



Queensland Macropod Management Program

Quota Submission 2027

DELIVERING
FOR QUEENSLAND



Queensland
Government

Prepared by: Macropod Management Program, Queensland Parks and Wildlife Service,
Department of the Environment, Tourism, Science and Innovation.

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Executive Summary

The Queensland commercial macropod harvest is focused on three species: eastern grey kangaroo (*Macropus giganteus*); red kangaroo (*Osphranter rufus*); and common wallaroo (*Osphranter robustus*) located across five harvest zones.

The harvest is administered through an annual quota submission which outlines species and zone-specific quotas for the following calendar year. Quotas are set between 10-20% of the estimated population for each species per zone but may be reduced if populations drop below pre-determined trigger points. Population estimates are established through density surface modelling, utilising aerial survey data and environmental variables. For 2026, aerial surveys were conducted at 17 survey sites across Queensland.

Density Surface Modelling (DSM) was adopted to improve the spatial representation and precision of macropod abundance estimates across Queensland. Historical estimates presented in this submission have been recalibrated to align with the contemporary DSM framework, providing a more consistent basis for evaluating long-term trends. Consequently, trends presented within this report can be interpreted as a comparable time series; however, abundance and density estimates must not be directly compared with values published in previous quota submissions, as those reports were based on a different analytical framework and direct comparisons may lead to misleading conclusions regarding population change.

Changes in abundance were highly dependent on zone and species and exhibited significant localised fluctuations. On average, eastern grey kangaroo numbers declined mildly across all zones, except Zone 4: red kangaroo numbers have declined in most zones, with the exception of Zones 2 and 4, which had significant increases; and common wallaroo numbers have remained relatively stable across most zones. Populations of eastern grey kangaroos in Zone 2 have remained below the predetermined trigger point, therefore the reduced (halved) quota for this zone will be maintained in 2027. Population fluctuations observed in 2026 are consistent with historical patterns of variability. There has been no consistent decline in the populations of the three commercially harvested species since 1992 (Figures 2 to 4).

In the 2025 harvest period, only 20.7% of the commercial harvest quota was utilised, with the highest percentage of quota used being 82% for common wallaroo in Zone 4, 12.3% of the possible 15% quota of the population in that zone. The overall harvest was male biased, with females comprising just 10.1% of the overall harvest. Across all species, harvest take was just 3.1% of the overall population.

As of January 2026, no shire in Queensland was drought declared. By August 2026, three shires near the Qld NSW border have been fully drought declared and one partially drought declared. However, long lasting effects of severe droughts still impact some areas, most notably in the halved quota for eastern grey kangaroos in Zone 2 for the 2027 harvest period. Parts of western Queensland experienced widespread flooding in March/April of 2025 and December 2025. Flood affected areas of western Queensland were surveyed in 2025 and 2026.

This quota submission, based on the 2026 aerial surveys, contains a summary of the recommended quotas for each of the species per harvest zone for 2027. Additionally, the submission outlines the basis of how these quotas were determined.

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Introduction

The sustainable harvest of macropods in Queensland is managed within an internationally recognised conservation framework. The International Union for Conservation of Nature (IUCN) Recommendation 18.24 acknowledges that “the ethical, wise and sustainable use of some wildlife can provide an alternative or supplementary means of productive land use, and can be consistent with and encourage conservation, where such use is in accordance with appropriate safeguards” (IUCN 1990). At the national level, the harvest of macropods for export is regulated under the *Environment Protection and Biodiversity Conservation Act 1999*.

In Queensland, the Department of the Environment, Tourism, Science and Innovation (DETSI) regulates the commercial harvest of three macropod species: eastern grey kangaroo (*Macropus giganteus*); red kangaroo (*Osphranter rufus*); and common wallaroo (*Osphranter robustus*). The regulatory framework comprises the *Nature Conservation Act 1992* and its subordinate legislation, the *Nature Conservation (Animals) Regulation 2020* and *Nature Conservation (Macropod) Conservation Plan 2017*, as well as the *Animal Care and Protection Act 2001*, the *Food Production (Safety) Act 2000*, and the *Queensland Wildlife Trade Management Plan for Export - Commercially Harvested Macropods 2023 – 2027* (Queensland Parks and Wildlife Service, 2022).

