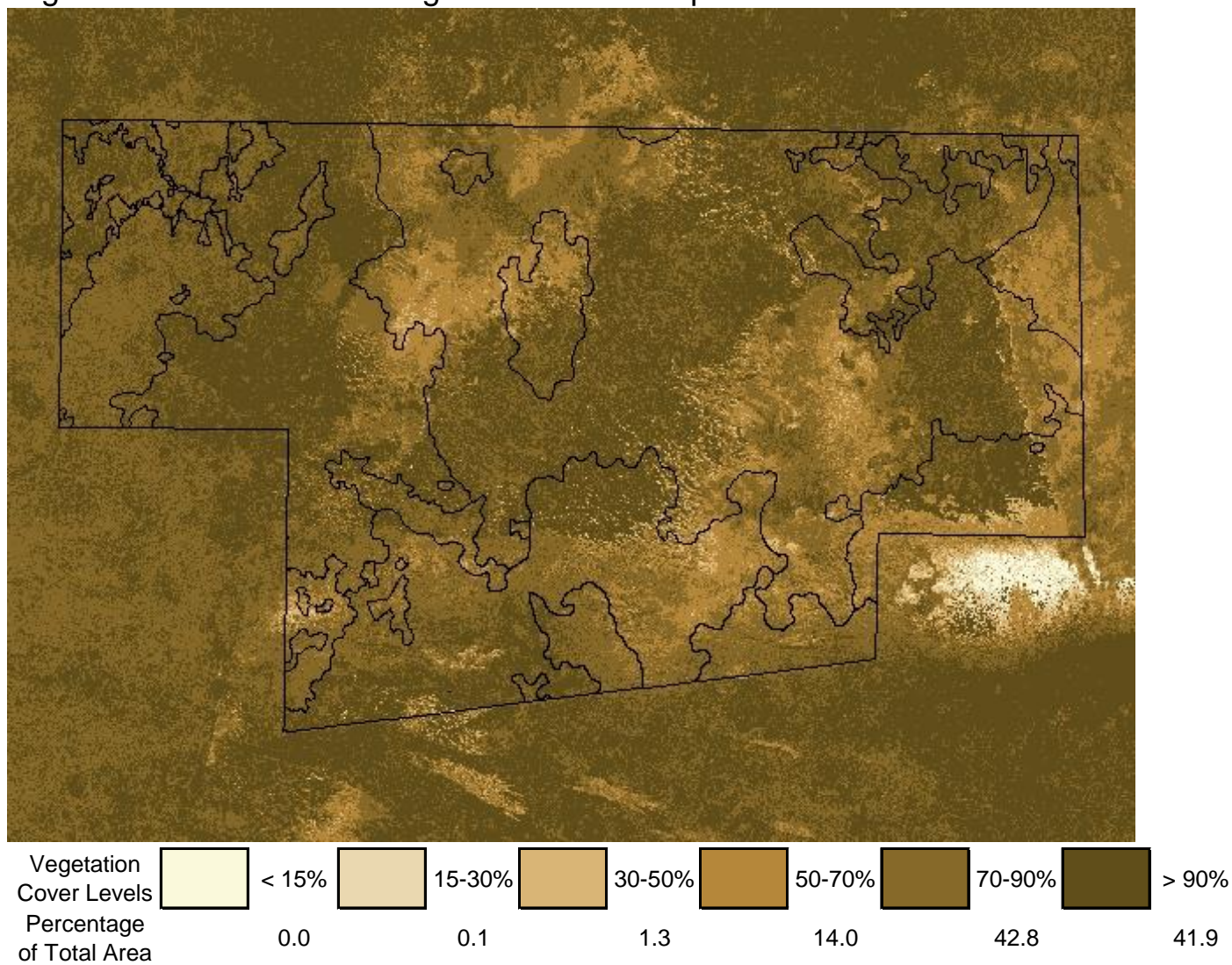
Total Dry Matter (TDM): an estimate of the gross primary production, or the total amount of vegetation (in kg dry matter per hectare) that was grown over the growing season.

