

The Hon Penny Sharpe MLC

Minister for Climate Change, Minister for Energy,
Minister for the Environment, Minister for Heritage,
Leader of the Government in the Legislative Council



MD24/1561

Ms Arizona Hart
Principal Council Officer
Committee Office
Legislative Council
Parliament of New South Wales
6 Macquarie Street
SYDNEY NSW 2000

By email:

Dear Ms Hart

Thank you for your correspondence requesting responses to questions on notice, supplementary questions and transcript corrections in relation to the Animal Welfare Committee Inquiry into proposed aerial shooting of brumbies in Kosciusko National Park hearing held on 5 February 2024.

I have enclosed my responses to your request.

Please note that the RSPCA NSW and National Parks and Wildlife Service staff details have been redacted from some documents included with my response, with the exception of references to Mr Steve Coleman, CEO RSPCA NSW, and Mr Atticus Fleming, Deputy Secretary, National Parks and Wildlife Service.

If you have any further questions, please contact Mr Atticus Fleming, Deputy Secretary, National Parks and Wildlife Service, on or at

Sincerely

Penny Sharpe MLC

Minister for Climate Change, Minister for Energy,
Minister for the Environment, Minister for Heritage

12/3/24,
Enclosures:

1. Responses to questions taken on notice
2. Response to supplementary question (with attached redacted correspondence between NPWS and the NSW RSPCA about the standard operating procedure)



INQUIRY INTO THE PROPOSED AERIAL SHOOTING OF BRUMBIES IN KOSCIUSZKO
NATIONAL PARK

Animal Welfare Committee

Answers to Questions on Notice

Hearing: 5 February 2024

No. Question**1. Extension of consultation period – Transcript page 3-4**

The Hon. WES FANG: I appreciate that, Minister; however, I've done a little bit of a time line of what I believe happened in relation to the request for feedback. Obviously on 7 August, I believe it is, you announced that you'd be seeking feedback.

The Hon. PENNY SHARPE: Yes.

The Hon. WES FANG: I think it opened on 8 August. It was due to close on 11 September, but you'd be aware that it was extended to 15 September. Did you authorise that extension?

The Hon. PENNY SHARPE: I'd need to take on notice the detail of that time line. But I would've agreed to it because the point generally is if people ask for an extension of time in relation to a matter such as this, I would've granted it. I wouldn't have been seeking to—

The Hon. WES FANG: Would you have done that in writing?

The Hon. PENNY SHARPE: I'd need to take on notice, because it might just be that we just said yes—it was a discussion. I'd need to check. But I don't believe so, because if there was paperwork around this it would've been provided.

The Hon. WES FANG: But in relation to that, then, you've had the submissions close on 11 September.

You've provided advice to that effect. I think at the time you were about—

The Hon. PENNY SHARPE: Sorry, are you suggesting that extending the time frame was the wrong thing to do?

The Hon. WES FANG: No, I'm suggesting that extending the time frame should have been captured in the documents that were provided from the office.

The Hon. PENNY SHARPE: As I said, I'll take it on notice in terms of what the trigger was, but it's quite likely—as I said, I'll take it on notice to check but it is very likely that we would have just said, "Let's just extend it for another four days," and there wouldn't necessarily have been paperwork around that.

The Hon. WES FANG: Minister, you are extending a deadline for a submission—

The Hon. PENNY SHARPE: Which is a good thing, I would have thought.

The Hon. WES FANG: I am not questioning that. I am questioning whether there's an issue around the fact that you've extended the deadline on a verbal instruction only and that there was no request for you to put that in writing. If it was in writing, it should have been returned under the SO 52.

The Hon. PENNY SHARPE: As I said to you, I will find out, and there hasn't been. I'll check. I've got nothing more to add on this.

The Hon. WES FANG: Minister, the only thing I can determine is that in relation to this, either the emails have been deleted or the documents have been shredded.

The Hon. PENNY SHARPE: I reject that.

The Hon. STEPHEN LAWRENCE: What a baseless assertion.