Population estimates for macropods are derived from aerial surveys and relevant environmental variables using density surface modelling (DSM), a modern approach for estimating wildlife abundance across large landscapes. This has improved the precision of density estimates and provides a realistic representation of density variation across the landscape. Annual quotas are set between 10–20% of the estimated population for each species and harvest zone. These quotas, ensure sustainable yields and the long-term conservation of macropod populations (Caughley et al., 1987; Hacker et al., 2002). Such proportional takes are currently accepted by the scientific community, DETSI and the National Environmental Protection Agency (NEPA). Quotas may be reduced if populations fall below pre-determined thresholds: halved if numbers drop below 1.5 standard deviations of the long-term average per zone and species, and a suspension of harvest if they fall below 2 standard deviations.

Each year, the Director-General of DETSI declares the harvest period open via a Harvest Period Notice, setting quotas in line with the *Queensland Wildlife Trade Management Plan for Export - Commercially Harvested Macropods 2023–2027*. The notice for the 2027 harvest period is scheduled for release in December 2026, allowing the commercial harvest to commence on 1 January 2027 and outlining any specific conditions applicable for that period.

Macropod population monitoring

Methodology

Aerial surveys for the three commercially harvestable species have been conducted by the Queensland Government since 1991. Annual aerial surveys are conducted across 17 fixed monitoring blocks between May and August, each consisting of two to eight east-west oriented transect lines that are 40 to 80 km long and spaced systematically at 10 km intervals. Transect lines are flown close to dawn and dusk to coincide with generally higher macropod activity. Observation data of the three commercially harvestable macropod species are collected through aerial observations, using Panasonic Toughpads and the SPOTTER application developed by NSW Department of Primary Industries and Regional Development. Two trained observers sit in the rear of a Robinson R44 Raven 1, with horizontal booms extended from either side of the aircraft to assist observers in identifying perpendicular distances of detected animals.

A modern approach for estimating wildlife abundance from observation data across vast landscapes has been implemented in 2026 to estimate the abundance of the commercially harvestable macropods in Queensland. Density Surface Modelling (DSM) is a spatially explicit extension of traditional line-transect sampling that combines aerial survey observations with environmental variables such as rainfall, vegetation productivity, land cover and temperature to model how macropod density varies across the landscape. DSMs are increasingly recognised as an advanced approach for estimating wildlife abundance across large landscapes and are currently used to estimate the abundance of commercially harvestable macropod populations in Victoria (Scroggie et al., 2025). DSMs identify relationships between macropod occurrence and environmental conditions and build on those relationships to estimate density in unsurveyed areas. Previous methodology (i.e. multi-covariate distance sampling) assumed surveyed areas were representative of the entire harvest region and that animal densities are uniform across unsurveyed regions. DSM overcomes these limitations by integrating survey observations with environmental data to better reflect real-world distribution patterns. This reduces reliance on the assumption that densities observed along survey transects are representative of the broader harvest region and provides a more realistic representation of how macropod populations are distributed across Queensland. It also reduces uncertainty and improves stability of abundance estimations. The modelling framework also makes better use of historical aerial survey data, improves the scientific robustness of abundance estimates whilst lowering variability and brings us in line with other States (Scroggie et al., 2025).

To ensure methodological consistency and to draw scientifically robust comparisons between years, density estimates from 2021 onwards have been retrospectively re-estimated using the statewide DSM framework. Survey data prior to 2021 were collected using a different methodology and lacked the fine spatial resolution required to retrospectively apply the current DSM approach. Consequently, density estimates derived from the previous methodology are not directly comparable with DSM-derived estimates. To improve comparability between years across the long-term monitoring dataset, historical estimates of density were recalibrated to align with estimates generated under the contemporary DSM framework. Without recalibration, apparent changes in density through time could reflect differences in methodology rather than genuine changes in population abundance. Species and zone-specific correction factors were derived by quantifying the mean difference between DSM and multi-covariate distance sampling (MCDS) densities during the overlapping period (2021 – 2025), where both methodologies could be evaluated on the same survey data. These correction

factors were applied to pre-2021 density estimates, providing an adjusted time series that is more consistent with the scale and assumptions of the DSM framework. The adoption of DSM represents a significant advancement in abundance estimation by allowing density to be modelled as a function of environmental drivers such as rainfall, vegetation type, pasture condition, biomass and other spatial and temporal covariates. This approach enables more reliable extrapolation of density estimates across both surveyed and unsurveyed areas, provides a more spatially explicit understanding of macropod distribution, and supports more robust assessment of long-term population trends across Queensland.