Figure 1 Estimated Fractional Cover Map



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

Figure 2 Estimated Total Vegetation Cover Map



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

# VIRGINIA STATION - Normalised Difference Vegetation Index (NDVI) as at June 2024

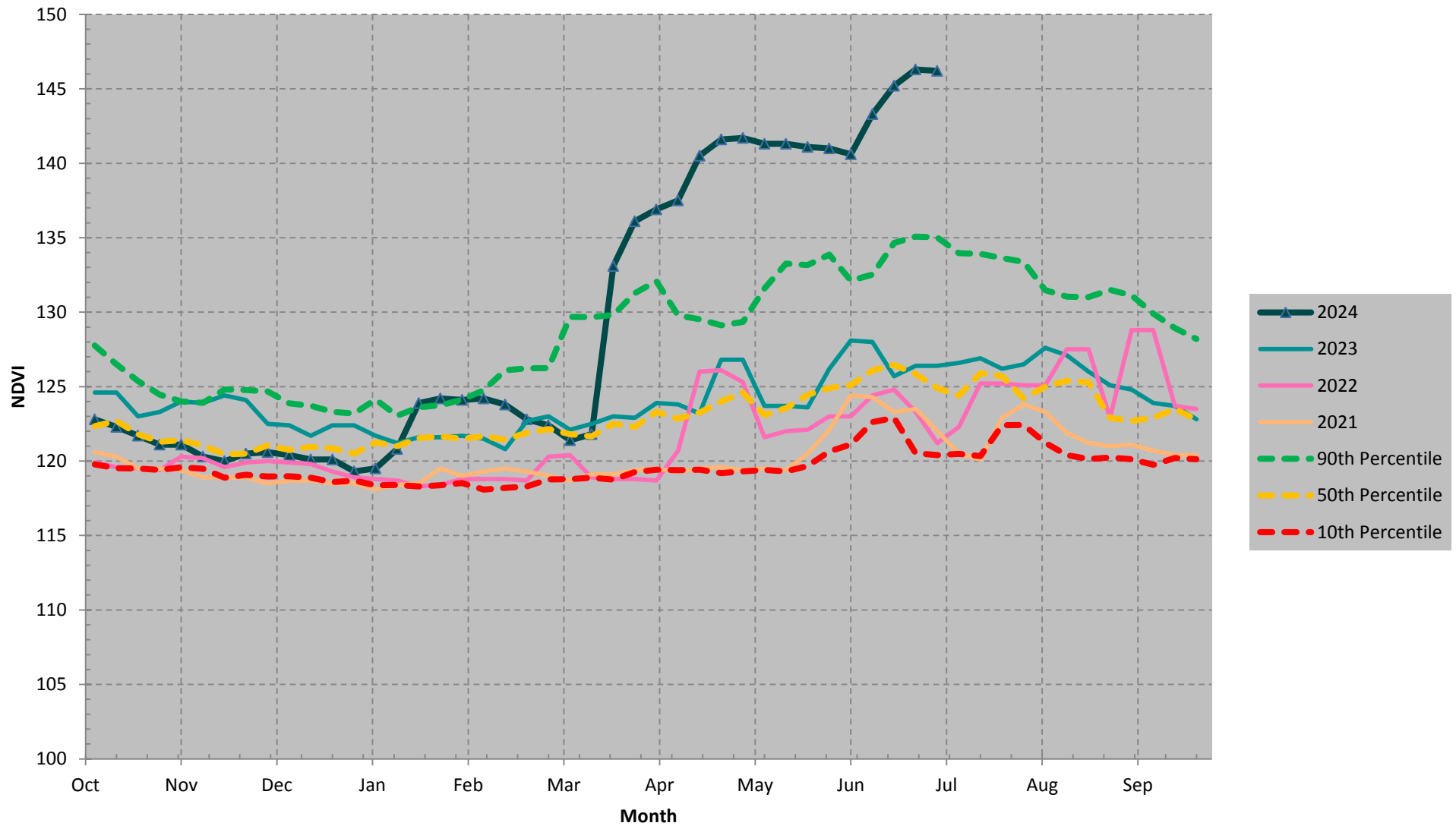


Figure 3 Normalised Difference Vegetation Index: This shows how green the property is at any given time.