The Hon. WES FANG: This is a very serious issue, Minister, that you've—

The Hon. STEPHEN LAWRENCE: Based on what?

The Hon. WES FANG: The chief of staff—

The Hon. PENNY SHARPE: Is there a question here?

The Hon. WES FANG: The chief of staff has indicated that there are no documents in the office.

The Hon. PENNY SHARPE: Correct.

No. Question

The Hon. WES FANG: Yet you've admitted to me that you would have been consulted and approved—

The Hon. PENNY SHARPE: I may have been consulted. I said that I will take it on notice.

The Hon. WES FANG: No, you said you would have been consulted in the extension. There are no documents that are provided to indicate that you have anywhere approved the extension. The extension saw those numbers go from 79 per cent to 82 per cent in approval of aerial culling, because the document that I have says 79 per cent and it has increased. So, Minister, where is that paperwork? Your office hasn't returned it.

The Hon. PENNY SHARPE: I utterly reject that. I have said that I will check what the process was in terms of the extension and I will provide it to the Committee.

Answer:

There was no formal or publicly announced extension to the exhibition period, but some submissions were received after Monday 11 September and were accepted up to Friday 15 September 2024. This was determined by my department, consistent with reasonable, normal practice for managing submissions on matters of significant public interest.

2. Standing order 52 – Transcript page 6

The Hon. WES FANG: Did you seek legal advice as to the requirements in relation to returning documents?

The Hon. PENNY SHARPE: If there is material that needed to be provided as a result of this request it would have been provided.

The Hon. WES FANG: Minister, that's not the question I asked.

The Hon. PENNY SHARPE: I've answered.

The Hon. WES FANG: Did you seek legal advice?

The Hon. PENNY SHARPE: If there are documents that needed to be provided, then they will be provided.

The Hon. WES FANG: Minister, that is not the question I asked.

The Hon. PENNY SHARPE: It is.

The Hon. WES FANG: Did you seek legal advice in relation to the return? Because you didn't return it.

The Hon. PENNY SHARPE: I don't believe so, no, because this is a very—

The Hon. WES FANG: So will you take it on notice?

The Hon. PENNY SHARPE: Are you going to let me finish?

The Hon. WES FANG: Are you going to take it on notice?

The Hon. PENNY SHARPE: Are you going to let me finish?

The Hon. WES FANG: Yes.

The Hon. PENNY SHARPE: Okay, thank you. This is a very standard SO 52.

The Hon. WES FANG: I know.

The Hon. PENNY SHARPE: The requirements in relation to providing it are very straightforward. We are providing that as we said. Late? Yes, but we are providing it. If you want me to take it on notice and if there's an update that I need to provide to the Committee, I will do so.

No. Question

Answer:

Neither I nor my office sought legal advice in preparing the Standing Order 52 return.

3. 3,000 aerial culling limit – Transcript page 12

The Hon. ROBERT BORSAK: What's your understanding of the limit to which the aerial culling program is going to reduce the numbers in the park to?

The Hon. PENNY SHARPE: It's a good question. I'll give you my answer, but if I want to add to it, I might come back to the Committee around that. The department is taking a very conservative approach. I know there's arguments about numbers, but if we're roughly talking about it, it's between 12,000 to 20,000 horses that we believe are in the park. We're required to reduce it down to 3,000. The trigger point—no pun intended—in terms of watching that on the way down is that we're really working on that lower level of around the 12,000. There'll be a re-examination over time as we're looking at the numbers, if that makes sense.

The Hon. ROBERT BORSAK: That was my next question. It's written into the statute that it has to be 3,000, do you agree with that?

The Hon. PENNY SHARPE: Yes.

The Hon. ROBERT BORSAK: At what stage and how will you know that you've reached that 3,000 limit park wide?

The Hon. PENNY SHARPE: It's a good question. Let me come back to you. I've got a working knowledge of how that's going to occur, but I'd rather provide you with the details—with the experts.

Answer:

The Kosciuszko National Park Wild Horse Heritage Management Plan requires the wild horse population to be reduced to 3,000 by 30 June 2027. Implementation of control measures is informed by the outcome of wild horse population surveys. These surveys use best practice scientific methods and are peer-reviewed.

