Rebecca Vassarotti MLA
Minister for the Environment
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23/524

Mr Tom Duncan
Clerk
ACT Legislative Assembly
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Dear Mr Duncan

Thank you for your letter dated 9 May 2023 about E-PET-010-23 that was lodged by Ms Lawder MLA with the Assembly on 9 May 2023. Pursuant to Standing order No. 100 of the ACT Legislative Assembly, I am pleased to provide you with this reply and supporting information to address the subject of the petition.

The ACT Government has the significant responsibility of managing some of Australia's last remaining high quality natural temperature grassland and grassy woodlands. These areas provide habitat to many plant and animal species that are threatened with extinction.

The ACT Government has decades of experience in managing all threats to these critical ecosystems, including the persistent overgrazing by kangaroos. Whilst confronting to some individuals and groups within the community, the ACT's kangaroo management program operates on proven science, extensive experience and a continual improvement philosophy to help ensure kangaroo numbers remain sustainable and that these critical ecosystems remain resilient and healthy.

Yours sincerely

Rebecca Vassarotti
Minister for the Environment
10/6/2023

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Supporting information

Achieving sustainable kangaroo populations

Eastern Grey Kangaroos are an integral component of the native grasslands and woodlands within the ACT. Kangaroo grazing is important for maintaining the health and function of these ecosystems. The purpose of the kangaroo management program is to moderate, not eliminate, kangaroo grazing in ACT nature reserves by keeping kangaroos at sustainable densities.

Specifically, the aim of kangaroo management in ACT lowland grassy ecosystems is to maintain kangaroos at densities that conserve the natural integrity of the ecological community and result in the maintenance of healthy habitat for other plants and animals, including several key threatened species.

Various scientific studies have been undertaken on the relationship between kangaroo populations and grassy layer structure, and relationships between grassy layer structure and the biodiversity of other native species such as beetles, birds, reptiles, and plants. Kangaroo densities are managed to maintain average grass heights between 5 -15 cm because research has shown that grass in this height range is associated with providing the maximum biodiversity benefits for both native plant and animal species. Further information on the research informing the management program can be found at:
Macropod research - Environment, Planning and Sustainable Development Directorate - Environment (act.gov.au).

The sustainable number of kangaroos to remain in priority nature reserves is calculated in accordance with the *Nature Conservation (Eastern Grey Kangaroo) Conservation Culling Calculator Determination 2018* (which is an instrument under the Eastern Grey Kangaroo: Controlled Native Species Management Plan 2017). In recent years, annual site-specific vegetation monitoring has been incorporated into the program which allows the output of the culling calculator to be adjusted to account for the current vegetation conditions. This means in rainy years with high grass growth, the sustainable number of kangaroos to remain is adjusted upward to account for the additional food resources available. In hot and dry years, where there is little grass growth, or in severely overgrazed reserves where the grassy layer needs to recover, the number of kangaroos to retain would be revised down. Annual population estimates are then used to calculate how many, if any, kangaroos need to be culled to achieve the desired population density. Minimum population densities are retained to ensure no risk of extinction from culling activities.

Information about vegetation assessments, kangaroo population surveys, target densities and management recommendations is made available in the Eastern Grey Kangaroo Conservation Management Advice Reports published online at: https://www.environment.act.gov.au/nature-conservation/wildlife-management/eastern-grey-kangaroos. The 2023 report will be made available at the conclusion of the current culling program.

ACT Kangaroo Population surveys

The ACT Government relies on globally recognised best practice scientific methodologies for undertaking kangaroo population estimates. Methods for counting kangaroos are described in the Eastern Grey Kangaroo: Controlled Native Species Management Plan (2017) (EGK:CNSMP) and in the 2021 peer reviewed publication "How many macropods? A managers guide to small-scale population surveys of kangaroos and wallabies" available at: https://onlinelibrary.wiley.com/doi/10.1111/emr.12485.