# VIRGINIA STATION - Estimated Total Green Biomass (TGB) as at June 2024

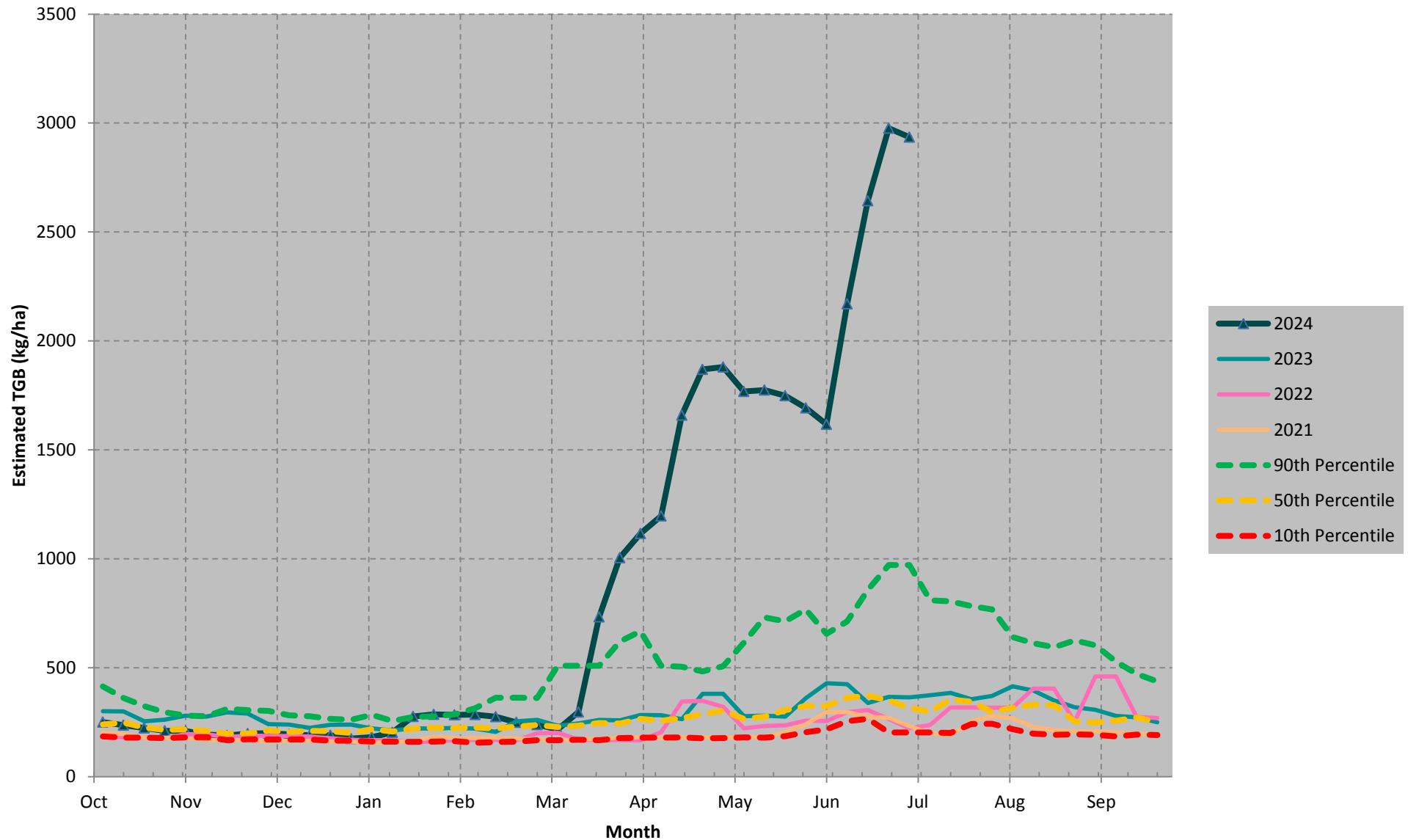


Figure 4 Total Green Biomass: Also known as total standing dry matter, this shows how much green biomass exists on average across the property at any given time.