The lower end of the current wild horse population estimate – which is 12,797 wild horses – is being used to guide the current control program. This is an appropriately cautious and conservative approach.

The National Parks and Wildlife Service will track the number of horses removed against this current lower estimate and conduct ongoing regular population surveys to further inform the level of future control required. This will ensure the target of 3,000 wild horses retained in the park by June 2027 is met.

In 2024, the population survey will focus on the wild horse retention management areas and is likely to include trials of drone technology and mark recapture distance sampling.

4. Managing culling limit – Transcript page 13

The Hon. ROBERT BORSAK: What confidence can local residents who live in the area around the park and those contractors who work in the park have in the National Parks and Wildlife Service that they will in fact do the right thing and not break the law and go below 3,000?

The Hon. PENNY SHARPE: I will come back to you with the detail of how we'll manage that number, but they should be confident in that. We're very serious about it. As I said, we're taking a very conservative approach at the lower levels. There is a view that we could have as many as 20,000 horses in the park, and we need to continually work through that to make sure that we get down to 3,000. But I'll get you the details about how they're going to do that.

No. Question

Answer:

Refer to the response to Question 3.



INQUIRY INTO THE PROPOSED AERIAL SHOOTING OF BRUMBIES IN KOSCIUSZKO
NATIONAL PARK

Animal Welfare Committee

Answers to Supplementary Questions

Hearing: 5 February 2024

Questions from the Animal Welfare Committee

- 1. Did the Minister or NPWS receive any written advice, notes or edited feedback from RSPCA NSW regarding the proposed standard operating procedure for shooting wild horses, including but not limited to, advice around the decision to allow shooting during foaling season? If so, please provide a copy of all documents recording this advice.**

Answer:

The RSPCA NSW was consulted by the National Parks and Wildlife Service on the draft standard operating procedure for the ongoing aerial shooting of wild horses in Kosciuszko National Park. I have attached the invitation to comment from the National Parks and Wildlife Service and the RSPCA NSW response.

The RSPCA NSW had previously been consulted and provided advice during preparation of the standard operating procedure for the preliminary program of aerial shooting. I have attached the invitation to comment from the National Parks and Wildlife Service and the RSPCA NSW response. The RSPCA NSW also observed the preliminary program and provided written feedback, which has been publicly released.

From: Steven Coleman [REDACTED]
Sent: Thursday, 7 December 2023 2:55 PM
To: Atticus Fleming [REDACTED]

Subject: RE: in confidence

Dear Atticus,

Thank you for your email and attachment.

Having discussed the issue/s with our team, we have no amendments and/or additions to make at this time.

Many thanks.

Steve

From: Atticus Fleming [REDACTED]
Sent: Monday, 4 December 2023 5:09 PM
To: Steven Coleman [REDACTED]

Subject: [External] in confidence

Hi Steve

Thank you again for the RSPCA NSW input on the Standard Operating Procedure (SOP) for the preliminary program of aerial shooting and for your input and advice when observing implementation of that preliminary program.

NPWS is committed to the highest standards of animal welfare. To that end:

- I have attached the draft SOP for our ongoing aerial shooting program.
 - There are minor revisions only to the existing SOP, noted in revision mode.

- NPWS would value any input the RSPCA may have on the revised SOP. Your advice by the end of this week would be appreciated, but please don't hesitate to let me know if you require more time.
- Subject to finalising the SOP, NPWS is currently intending to conduct aerial shooting from next Tuesday 12 Dec – probably for ~4 days (noting this information is confidential). If the RSPCA would like to attend/audit this operation, please make arrangements with [REDACTED]

Thanks again for your advice.