In 2014, Kurahaupo Consulting independently reviewed the kangaroo population count methods, count results, the method for determining the number of kangaroos to cull in the ACT, and the science behind the relevant parts of the 2010 Kangaroo Management Plan (the key policy driver at the time). The review endorsed the ACT Government's counting methods and culling advice.

The ACT Government currently uses three methods for estimating kangaroo populations:

- Direct counts – Direct counts involve a small group of observers searching the entire site in a coordinated way and counting all individual kangaroos without missing any or counting any more than once. This method is only suitable for small sites with open vegetation and requires a high amount of knowledge about the site and the behaviour of the animals. More than one count is carried out to ensure a reliable, repeatable estimate has been derived.
- Sweep counts – Sweep counts involve a coordinated line of people walking across a site and counting the kangaroos that move through the line. This method requires careful coordination of the counters, aided by the use of two-way radios and maps. Repeat counts are carried out to ensure a reliable, repeatable estimate has been derived. This type of count is suitable for sites larger than those that can be counted directly, and where the vegetation and terrain allow for good visibility from one counter to the next.
- Walked Line Transect Surveys – The walked line transect method is currently the most common method used by the ACT Government and is suited to larger sites where kangaroos cannot be reliably counted by a direct or sweep count. This type of survey involves an observer walking linear transects and, upon encountering kangaroos, recording a GPS location, the number of kangaroos observed in the group and the distance and compass bearing to the group. These observations are then analysed using the program 'Distance' to provide a population estimate for the whole area. Importantly, surveys utilising this method adopt linear transects which are unbiased with regard to landscape features such as tracks or waterbodies, that are known to influence the distribution of kangaroos across the landscape and hence risk a bias in abundance estimates. Observers walk approximately 44 km of transects per site over approximately 11 days. Surveys are undertaken in the early morning, when kangaroos are evenly dispersed across the grazing landscape and are most likely to be detected from survey lines.

These methods are described in more detail in the peer reviewed publication mentioned above.

The ACT Government was provided with a redacted version of the report prepared by Jane Robinson and John Grace, "Eastern Grey Kangaroos in Canberra Nature Park. Population estimates and culling history 2009-2021". The ACT Government is also aware of more recent surveys undertaken by the "Save Canberra's Kangaroos" community group. The ACT Government is a supporter of citizen science and commends the authors for the report. However, the method used by this group to

survey kangaroo populations is inappropriate for most sites in the ACT. The method is described by the authors as "Direct Observational Count". As noted above, direct counts are only suitable for small sites with open vegetation and require the entire area of the site to be searched in a single visit. This method was applied to all sites by the citizen science group and on many occasions only part of a site was surveyed in a single visit. This approach has a high likelihood of underestimating the true kangaroo population size.

Staff from the ACT Government have recently provided information to members of "Save Canberra's Kangaroos" about appropriate count methods for Farrer Ridge Nature Reserve. It is intended that further discussions will be held with members of this group to provide additional information about the currently used counting methods.

No identified need for kangaroo management program suspension

The ACT Government's kangaroo management policy and programs are based on scientific knowledge supported by ongoing research, appropriate regulation and monitoring and national codes of practice. Ongoing improvement and review have been, and will continue to be, a key feature in the development of kangaroo management policy and the implementation of management programs in the ACT.

The ACT Government is fully transparent in the science behind the kangaroo management program, the lengths that it goes to with respect to animal welfare issues and the community perceptions to kangaroo management. Extensive information is available on the program's website (https://www.environment.act.gov.au/parks-conservation/plants-and-animals/wildlife-management/eastern-grey-kangaroos).