# VIRGINIA STATION - Estimated Total Ground Cover (TGC) as at June 2024

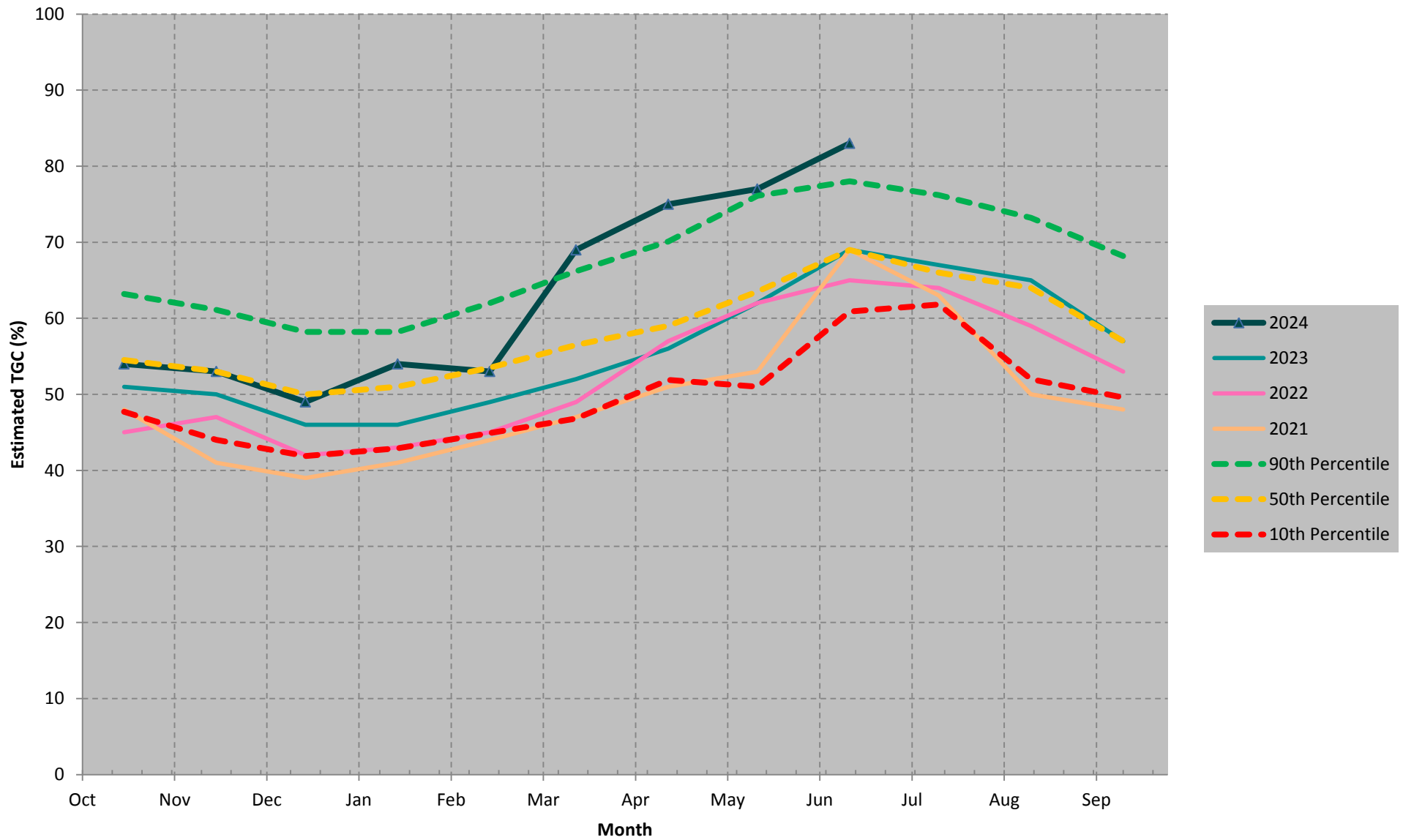


Figure 5 Total Ground Cover: This shows the percentage of the ground covered by green or dead vegetation.