Atticus

Atticus Fleming AM
A/Coordinator General, Environment and Heritage

Environment and Heritage Group | Department of Planning and Environment

4 Parramatta Square, 12 Darcy St, Parramatta, NSW 2150.

www.dpie.nsw.gov.au



The Department of Planning and Environment acknowledges that it stands on Aboriginal land. We acknowledge the traditional custodians of the land and we show our respect for elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

[REDACTED]

From: [REDACTED]
Sent: Wednesday, 27 September 2023 2:58 PM
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: NPWS DRAFT SOP wild horse control for review
Attachments: DRAFT SOP_for RSPCA Review_EA.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Hi [REDACTED],

There are some comments, on behalf of RSPCA, for your consideration, in the attached.

It is also my view that it would be beneficial for these SOPs to become publicly accessible when finalised. As you are not simply adopting the national, published PestSmart SOPs, I think it risks leaving the impression that your SOPs may be significantly divergent. I believe the transparency will be beneficial.

Kind regards,
[REDACTED]

From: [REDACTED]
Sent: Friday, 22 September 2023 5:02 PM
To: [REDACTED]
Cc: [REDACTED] Steven Coleman [REDACTED]
Subject: [External] NPWS DRAFT SOP wild horse control for review

Hi [REDACTED]

Please find attached for your review the latest draft NPWS SOP for control of wild horses. The SOP is for a preliminary (trial) aerial shooting program.
Please note that use of the method is pending a decision by the Minister on whether to adopt amendments to the Wild Horse Heritage Management Plan to include aerial shooting as an available control method.

The draft SOP has been reviewed internally and by our consultant wildlife vet.

Is it possible for return of your comments please by **COB next Wednesday 27 September**? I do apologise for the tight timeframe – we are hoping to get this to the Minister as part of a package of documents to aid in decision making now that the draft amendment to the plan submission period has closed.

I am happy to meet with you both if required to go over any concerns or queries you may have on the draft SOP.

[REDACTED] – I hope you are feeling better!

Thanks again



[REDACTED]
[REDACTED]
Park Operations Projects
NSW National Parks & Wildlife Service

[REDACTED]
T [REDACTED]
M [REDACTED]
W environment.nsw.gov.au

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NSW NATIONAL PARKS & WILDLIFE SERVICE

Aerial shooting – preliminary program

Wild horse control standard operating
procedure

Document control

Author	Feral Animal and Weeds unit, NPWS
Date of original endorsement	XX September 2023
Date last reviewed	XX September 2023

Related documents

NPWS wild horse control standard operating procedures:

- NPWS H001 Ground shooting
- NPWS H002 Passive trapping
- NPWS H003 Removal for domestication (rehoming)
- NPWS H004 Removal for knackery or abattoir
- NPWS H005 Killing in yards (in preparation as of September 2023)
- NPWS H006 Mustering (in preparation as of September 2023)
- NPWS H007 Euthanasia (in preparation as of September 2023)
- NPWS H008 Problem wild horses (in preparation as of September 2023)

Sharp T, 2011. *Aerial shooting of feral horses. Standard Operating Procedure*. PestSmart. Centre for Invasive Species Solutions, Canberra, Australia. Available at: <https://pestsmart.org.au/toolkit-resource/aerial-shooting-of-feral-horses>

NPWS Aviation Safety Policy

NPWS Aerial Shooting (Feral Animal Aerial Shooting Team (FAAST)) Aviation Standard Operating Procedure

NPWS Firearms Management Manual

The FAAST Manual: Feral Animal Aerial Shooting Team

NPWS Daily aerial shooting record – ante-mortem

NPWS Daily aerial shooting record – post-mortem

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Background

Wild horses in national parks negatively impact the natural environment, cultural and historic heritage, and public safety. The National Parks and Wildlife Service (NPWS) is committed to managing the negative impacts of wild horses in New South Wales (NSW) national parks through implementation of a management control program which is consistent with relevant Commonwealth and/or NSW animal welfare legislation, regulations, codes of practice and standard operating procedures.

This Standard Operating Procedure (SOP) is specific to NPWS operating on NPWS estate and does not replace or override any NSW and Commonwealth legislation. The SOP has been developed following consultation with the RSPCA NSW and relevant specialists.

