



Government of **Western Australia**
Department of **Health**

Medical Entomology Quarterly Report

Kimberley Health Region: Apr – Jun 2024



Serologically confirmed doctor-notified and laboratory reported cases of Ross River virus disease each month in WA, July 2023 - June 2024 #

*Compiled by the Medical Entomology, WA Department of Health

MEDICAL ENTOMOLOGY REGION	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	Crude Rate	Age Std Rate
KIMBERLEY	2	2	2	1	2	2	23	6	4	4	4	2	52	133.6	134.5
PILBARA	0	0	1	0	0	1	0	0	1	5	7	0	15	25.4	23.8
GASCOYNE	0	0	1	0	0	0	0	0	0	1	0	0	2	19.8	16.0
MIDWEST	1	0	1	0	1	1	0	0	0	1	0	1	6	9.2	9.1
WHEATBELT	2	0	0	1	1	0	0	2	1	0	0	0	7	10.0	13.2
METRO	4	1	1	1	2	3	4	4	7	11	5	3	46	2.4	2.4
SW - PEEL	1	0	6	7	9	16	1	6	1	4	5	1	57	19.2	18.4
SW - LESCHENAULT	0	3	0	1	10	9	3	3	2	3	0	0	34	42.5	43.3
SW - Geographe	1	2	1	12	14	5	9	2	4	0	0	1	51	82.4	75.7
SW - ELSEWHERE	1	0	1	1	1	2	4	5	8	2	0	0	25	48.2	43.3
SOUTH WEST(Total)	3	5	8	21	34	32	17	16	15	9	5	2	167	34.0	
GREAT SOUTHERN	0	1	0	1	0	1	2	1	0	0	0	0	7	10.9	9.0
GOLDFIELDS-ESPERANCE	0	0	1	1	0	1	0	0	0	0	2	1	6	10.5	10.6
WA UNDETERMINED	0	0	0	0	0	0	0	0	0	0	0	0	0		
INTERSTATE	0	0	0	0	1	1	3	2	2	1	3	0	13		
WA TOTAL (does not include interstate)	12	9	15	26	40	41	24	47	31	31	23	9	308		

Ross River virus disease case data summary

Western Australia State Summary: Apr - Jun 2024

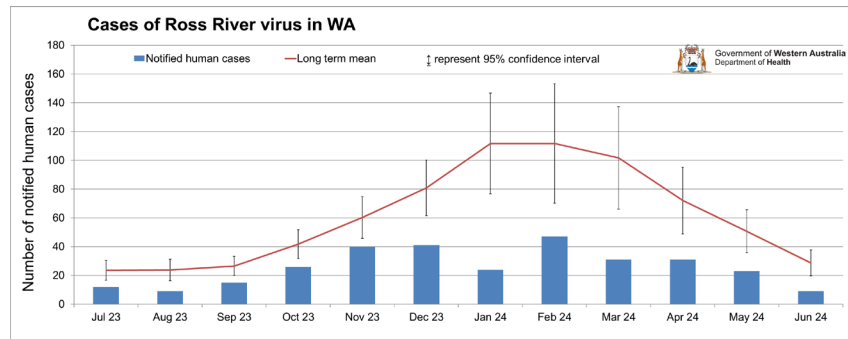
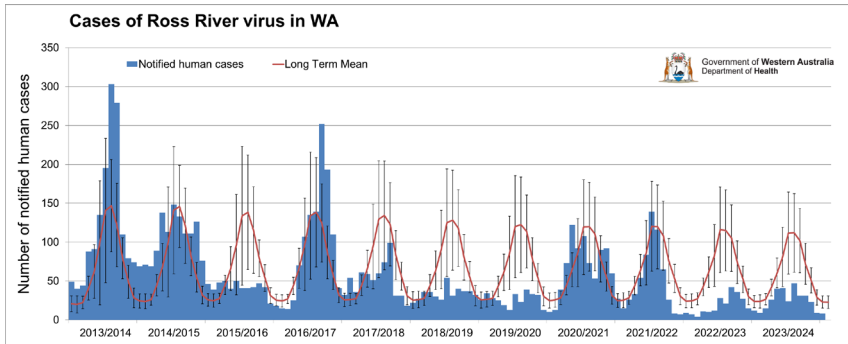
Data reflected in this summary of mosquito-borne disease is taken from the Western Australia Notifiable Infectious Disease Database (WANIDD) and includes enhanced surveillance data (ESD) collected by Population Health Units (PHUs) and local governments (LGs) (Note: only locations with notified cases of disease are shown in tables and figures).