# VIRGINIA STATION - Estimated Fractional Ground Cover as at June 2024

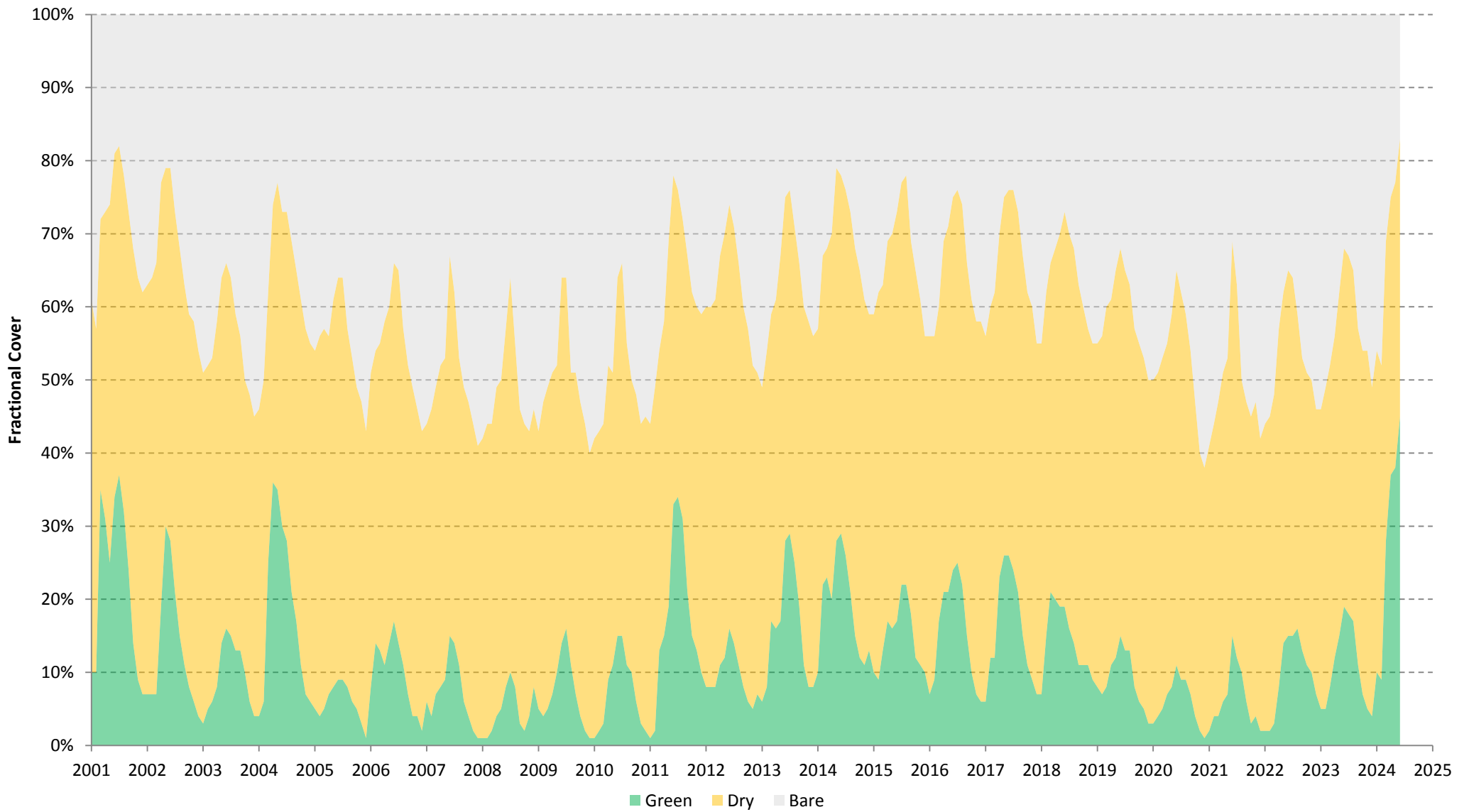


Figure 6 Estimated Fractional Ground Cover: This shows the percentages of the ground covered by green, dead or no vegetation.