To ensure DSMs were applied to the most current species range, the known spatial distributions of macropods were reviewed in 2026 using a combination of historical spatial data, aerial survey data and verified records of macropods from Atlas of Living Australia (ALA) (2026). Though verified, a single, isolated ALA detection outside pre-published distributions was not considered sufficient evidence to modify established distribution boundaries. However, where multiple verified records occurred beyond pre-published distributions, distribution boundaries were moved accordingly. Distribution boundaries were also revised where trained departmental staff recorded observations of species outside historic distributions.

Abundance and density estimates presented in this report must not be directly compared with estimates published in previous quota submissions, as differences in methodology mean the datasets are not directly comparable and any such comparisons may lead to misleading or erroneous conclusions regarding population trends and status. The recalibrated time-series presented in this report provides the appropriate basis for evaluating long-term population trends under the contemporary DSM framework.

Harvest Zones

Table 1 displays information about harvest zone habitat types, land use and shire. Figure 1 is a map of the five macropod harvest zones of Queensland.

Table 1: Macropod harvest zones and shires.

Zone	Shires
Zone 1	Boulia, Burke, Carpentaria, Cloncurry, Diamantina and Mount Isa
Zone 2	Barcaldine, Barcoo, Blackall-Tambo, Flinders, Longreach, McKinlay, Richmond and Winton
Zone 3	Bulloo, Murweh, Paroo and Quilpie
Zone 4	Balonne, Goondiwindi, Maranoa and Western Downs
Zone 5	Banana, Bundaberg, Burdekin, Central Highlands, Charters Towers, Croydon, Etheridge, Gladstone, Isaac, Livingstone, Lockyer Valley, Mackay, North Burnett, Rockhampton, Scenic Rim, Somerset, South Burnett, Southern Downs, Toowoomba and Whitsunday



Figure 1: Queensland macropod harvest zones.

Proportional Harvest

Sustainable harvest quotas are calculated using a fixed proportion of the estimated macropod populations within the Queensland harvest zones. The proportions used vary between species and are adjusted across the harvest zones in relation to the margins of error present in population estimates. The maximum proportions used for each species are 15% of populations for eastern grey kangaroos and common wallaroos and 20% of the population for red kangaroos. Due to lower survey effort in Zones 1 and 5, a more conservative harvest proportion of 10% for all three species is applied. These sustainable-use harvest quotas are based on research undertaken by (Caughley et al., 1987) and (Hacker et al., 2002). They are accepted by the scientific community, the Queensland Government and the National Environmental Protection Agency.

Low Population Thresholds

In accordance with the Queensland Wildlife Trade Management Plan for Export (Commercially Harvested Macropods 2023–27), trigger points are set to restrict the commercial harvest should the population fall below certain thresholds. Thresholds are based on the analysis of long-term population data and are set by species and harvest zone. Where population estimates fall below 1.5 standard deviations (SD) of the long-term mean, the harvest quota is halved for the following harvest period. Where population estimates fall below 2 SD of the long-term mean, the harvest quota will be suspended for the following harvest period. Due to the change in methodology, these trigger points have been reviewed and re-determined using density surface modelling.

Non-Commercial Macropod Mortality

Mortality Events

The mortality of macropods in Queensland is heavily influenced by a range environmental, epidemiological factors, including vehicle-strike, predation, droughts, floods, disease outbreaks and vector-borne pathogens. Macropods are susceptible to predation from wild dogs/dingoes, wedge-tailed eagles and to a lesser extent, foxes. Prolonged drought conditions reduce forage and water availability, leading to poor body condition, lower reproductive success and higher mortality in macropod populations. As of 1st August, 3 shires in Queensland were drought declared and one partially drought declared (Queensland Government, 2026)

Flooding can cause direct mortality of macropods through drowning or displacement and may cause long-term damage to forage. Additionally, excess water increases exposure to biting insect-borne pathogens. In early 2026, north-west Queensland had heavy rain with areas in western Queensland also experiencing widespread flooding, which severely impacted towns such as Clermont, Emerald, Richmond, Julia Creek, Longreach, Winton, Quilpie and Boulia. (Queensland Government, 2026). Significant livestock losses were reported in the media, however no significant macropod losses were reported to DETSI. In response to the flooding, aerial surveys were conducted out of rotation.

Macropods are susceptible to a number of naturally occurring diseases and parasites. No incidence of significant disease mortalities has been recorded for macropod populations in Queensland during 2026. The department continues to liaise with Wildlife Health Australia and other Queensland government agencies to monitor any emerging health issues for macropods in Queensland.