Data current as at 5 August 2024.

* Crude Rate per 100,000 and Age Standardised Rate per 100,000 compared to Australian Standard Population (to eliminate the effect of differences in population age structures between geographic areas)

- In this quarter, **63 RRV cases were notified across WA**, including 22 by lab only
- The long term mean for RRV cases is 732 per year, and 51 for this quarter
- For WA, the number of RRV cases was **significantly below the long term mean for all months** this quarter.
- The date and location of exposure will often be different to information provided on notification forms in 90% and 50% of the cases, respectively. Data is more accurate when follow up surveys are completed.
- **ESD/Follow-up Response Rate for RRV cases in this quarter: 32%#**

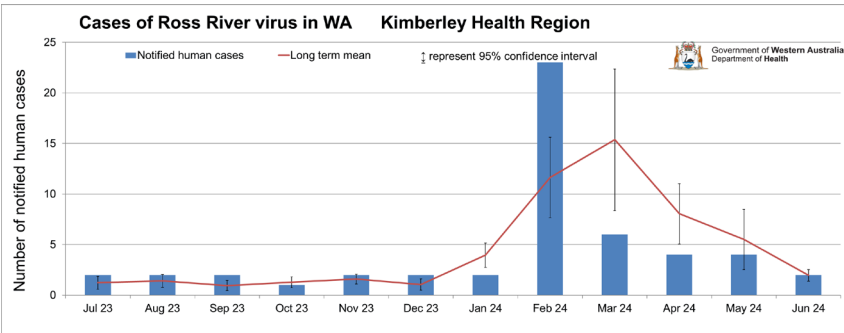
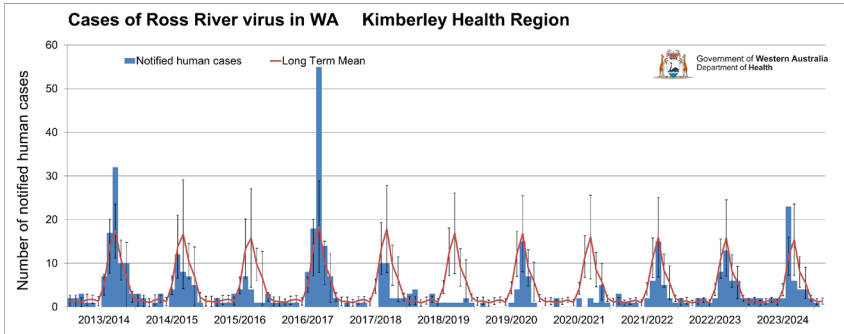
#calculated as number of follow up surveys received divided by total number of notified cases



Ross River virus disease case data summary Kimberley Health Region Apr - Jun 2024

Data reflected in this summary of mosquito-borne disease is taken from the Western Australia Notifiable Infectious Disease Database (WANIDD) and includes enhanced surveillance data (ESD) collected by Population Health Units (PHUs) and local governments (LGs) (Note: only locations with notified cases of disease are shown in tables and figures).

Data current as at 5 August 2024.