# VIRGINIA STATION - Modelled Cumulative Total Dry Matter (TDM) Production as at June 2024

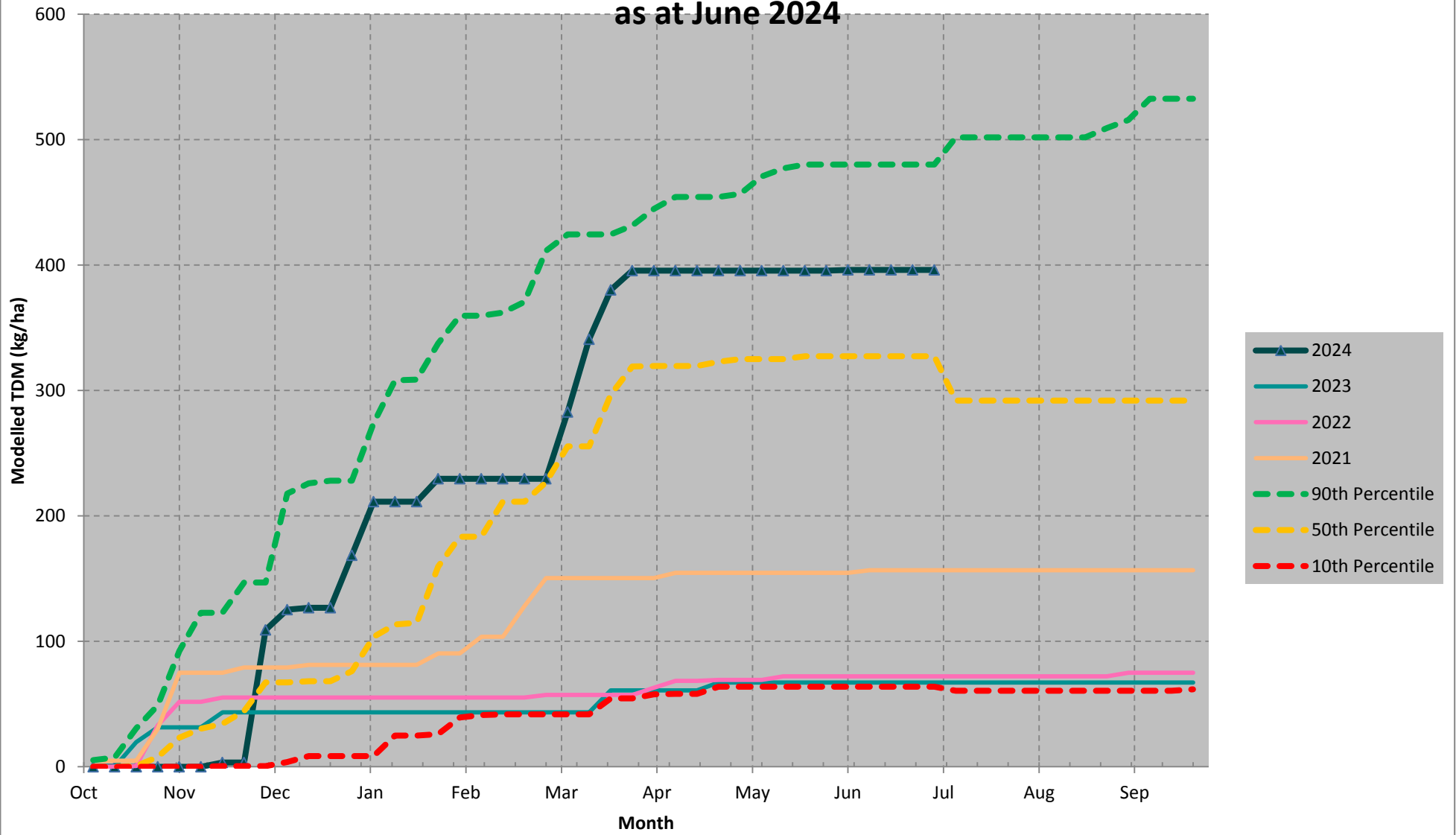


Figure 7 Cumulative Total Dry Matter: Also known as gross pasture production or total pasture growth, this shows the cumulative or total grass growth in the 12 months October to September.