The key review processes that have been undertaken since the program began in 2009 include:

- 2010 – The ACT Kangaroo Management Plan was released. This plan provides principles, objectives and policies relating to kangaroo management in the ACT. Its explanations include over 400 references including approximately 125 peer reviewed science journals and 155 books or book chapters, most of which have been peer reviewed.
- The conservation cull has been challenged in the ACAT three times: 2012 (did not go to hearing), 2013 and 2014 (reported in *Animal Liberation ACT v Conservator of Flora and Fauna (Administrative Review)* [2014] ACAT 35). Additionally, the cull of Eastern Grey Kangaroos on Defence land was challenged in 2009. All four challenges were unsuccessful and the ACAT held that the conservation cull on both Territory and Defence land was valid.
- 2014 – Kurahaupo Consulting independently reviewed the kangaroo population count methods, count results, the method for determining the number of kangaroos to cull in the ACT, and the science behind the relevant parts of the 2010 Kangaroo Management Plan. The review endorsed the ACT Government's counting methods and culling advice.
- 2017 – The Eastern Grey Kangaroo: Controlled Native Species Management Plan was released. This plan is an update on the 2010 Kangaroo Management Plan and applies only to Eastern Grey Kangaroos in the ACT. It is a statutory plan under the *Nature Conservation Act 2014* and includes two instruments detailing the process for calculating the number of kangaroos to cull for conservation and rural purposes. This plan incorporates relevant research conducted since 2010, and some updates to policies and codes of practice.

- 2018 –The ACT Government's adaptive management approach to managing kangaroo impacts on conservation lands was reviewed by a panel of experts during a Kangaroo Management Research Workshop. A report was prepared detailing recommendations, including the adoption of a management goal for grassy ecosystems of maintaining native grass heights between 5 and 15cm tall. This recommendation has become a key component of the management program. The review report is available online at: https://www.environment.act.gov.au/__data/assets/pdf_file/0006/1550292/kangaroo-management-research-report-april-2019.pdf.
- 2008, 2011, 2015, 2019 and 2022 – Phone polls of ACT residents opinions to kangaroo management have been undertaken (see below).
- In 2021 staff from ACT Government contributed to numerous peer reviewed journal articles that were published in the special issue "Optimum management of overabundant macropods" in the journal Ecological Management & Restoration, available at: https://onlinelibrary.wiley.com/toc/14428903/2021/22/S1.
- Macropod culling is conducted under the strictest animal welfare standards. An independent audit of compliance with National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Non-Commercial Purposes is undertaken at 5–7-year intervals. A 2017 audit found that all aspects of the Code of Practice were complied with and can be viewed at https://www.environment.act.gov.au/__data/assets/pdf_file/0009/1556892/animal-welfare-assessment-kangaroo-culling-2017.pdf.

Current reviews

Current reviews being undertaken by the ACT Government include:

- Update to community support research.
  Completed in December 2022, the Environment Planning and Sustainable Development Directorate contracted Micromex Research to undertake a random telephone survey of 605 ACT residents to gauge current attitudes towards kangaroos and kangaroo management. Key results from the 2022 survey include:
  - 54% of respondents were satisfied or very satisfied with ACT Government's current management of kangaroos.
  - 76% believe the culling of kangaroos is appropriate under certain circumstances.
  - 66% are supportive of kangaroo culling for the conservation of grassland and woodland animals.
  - 71% believe it is important/very important to develop and apply fertility control methods to control the breeding of kangaroos in Canberra.

Overall, the results of the survey show that most ACT residents value kangaroos and support the ACT Government's management practices. However, there remains the need for the government to continually remind and reaffirm the goals and purpose of kangaroo management in the ACT to ensure the community has access to information about the program.

- Review the 2017 Eastern Grey Kangaroo: Controlled Native Species Management Plan.
  A review of the plan is being undertaken in 2023 and will include:
  - Evaluation of the effectiveness of the conservation culling program in achieving target population densities and grass structure,

- Review of the 2017 Plan, the culling calculator instruments, the methods used to estimate kangaroo density and the above evaluation by an independent reviewer,
- Consultation with key stakeholder groups including the Ngunnawal community.

The process of engaging a suitable independent reviewer is underway. Recommendations from this review will be made public once completed. The full review and revision of the Plan is expected to be completed by the end of 2023.

- An independent veterinary audit of the 2023 conservation culling program to ensure continued regard to animal welfare issues. This audit is currently underway and will be publicly released when it is made available to the Directorate.