Application

This SOP operationalises a preliminary aerial (helicopter) shooting program in Kosciuszko National Park to be conducted in 2023–2024 on an initial group of wild horses (not exceeding 500).

The rationale for a preliminary program is to allow monitoring to be undertaken by independent observers (Greene et al. 2013). The observational animal-based data collected during implementation of this SOP will be used to develop *SOP NPWS H009 Aerial Shooting*, which once finalised, will meet the requirements of the *Kosciuszko National Park Wild Horse Heritage Management Plan* in relation to aerial shooting (pending adoption of a draft amendment to include aerial shooting as an available control method). *SOP NPWS H009 Aerial Shooting* will also be applicable to operations intended to control wild horses in other national parks, where such control operations are approved.

Aerial shooting of wild horses is particularly useful in large, remote and/or inaccessible areas where the use of other control methods is not effective and/or practicable (Dobbie et al. 1993; Edwards et al. 2004).

The animal welfare outcomes of aerial shooting are enhanced when carried out by experienced, skilled and trained shooters, multiple shots are taken, and appropriate firearms, ammunition and shot placement are used (Hampton et al. 2017).

There are several key considerations that will guide the application of aerial shooting by NPWS:

- Shooting should be used in a strategic manner as part of a program designed to achieve sustained effective population control.
- Shooting of wild horses during this program will only be performed by approved NPWS *Feral Animal Aerial Shooting Team (FAAST)* accredited firearms users who have the necessary experience, licences and accreditation. Shooter skill has been shown in multiple studies to be the most important parameter affecting animal welfare (Hampton et al. 2014, 2017).
- The safe and effective management and use of firearms must comply with the *NPWS Firearms Management Manual*.

Animal welfare considerations

Impact on target animals

NPWS will use skilled and competent shooters, and appropriate firearms and ammunition, in a manner that results in the most rapid death possible.

NPWS will also ensure:

Commented [redacted]: Suggest replace "enhanced" with "improved". The term 'enhancing' animal welfare is usually synonymous with providing an animal with positive emotional states, not minimising negative which is clearly what we are talking about when destroying an animal.

Aerial Shooting – Preliminary Program – Wild Horse Control Standard Operating Procedure

- That shooters only target the head (brain) or chest (heart/lung).
- That shooters will not take a primary shot at an animal unless the anatomical target zone listed above are clearly visible.
- That, where practical, all horses in a social group will be killed before targeting other social groups.
- Since it is difficult to assess from the air whether an animal is dead, it is essential that a deliberate policy of 'overkill' be followed, where a minimum of two shots are used per animal. That is, after an initial chest or head shot, another shot must be fired into the chest to ensure death.
- A 'fly-back' procedure must be followed, in which the shooter is flown back over the shot animals to visually ensure death and apply follow-up shots to the chest (Hampton et al. 2021a). The fly-back procedure must be followed.
- That, in the event of a wounded horse, it must be located and killed as quickly as possible before targeting additional animals.
- In areas of closed vegetation canopies or on steep slopes, thermal detection equipment (Cox et al. 2023) must be available to permit quick detection and follow-up of non-fatally wounded horses.
 - Alternatively, or in addition, horses can be helicopter-mustered to adjacent areas with reduced canopy cover or slope, in situations where the total time required to achieve this is not excessive.
- That, where a lactating female horse is killed but no foal is present, all reasonable efforts will be made to find any dependent young and kill them as quickly as possible.

Commented [redacted]: There are two anatomical zones 'listed above'. Would it be more correct to edit to 'unless one of the anatomical target zones...?'

Impact on non-target animals

Shooting will only occur once a wild horse has been positively identified.

- Shooting is target-specific, i.e. a targeted wild horse will be positively identified before a shot is taken, thus avoiding direct harm to non-target animals.
- Non-target impacts of shooting may include noise disturbance.
- The use of lead (Pb)-free projectiles approved for use in this SOP avoids impacts of toxic lead residues in carcasses to wildlife scavengers. The potential impact of lead projectiles also approved for use in this SOP on wildlife scavengers is acknowledged.