# VIRGINIA STATION - Cumulative Estimated Rainfall as at June 2024

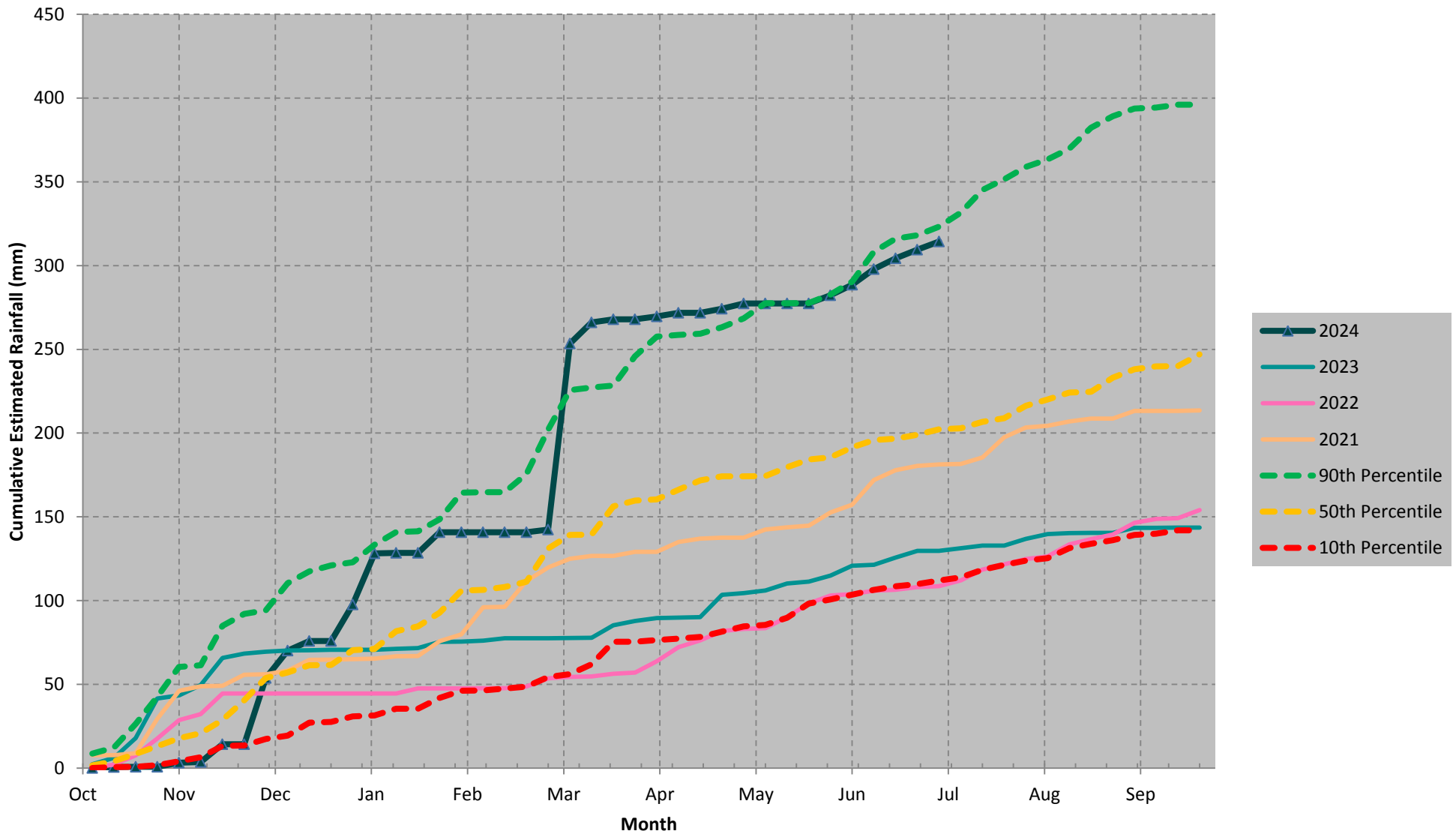


Figure 8 Cumulative Estimated Rainfall: This shows the total rainfall that fell in the 12 months October to September. The rainfall data is interpolated from the nearest rain gauge locations.

## **IMPORTANT DISCLAIMER**

The Department of Primary Industries and Regional Development (DPIRD), Western Australian Land Information Authority (Landgate) and the State of Western Australia (State) give no warranties in relation to the climatic data, imagery and data derived from it, and any other information contained in this report including without limitation in respect of accuracy, reliability, completeness, merchantability or fitness for a particular purpose.

To the maximum extent permitted by applicable law, in no event shall DPIRD, Landgate and the State be liable for any loss, damage, expense or costs (including special, incidental, indirect, or consequential loss or damage) however caused including without limitation, damages for loss of profits, business interruption, personal injury, loss of privacy, failure to meet any duty including of good faith or of reasonable care, negligence or legal costs, arising out of, or in any way related to, the use of or inability to use this report or any climatic data, imagery and the data derived from it, and any other information contained in this report or from any action or decision taken as a result of relying on this report.

The content of this report is general in nature, is not tailored to the circumstances of individual farms or businesses, and does not constitute advice, including without limitation, financial, taxation, legal, business or farm management advice. We recommend before making any significant decisions, including without limitation farming, financial or business decisions, you obtain independent advice from appropriate professionals who can take into account your individual circumstances and objectives.

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.