Damage Mitigation Permits

A Damage Mitigation Permit (DMP) may be granted where a protected animal (including commercially harvested macropods) is causing, or may cause, damage or loss; or represents a threat to human health or wellbeing. The total number of harvest macropods allowed to be taken under these permits is limited to a maximum of 2% of the estimated population for each species by zone. Restricting the granting of DMPs in this way provides a clear limit that ensures the lethal take of harvest macropods operates as a sustainable program. Further restrictions are also in place on the limit allocated to individuals in zones where the population estimated are below trigger points.

More information can be found on the department website:

<https://environment.qld.gov.au/licences-permits/plants-animals/damage-mitigation-permits>

All DMPs state that macropods must be taken in a way specified in the National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Non-commercial Purposes:

<https://www.dcceew.gov.au/environment/wildlife-trade/publications/national-code-practice-humane-shooting-kangaroos-and-wallabies-non-commercial>

2025 Harvest Statistics

The data from dealer returns in 2025, indicate that there were 609,842 macropods commercially harvested and sold, which represents just 20.7% of the overall quota and 3.1% of the total population. Numerous factors influence harvest rates for macropods. These include population levels, market forces, environmental conditions and access by harvesters.

Table 2: Quota and harvest statistics for all harvest zones combined in 2025.

Species	Quota	Harvest	% Quota harvested
Eastern grey kangaroo	1,333,000	286,939	21.5
Red kangaroo	1,377,500	265,271	19.3
Common wallaroo	231,050	57,632	24.9
Total	2,941,550	609,842	20.7

Population Estimates

Eastern Grey Kangaroo

Across all harvestable zones, there are approximately 8.55 million eastern grey kangaroos, a decrease of 7.1% from 2025. Harvest zones 4 and 5 (Figure 1) recorded the highest densities of eastern grey kangaroos in Queensland and encompass over 80% of all detections. The far-western regions of the State (Zone 1) are at the edge of their distributional range, and as such demonstrate very low densities. In fact, no eastern grey kangaroos were observed in aerial surveys in this zone and densities may be too low to detect with current survey effort. Eastern grey numbers remained relatively stable between 2025 and 2026, ranging between a 12.5% decline in population in Zone 2, and a 20.9% increase in population in Zone 4. There are more significant, but much more localised fluctuations. However, such fluctuations are consistent with historical data and are typically averaged out across broader spatial scales. Populations of eastern grey kangaroos in Zone 2 have remained below the predetermined trigger point, therefore the reduced (halved) quota for this zone will be maintained in 2026. No quota will be proposed for eastern grey kangaroos in zone 1 because the population size in this harvest zone is incredibly small and at the geographic edge of this species’ distribution.