Commented [redacted]: How does this accord with Pest Smart HOR002(Sharpe, 2011) that states "Aerial shooting should not be done if the nature of the terrain reduces accuracy resulting in too many wounding shots and prevents the humane and prompt despatch of wounded animals." It seems like your provision allows this to be attempted, accepts there will be more injuries and suggests a mitigation strategy for finding those wounded. I note in your first point of "shooting sequence" it suggests that you will always muster away from dense canopies but uses the word 'should'. To me there remains ambiguity about what this SOP requires/allows/prohibits in respect of dealing with areas of unsuitable terrain/vegetation.

Health and safety considerations

- A first aid kit must be available.
- Care must be taken when handling wild horse carcasses as they can transmit zoonoses such as Q-fever. Appropriate personal protective equipment, e.g. gloves, must be worn to protect skin. Routinely wash hands and other skin surfaces after handling carcasses and working in and around yards, and before eating, drinking and smoking. Horse carcasses are heavy, so care must be taken when lifting or dragging them.
- Visitor and staff safety is of great concern when undertaking aerial shooting operations. All participants in the program must review the Operational Shoot Plan and Job Safety Analysis (JSA). Notifications and park closures will be undertaken in accordance with NPWS aerial shooting checklists and procedures.
- Storage, use and transportation of firearms and ammunition must comply with relevant legislative requirements and the *NPWS Firearms Management Manual* and the *NSW FAAST Manual*.

- Aviation operations must comply with relevant legislative requirements, the *NPWS Aviation Safety Policy* and the *NPWS Aerial Shooting (FAAST) Aviation Standard Operating Procedure*.
- If on-ground post-mortem observations are being conducted, shot animals must always be approached from the dorsal (or spinal) side.

Equipment that may be used

Firearms and ammunition

- Firearms:
 - FN SCAR®-H semi-automatic rifle.
 - Aimpoint® red dot scope with zero magnification.
- Ammunition:
 - .308 Winchester®: 150 grain minimum (see approved ammunition table).
- Silencer/suppressor: B&T AG® (formally Brügger & Thomet AG®).
- FLIR ThermoSight® T75-clip on thermal scope.
- Thermal scope/monocular: minimum 640×480 sensor.
- Spotting scopes, monoculars and binoculars.

Commented [REDACTED]: Model TBC and added

Two functioning firearms of the specified make and model must be on-hand at all times in the aircraft.

The accuracy and precision of firearms should be tested before any shooting operation.

Aircraft

- Refer to the *NPWS Aerial Shooting (FAAST) Aviation Standard Operating Procedure* for aircraft requirements.
- Operations may involve the simultaneous use of multiple aircraft. Standard aviation practices will be followed to ensure wide spatial separation between simultaneously flying aircraft.

Procedures

Administration

- The following documents must be developed and approved for the operation:
 - Shooting operations plan.
 - Notification risk assessment.
 - Aerial shooting checklist.
 - Job safety analysis and job safety brief.
 - Review of environmental factors.
- The outcomes of operations must be recorded daily (refer to the *NPWS daily wild horse aerial shooting record forms* (ante-mortem and post-mortem)).

Personnel

- Each team must comprise three members as a minimum (there must be a pilot in command, primary shooter and air observer).
 - An independent observer (e.g. veterinarian, thermal operator) may be included in the team as required and if conditions permit.
- The shooter must hold current accreditation in accordance with the *FAAST Manual*.
- Refer to the *NPWS Aerial Shooting (FAAST) Aviation Standard Operating Procedure* for operator, aerial observer/navigator and pilot-in-command requirements.

Approved cartridges/calibres and ammunition

Projectile energy is an important determinant of welfare outcomes in wildlife shooting programs (Hampton et al. 2016). The maximum shooting distance of approved ammunition is the distance at which at least 2,711 Joules (2,000 foot pounds) of kinetic energy is delivered.

Before ammunition can be used, ballistic testing using tissue stimulant gel blocks must be undertaken to quantify shot precision, kinetic energy levels, and bullet penetration and deformation (Hampton et al. 2021b). Outcomes of the testing must be approved by an independent veterinarian prior to use on live animals.