- For this region, **10 RRV cases were notified**, including 4 by lab only. **This is below the long term mean for all months this quarter**
- Long term mean for RRV cases is **54 per year**, and **about 16 cases for this quarter**
- No follow-up surveys available for this region

RRV Kimberley Health 2024	Apr	May	Jun	Total
Kimberley	4	4	2	10
Broome (S)	3	2	2	7
BROOME	3	1		4
DJUGUN			1	1
ROEBUCK			1	1
MINYIRR		1		1
Derby-West Kimberley (S)		1		1
FITZROY CROSSING		1		1
Halls Creek (S)	1	1		2
HALLS CREEK	1	1		2
Total	4	4	2	10

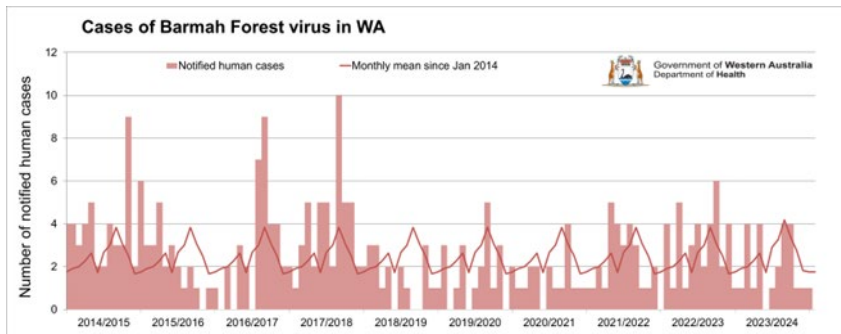


Serologically confirmed doctor-notified and laboratory reported cases of Barmah Forest virus disease each month in WA, July 2023 - June 2024 #

* Compiled by the Medical Entomology, WA Department of Health

MEDICAL ENTOMOLOGY REGION	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	Crude Rate	Age Std Rate
KIMBERLEY	1	1	1	1	1	0	0	0	0	0	0	1	6	15.4	19.5
PILBARA	0	0	0	0	0	0	0	0	0	0	1	0	1	1.7	1.2
GASCOYNE	0	0	0	0	0	0	0	0	0	1	0	0	1	9.9	9.3
MIDWEST	0	0	0	0	0	0	0	0	1	2	0	0	3	4.6	4.8
WHEATBELT	0	0	0	0	0	0	0	1	0	0	0	0	1	1.4	1.7
METRO	0	0	0	0	0	0	1	0	0	0	0	0	1	0.1	0.0
SW - PEEL	0	0	1	0	1	0	0	0	2	1	0	0	5	1.7	1.4
SW - LESCHENAULT	0	0	0	0	0	0	0	1	0	0	0	0	1	1.3	0.8
SW - Geographe	0	0	1	0	2	0	0	0	1	0	0	0	4	6.5	5.6
SW - ELSEWHERE	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
SOUTH WEST (Total)	0	0	2	0	3	0	0	1	3	1	0	0	10	2.0	2.0
GREAT SOUTHERN	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
GOLDFIELDS-ESPERANCE	0	0	1	0	0	0	0	0	0	0	0	0	1	1.8	1.4
WA UNDETERMINED	0	0	0	0	0	0	0	0	0	0	0	0	0		
INTERSTATE	1	0	0	0	0	0	0	0	0	0	0	0	1		
WA TOTAL (does not include interstate)	1	1	4	1	4	0	1	2	4	4	1	1	24		

* Crude Rate per 100,000 and Age Standardised Rate per 100,000 compared to Australian Standard Population (to eliminate the effect of differences in population age structures between geographic areas)



BFV Kimberley Health 2024	Apr	May	Jun	Total
Kimberley			1	1
Halls Creek (S)			1	1
HALLS CREEK			1	1
Total			1	1

Barmah Forest virus disease case data summary Apr – Jun 2024

Data reflected in this summary of mosquito-borne disease is taken from the Western Australia Notifiable Infectious Disease Database (WANIDD) and includes enhanced surveillance data (ESD) collected by Population Health Units (PHUs) and local governments (LGs) (Note: only locations with notified cases of disease are shown in tables and figures).

Data current as at 5 August 2024.