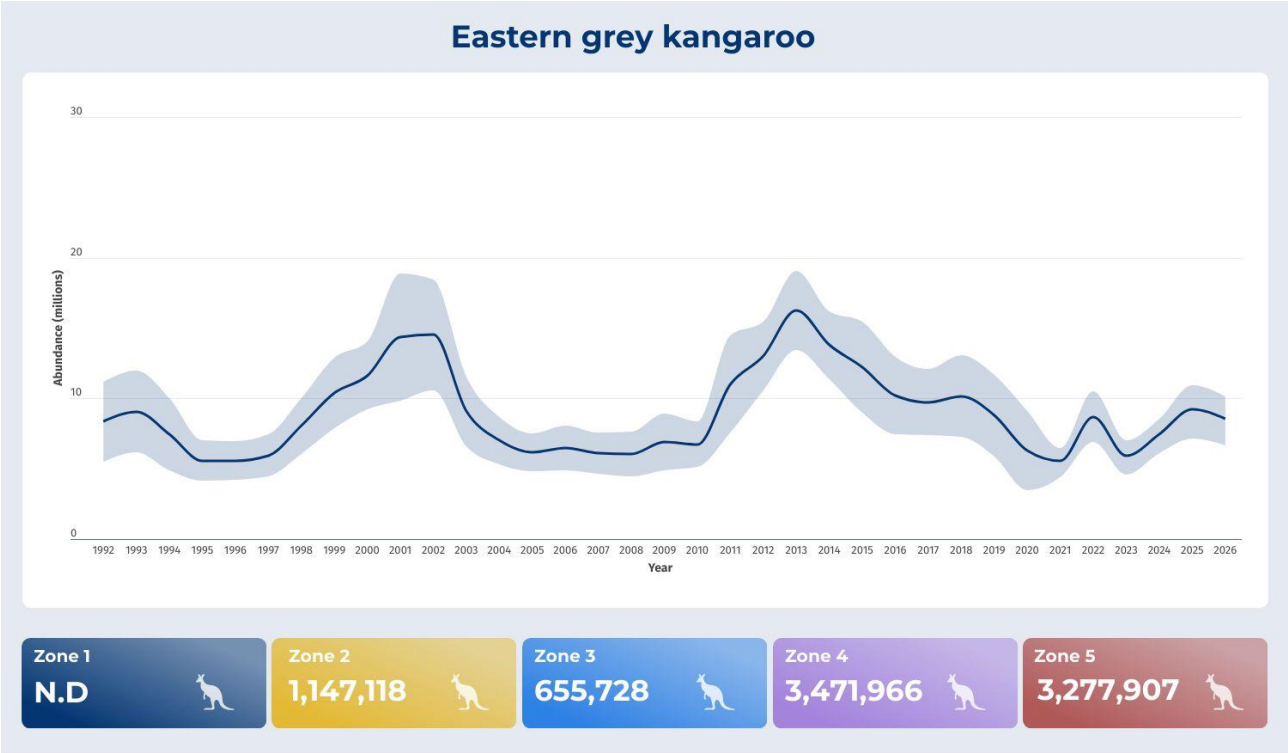


Figure 2: Smoothed eastern grey kangaroo abundance, 1992-2026. Density estimates for 2021-2025 were derived from retrospective DSMs. Earlier estimates (1992-2020) were adjusted from historical MCDS density estimates using correction factors based on the mean difference between DSM and MCDS estimates from 2021-2025 for each species and harvest zone. Inset boxes indicate the 2026 population within harvest zones. N.D. (no data) indicates the population was too low to be detected with current survey effort.

Red Kangaroo

Across all harvestable zones of Queensland there are approximately 7.6 million red kangaroos, on average an increase of 8.7% from 2025. Harvest zones 1 and 2 demonstrate 65% of the total population in Queensland. Given the species’ naturally western distribution in Queensland, Zone 5 holds comparatively low densities, and represents just 4.5% of the population. Zone 2 and 4 were the only areas to record an increase in numbers, rising by 66.7%, and 30.8% respectively, while all other zones experienced declines between 8.8% and 25.3%. Such fluctuations are common in red kangaroos and reflects their tendency to migrate in response to rainfall. Notably in Zone 4, densities for Westmar were 6 times higher than 2025, and Roma more than double following significant rainfall in December 2025. Windorah in Zone 2 more than doubled in density while Winton was halved. A smaller increase was also seen in Barcaldine with declines elsewhere, suggesting possible large-scale movements across the landscape. No harvest zone reached the low population trigger points for red kangaroos, in 2026.