.308 Winchester® ammunition: Sako 150 grain Powerhead Blade® (lead-free)

	Muzzle	50 m	100 m	150 m
Velocity (m/s)	840	804	769	734
Energy (J)	3,442	3,134	2,865	2,613

.308 Winchester® ammunition: Winchester 150gn PowerMax® Bonded protected hollow point (lead-based)

	Muzzle	50 m	100 m	150 m
Velocity (m/s)	860	817	775	734
Energy (J)	3,587	3,238	2,915	2,618

Above ammunition is manufactured and factory-loaded by Sako® and Winchester®, respectively.

Data above is from the manufacturers via their websites.

Both ammunition types above are approved for use.

Shooting sequence

- Targeted wild horses should be mustered away from watercourses and areas of dense vegetation before being shot, as wounded animals may be more difficult to locate in these terrain types.
- Chase time must be kept to a minimum.
- Once a wild horse (or group) is sighted and has been positively identified, the pilot should position the helicopter as close as is safe to the target animal in order to ensure an accurate shot.

Commented Consider removing the subjectivity of his. Would a pilot/shooter and observer have an informed and consistent view on how long is too long? The Hampton et al (2017) paper would, I thought, provide some guidance on what is acceptable.

Aerial Shooting – Preliminary Program – Wild Horse Control Standard Operating Procedure

- The pilot should aim to provide a shooting platform that is as stable as possible.
- A horse should only be shot at when:
 - It can be clearly seen and recognised.
 - It is within the effective range of the firearm and ammunition being used.
 - It is likely that the horse can be rapidly rendered insensible, with subsequent death without the animal regaining consciousness. If in doubt, do not shoot.
- All animals must receive multiple shots (also known as 'repeat shooting', 'insurance shots' or 'over-kill') to the target areas to minimise time to insensibility and the risk of non-fatal wounding (Hampton et al. 2021a).
- The initial shot to the chest is preferred since it is easier to achieve with a moving animal and moving shooting platform. However, the judgement of the shooter is paramount in determining the optimum initial shot placement for each target animal.
 - Immediately after delivering the initial shot, the shooter must deliver a minimum of one additional shot in the specified anatomical target areas.
- In a line of running animals, the animals at the tail end should be shot first and then move forward until all animals in the line have been shot.
- Dependant foals should be shot first.
- In the event of a suspected wounded animal, no further animals can be targeted. Every practical effort should be made to locate a suspected wounded animal. The animal must then be killed via additional shots delivered to the target area(s).

Commented [REDACTED]: Are there any other strategies to reduce the risk of orphaning/starvation of young at foot? Such as the timing, during the year, of using this strategy?

Aim points

Horses may be targeted in the head (brain) or the chest (heart-lung area). Refer to the *FAAST Manual* for head and chest shot aiming points.

Commented [REDACTED]: Should this be a "must". I think it is worth making very clear that any other alternatives are not allowable.

Carcass management

Carcasses will be left *in situ* unless there are site specific circumstances/requirements in which case they will be dealt with in an appropriate and reasonable manner.

References

- Cox TE, Paine D, O'Dwyer-Hall E, Matthews R, Blumson T, Florance B, Fielder K, Tarran M, Korcz M, Wiebkin A, and Hamnett PW. 2023. Thermal aerial culling for the control of vertebrate pest populations. *Scientific Reports*. 13: 10063.
- Dobbie W, Berman D, and Braysher M. 1993. *Managing Vertebrate Pests: Feral Horses*. Australian Government Publishing Service, Canberra.
- Edwards GP, Pople AR, Saalfeld K, and Caley P. 2004. Introduced mammals in Australian rangelands: future threats and the role of monitoring programmes in management strategies. *Austral Ecology*. 29: 40–50.
- Greene EA, Heleski CR, Ralston SL, and Stull CL. 2013. Independent Observer Pilot Program: an objective evaluation method for determining humane handling and welfare during wild horse gathers. *Journal of Veterinary Behavior*. 2: e7.
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