Western Australia State Summary

- In this quarter, **6 BFV cases were notified across WA**, including 2 by lab only.
- For WA, the **long term mean for BFV cases is 29 per year**, and **8 for this quarter**. The number of BFV cases was below the monthly mean.
- The date and location of exposure will often be different to information provided on notification forms in 90% and 50% of the cases, respectively. Data is more accurate when follow up surveys are completed.
- ESD/Follow-up Response Rate for RRV cases in this quarter: 33%#**
#calculated as number of follow up surveys received divided by total number of notified cases

Kimberley Health Region

- There was **1 BFV lab-notified case** for this quarter.
- For this region, the **long term mean for BFV cases is 7 per year** and **2 for this quarter**.

Climate Summary for April to June 2024

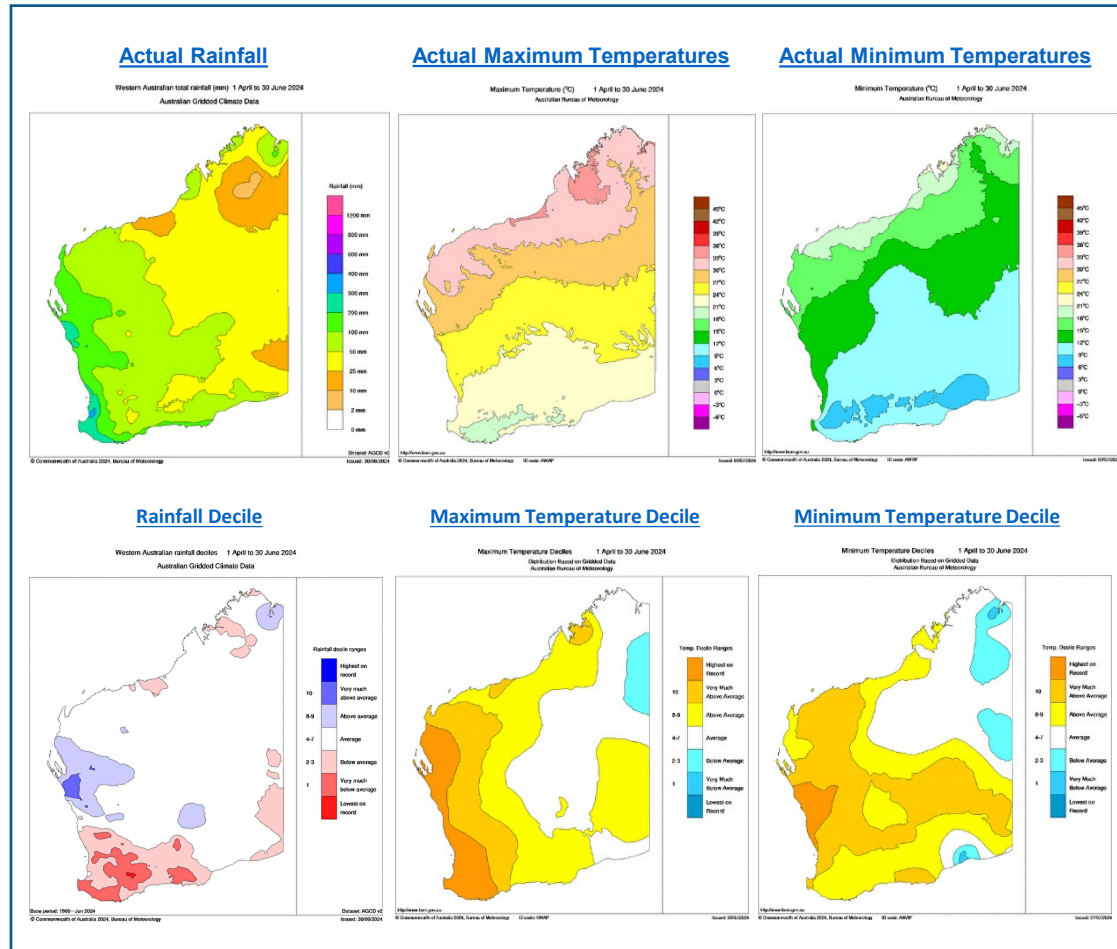
Links to the Climate Driver Update and Climate summaries for April to June 2024 can be found below:

[Climate Driver Update history](#)

[Climate summary for Western Australia in April 2024](#)

[Climate summary for Western Australia in May 2024](#)

[Climate summary for Western Australia in June 2024](#)



Mosquito-borne Disease Risk Outlook

Ross River virus activity expected to increase in the South West

With the wet season in northern WA well and truly behind us, Flavivirus activity has been greatly reduced. The last detection in our surveillance systems was in early July, and no further human cases have been reported since June. Given we are in the dry season in northern WA we expect mosquito-borne virus activity to remain low for the next few months.

Ross River virus activity has continued to be below average through the winter months, although this is the time when activity is at its lowest. Since July 1 2024 we have received eight notifications, with two of those being from the South West. With rainfall expected to be average, or slightly above average in much of the South West over the next three months, we expect to see an increase in Ross River and Barmah Forest notifications from the region.

Climate outlook for Western Australia for July 2024 to September 2024 Issued 4 July 2024

Descriptions of Major Climate Drivers in WA

Weather forecasts based on interactions between oceanic and atmospheric conditions.

El Niño/ La Niña (ENSO Pacific Ocean) mainly affects north and east of WA

El Niño: Typically associated with drier conditions, decreased tidal activity and warmer days in south. Late start to northern wet season with less cyclones and less flooding.

La Niña: Typically associated with wetter, cooler days and warmer nights (due to increased cloud cover). Earlier start to the northern wet season with more tropical cyclones. More conducive to mosquito breeding and possible mosquito-borne virus activity.

Indian Ocean Dipole (IOD) mainly affects mid two thirds of WA.

Positive IOD: Typically associated with reduced winter/spring rainfall, warmer conditions in the south, and cooler in the north.

Negative IOD: Typically associated with wetter winter/spring, cooler days in the south, warmer in the north with increased chances of rainfall/flooding.

Southern Annular Mode (SAM) mainly affects south of WA, impact varies by season, trending towards a more positive phase in summer - contribution still under research .

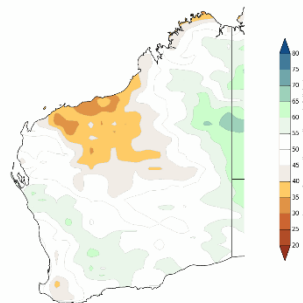
Positive SAM: warmer and drier conditions. Boosted by La Nina conditions.

Negative SAM: cooler and wetter conditions.

For more info see [Australian Climate Influences](https://www.bom.gov.au/australia/influences/)

Average rainfall for most of WA

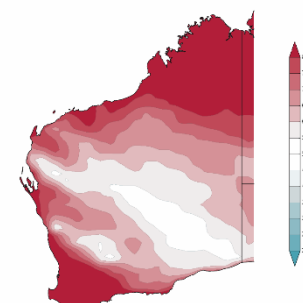
Chance of exceeding the median rainfall for July to September 2024



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Warmer than average days for all of WA

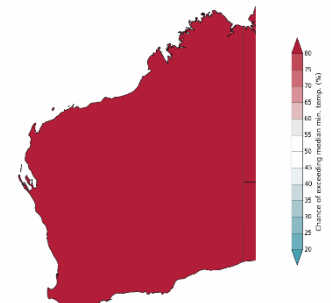
Chance of exceeding the median maximum temperature for July to September 2024



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Warmer than average nights for all of WA

Chance of exceeding the median minimum temperature for July to September 2024



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Climate Driver Update

Neutral ENSO and IOD conditions continue

IOD is currently neutral and forecasted to remain neutral till at least early Spring

SAM is currently neutral