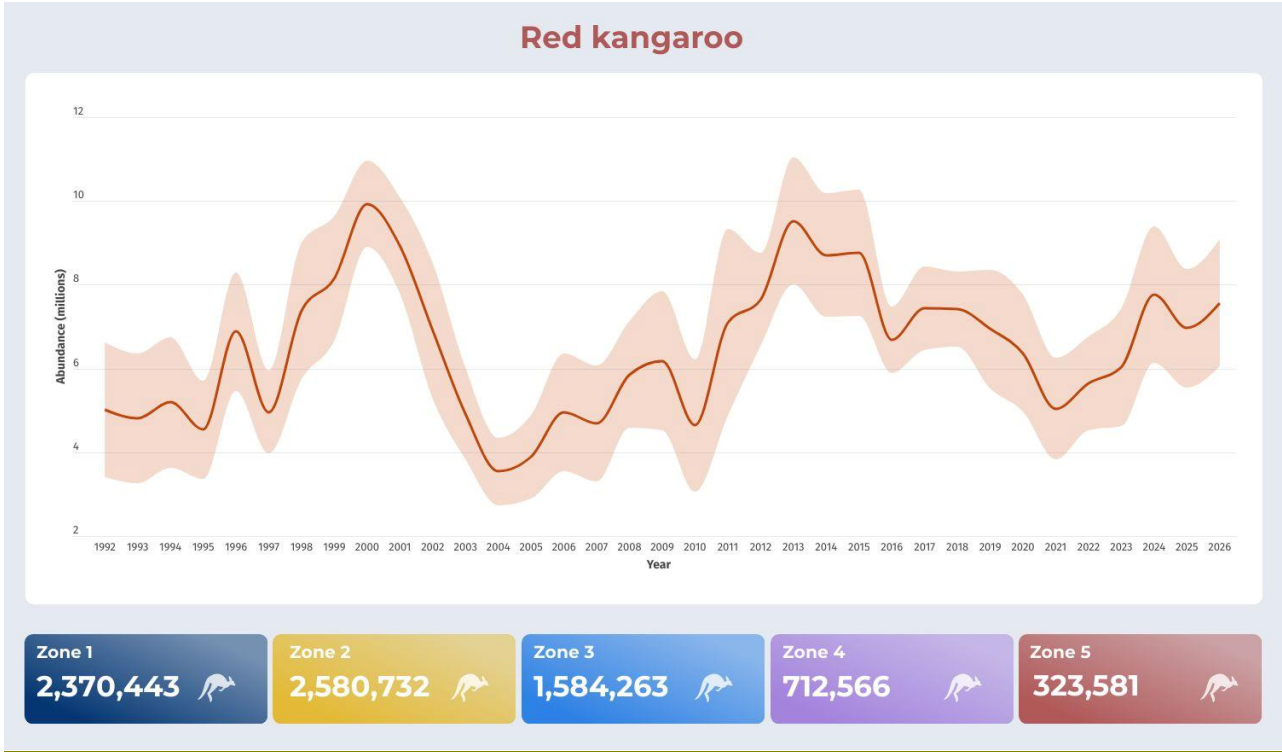


Figure 3: Smoothed red kangaroo abundance 1992-2026. Density estimates for 2021-2025 were derived from retrospective DSMs. Earlier estimates (1992-2020) were adjusted from historical MCDS density estimates using correction factors based on the mean difference between DSM and MCDS estimates from 2021-2025 for each species and harvest zone. Inset boxes indicate the 2026 population within harvest zones.

Common Wallaroo

There are approximately 1.5 million common wallaroos in the harvestable zone of Queensland, an average decline of 8.7% across the State. Harvest zones 2 demonstrates 43.1% of the total population in Queensland. The common wallaroo demonstrated some of the larger swings in population abundance, though this is likely related to low detection probabilities of the species (Clancy et al., 1997). Harvest Zones 1 and 4 recorded a sharp decrease in numbers, declining by 46%, and 40.3% respectively. Harvest Zone 2 and 3 contain the highest densities of common wallaroos, and Zone 5 the lowest. Despite this, Zone 2 demonstrated the largest increase in population (32.4%), followed by Zone 5 (8.7%); most likely following significant rainfall events. Abundance in all other zones declined between 4.9% and 46%. Large fluctuations are likely due to the low detectability of the species and are consistent with historical records, as such no harvest zone reached the low population trigger points for common wallaroos, in 2026.

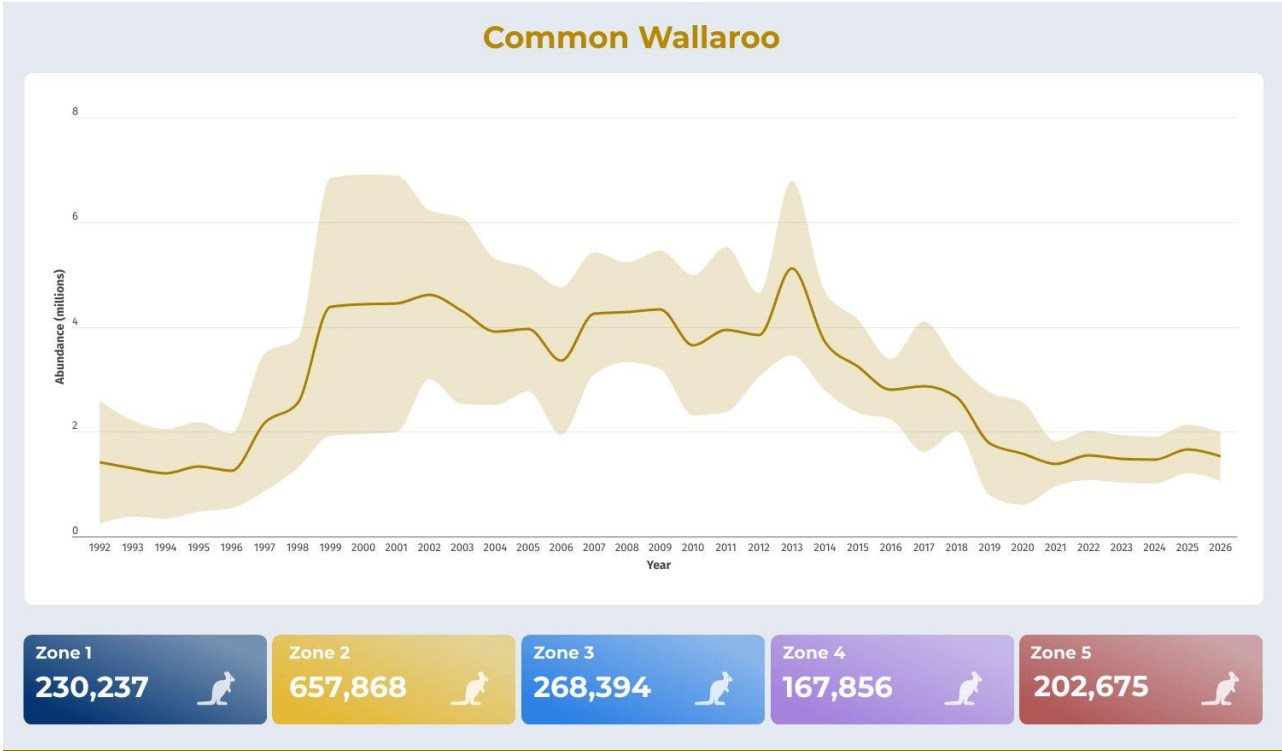


Figure 4: Smoothed common wallaroo abundance 1992 - 2026. Density estimates for 2021-2025 were derived from retrospective DSMs. Earlier estimates (1992-2020) were adjusted from historical MCDS density estimates using correction factors based on the mean difference between DSM and MCDS estimates from 2021-2025 for each species and harvest zone. Inset boxes indicate the 2026 population within harvest zones. Note: estimates corrected with a 1.2 correction factor from 1992 - 2010 and a 1.85 correction factor from 2011 - present.

Harvest Quota

Table 3: Average population density and abundance estimates for 2026 and proposed sustainable use quotas for the 2027 commercial harvest. Commercial harvest quotas are rounded to the nearest 50.

Species	Zone	Density (per km ²)	Population estimate	Harvest %	Quota	DMP ¹
Eastern grey kangaroo	Zone 1	0	0	NA	NA	NA
	Zone 2	3.49	1,147,118	7.5% ²	86,050	22,942
	Zone 3	2.90	655,728	15%	98,350	13,115
	Zone 4	23.58	3,471,966	15%	520,800	69,439
	Zone 5	8.25	3,277,907	10%	327,800	65,558
Red kangaroo	Zone 1	7.50	2,370,443	10%	237,050	47,409
	Zone 2	7.45	2,580,732	20%	516,150	51,615
	Zone 3	6.91	1,584,263	20%	316,850	31,685
	Zone 4	5.60	712,566	20%	142,500	14,251
	Zone 5	1.95	323,581	10%	32,350	6,472
Common wallaroo	Zone 1	0.74	230,237	10%	23,050	4,605
	Zone 2	1.88	657,868	15%	98,700	13,157
	Zone 3	1.17	268,394	15%	40,250	5,368
	Zone 4	1.14	167,856	15%	25,200	3,357
	Zone 5	0.50	202,675	10%	20,250	4,054

¹ Lethal damage mitigation permit (DMP) quotas are set at 2% of the estimated population.

² Low population threshold reached – quota is reduced by 50%.

Conclusion

In the 2025 harvest period, only 20.7% of the commercial harvest quota was utilised, with the highest percentage of quota used being 82% for common wallaroo in Zone 4, 12.3% of the possible 15% quota of the population in that zone. The overall harvest was male biased, with females comprising 10.1% of the overall harvest. Across all species, harvest take was just 3.1% of the overall population.

The 2026 aerial surveys showed a slight decrease in eastern grey kangaroo abundance across the harvestable zones, except for one zone in the south of the state. A decrease in common wallaroo abundance across most harvest zones was observed, except for the central west where abundance increased. Red kangaroos, in two harvest zones, increased sharply in abundance, where slight decreases in others were observed. All demonstrated variabilities are within natural fluctuations. Long-term trends data from 1992 – present (Figures 2 – 4), demonstrate considerable fluctuations in populations of all species over time, driven predominantly by environmental conditions. The restricted quota for eastern grey kangaroos in Zone 2 will be maintained in 2027 due to low population thresholds being reached.

This submission details the recommended quotas for the three commercially harvestable macropod species in Queensland, for 2027.

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Appendix 1. Zone-specific DSM densities per km² of the commercially-harvested macropod species 2006–2026

Eastern grey kangaroo																						
Harvest Zone	Study site	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Zone 1	Boulia Cloncurry Mount Isa	0.05	0.00	0.01	0.00	0.07	0.00	0.00	0.02	0.01	0.00	0.02	0.03	0.04	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Zone 2	Barcaldine Blackall Longreach Wondrah Winton Julia Creek Flinders	7.60	7.58	8.60	10.91	6.72	10.85	13.13	20.44	14.29	9.29	7.15	6.57	6.49	3.61	3.20	2.42	3.71	2.62	3.54	3.99	3.49
Zone 3	Charleville Quilpie Cunnamulla Thargomindah	5.60	2.67	5.00	2.89	5.67	13.30	13.89	15.48	12.10	10.92	7.34	5.88	3.53	1.60	0.90	1.68	2.03	1.59	1.89	3.42	2.90
Zone 4	Injune Roma Bollon Westmar Chinchilla	9.42	10.49	4.02	10.38	13.47	18.67	23.39	25.73	27.13	25.67	23.61	25.38	27.88	23.86	15.82	15.00	16.64	17.29	20.27	19.50	23.58
Zone 5	Taroom Charters Towers Central Highlands Texas Rockhampton Burnett	3.32	3.76	3.78	2.87	3.22	4.27	5.32	5.63	5.94	7.37	6.83	6.29	7.83	9.37	6.80	5.41	11.48	5.38	7.29	10.70	8.25

Red kangaroo																						
Harvest Zone	Study site	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Zone 1	Boulia Cloncurry Mount Isa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87	1.74	1.61	1.58	1.58	4.36	7.83	7.15	7.96	8.54	7.50
Zone 2	Barcaldine Blackall Longreach Windsor Winton Julia Creek Flinders	10.93	9.11	12.00	12.80	9.04	13.01	14.57	18.44	16.35	16.33	12.38	14.85	14.95	13.30	11.81	6.31	3.17	6.36	8.24	4.47	7.45
Zone 3	Charleville Quilpie Cunnamulla Thargomindah	3.77	5.35	5.89	5.98	4.95	9.66	9.85	12.16	11.70	11.73	4.85	4.53	4.39	4.63	4.43	4.40	5.83	4.83	6.67	7.58	6.91
Zone 4	Injune Roma Bollon Westmar Chinchilla	2.36	2.39	2.71	2.95	2.66	2.81	2.60	2.59	2.80	2.99	3.86	3.61	3.50	3.68	3.52	2.73	3.07	2.63	4.10	4.28	5.60
Zone 5	Taroom Charters Towers Central Highlands Texas Rockhampton Burnett	0.01	0.02	0.01	0.00	0.22	0.15	0.08	0.07	0.07	0.19	1.23	1.49	1.65	1.81	1.88	0.75	2.10	0.76	2.06	2.61	1.95

Common wallaroo																						
Harvest Zone	Study site	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Zone 1	Boulia Cloncurry Mount Isa	0.21	0.00	0.46	0.00	0.36	0.19	0.14	0.10	0.00	0.01	0.15	0.55	0.95	0.73	0.73	0.29	1.84	0.33	0.48	1.37	0.74
Zone 2	Barcaldine Blackall Longreach Windsorah Winton Julia Creek Flinders	6.45	8.87	9.42	9.58	4.87	5.89	6.08	10.67	6.47	4.94	3.39	2.74	2.33	1.39	1.35	1.82	1.08	2.01	1.90	1.42	1.88
Zone 3	Charleville Quilpie Cunnamulla Thargomindah	2.33	1.81	2.87	2.37	5.53	5.77	5.30	4.01	4.55	5.25	3.92	3.10	2.50	0.70	0.84	1.07	1.14	1.09	1.14	1.23	1.17
Zone 4	Injune Roma Bollon Westmar Chinchilla	3.37	2.66	1.22	2.05	3.09	2.73	2.42	1.82	1.26	0.79	1.98	3.06	2.56	1.91	1.73	1.15	1.12	1.15	1.12	1.91	1.14
Zone 5	Taroom Charters Towers Central Highlands Texas Rockhampton Burnett	0.00	0.84	0.00	0.33	0.28	0.26	0.25	0.41	0.57	0.49	0.95	1.14	1.46	1.50	1.06	0.61	0.43	0.64	0.55	0.46	0.50