



NSWFOX SOP5

Trapping of foxes using padded foot hold traps

Background

The introduced European red fox (*Vulpes vulpes*) has a significant impact on native fauna and agricultural production. Trapping of foxes is undertaken in areas where poison baiting is unacceptable and other methods cannot be used e.g., semi-rural and urban/residential areas. Trapping may be useful for the control of nuisance animals but is not effective as a general fox control method. In urban/residential areas, cage traps are preferred over foot-hold traps as fewer injuries are sustained (target and non-target), non-target animals can be released unharmed and trapped foxes can be transported away from the area for euthanasia. Refer to *NSWFOX SOP6 Trapping of foxes using cage traps*. Foot-hold, padded-jaw traps should only be used at sites where the animal can be killed by shooting whilst still held in the trap.

This standard operating procedure (SOP) is a guide only; it does not replace or override the relevant legislation that applies in NSW. The SOP should only be used subject to the applicable legal requirements (including WHS) operating in the relevant jurisdiction.

Individual SOPs should be read in conjunction with the overarching Code of Practice for that species to help ensure that the most appropriate control techniques are selected and that they are deployed in a strategic way, usually in combination with other control techniques, to achieve rapid and sustained reduction of pest animal populations and impacts.

Application

- Trapping is time-consuming and labour intensive and is therefore an inefficient method for large-scale fox control.
- Traps have the potential to cause significant suffering and distress so should only be used when there is no suitable alternative.
- Humane and successful trapping requires extensive training and experience. Trapping by inexperienced operators can result in 'trap-shy' foxes that are difficult to catch because they have previously escaped from a carelessly prepared and presented trap. Similarly, poor technique can result in greater rates of injuries and non-target captures.
- Selection of appropriate traps and trap sites will minimise the damage, pain and distress caused to target and non-target animals.
- Every effort must be made to avoid animal deaths from factors such as exposure, shock, capture myopathy and predation.

- Once trapped, foxes are euthanased by shooting at the site of capture (observing relevant firearms restrictions).
- Traps must be used in accordance with relevant state legislation (*see Prevention of Cruelty to Animals Act 1979 NSW*). Use of steel-jaw traps is prohibited in NSW. Trapping with padded-jaw traps, cage traps and treadle snares is permitted.
- Shooting of foxes in traps should only be performed by skilled operators who have the necessary experience with firearms and who hold the appropriate licences and accreditation. Storage and transportation of firearms and ammunition must comply with relevant legislation requirements.
- In NSW, PAPP cloths, when incorporated with traps, must be used in accordance with the *Pesticides Act 1999* and the relevant Pesticide Control Order (that include distance restrictions, signage and notification requirements).

Animal welfare implications

Target animals

- Foot-hold traps cause pain and distress in two ways, pressure of the trap jaws on the captured limb and restraint of the animal. Injuries will inevitably occur to some animals, especially when they struggle to escape the trap. These range from swelling of the foot and lacerations to dislocations and fractures. Foxes may also inflict injuries to their feet and legs by chewing on the captured limb, and to their teeth, lips and gums by chewing at the trap jaws. To reduce capture distress, trapped foxes must be destroyed as quickly and humanely as possible.
- Traps must be inspected daily to prevent prolonged suffering from exposure, thirst, starvation and/or shock to foxes (and non-targets). Cloths (containing PAPP) which are incorporated onto the jaws of the trap have been developed to improve the humaneness of foot-hold traps. Traps fitted with PAPP cloths must still be inspected daily to minimise harm to non-target animals caught in the trap. Where the daily inspection of traps is problematic, deployment of alternative control measures such as baits or CPEs should be considered.
- It is preferable to set traps (with suitable chain length) at sites where vegetation can provide shade and shelter. However, sites should be avoided where there is a risk of the trapped animal becoming entangled in understorey vegetation or fences, which could result in dislocation of the limb.
- Where possible, trapping should be avoided when adverse weather conditions threaten the welfare of trapped animals.
- Captured animals must be approached carefully and quietly to reduce panic, further stress and risk of injury.
- To minimise the animal welfare implications of orphaning dependant cubs, it is preferable not to undertake trapping when vixens are lactating.
- If lactating vixens are caught in a trap, reasonable efforts should be made to find dependent cubs and kill them quickly and humanely by either shooting (with a single

shot to the brain) or by fumigation of the den with carbon monoxide (refer to NSWFOX SOP4 *Fumigation of fox dens with carbon monoxide*).

Non-target animals

- Traps are not target specific, so a wide range of non-target species may be caught. These can include birds (e.g., ravens, magpies, and pied currawongs), kangaroos, wallabies, rabbits, hares, echidnas, goannas, wombats, possums, bandicoots, quolls and sheep. If there is a high risk of trapping non-target animals, traps should not be set.
- Different groups of non-target animals suffer different levels of injury and distress. For example:
 - Wallabies often experience serious injuries e.g., dislocations, due to the morphology of their limbs and because they become very agitated when restrained.
 - Goannas (e.g., lace monitors) also suffer from dislocations and can die from hyperthermia.
 - Birds, rabbits and hares can be preyed upon by foxes, cats and wild dogs whilst caught in traps.
- Traps must not be set near areas such as waterholes or gully crossings that are regularly frequented by non-target species. Animal tracks and pads or holes in fences utilised predominately by non-target animals should also be avoided.
- Live non-target animals caught in traps must be examined for injuries and signs of illness or distress and dealt with as follows:
 - Animals that are unharmed or have only received minimal injuries such as minor cuts or abrasions should be immediately released at the site of capture.
 - Animals that have more severe injuries or are suffering from thermal stress should receive appropriate attention. An animal suffering from thermal stress can initially be placed in a suitable quiet holding area which provides warmth or shade to allow recovery before release. Animals with treatable injuries that cannot be immediately released or those failing to recover from thermal stress should be presented to a veterinarian or a registered wildlife carer for treatment.
 - Animals with injuries that are untreatable or that would compromise their survival in the wild should be euthanased using a technique that is suitable for the species. For more information on euthanasia techniques refer to [GEN001 Methods of Euthanasia](#).
- If wild dogs or feral cats are caught in the trap they must be euthanased quickly and humanely by a shot to the brain using an appropriate firearm (refer to NSWCAT SOP2 Trapping of feral cats using cage traps and NSWDOG SOP1 Trapping of wild dogs using padded foot-hold traps).
- If a domestic pet is caught, it should be taken to the nearest animal shelter, council pound or veterinarian where it can be scanned for a microchip and the owner contacted or assessed as to suitability for re-homing.
- Traps fitted with PAPP cloths may kill domestic and working dogs. Neighbours must be notified at least 72 hours in advance to allow them to take appropriate action e.g., restraint and/or muzzling. Signage and distance restrictions are also compulsory (refer to PCO).

Workplace health and safety considerations

- Firearms are hazardous. All people should stand well behind the shooter when a fox is being shot. The line of fire must be chosen to prevent accidents or injury from stray bullets or ricochets.
- Firearm users must strictly observe all relevant safety guidelines relating to firearm ownership, possession and use.
- Firearms must be securely stored in a compartment that meets state legal requirements. Ammunition must be stored in a locked container separate from firearms.
- The shooter and others in the immediate vicinity should wear adequate hearing protection to prevent irreversible hearing damage, and safety glasses to protect eyes from gases, metal fragments and other particles.
- Care must be taken when handling fox carcasses as they may carry diseases such as hydatidosis and sarcoptic mange that can affect humans and other animals. A fox with obvious mange should only be handled while wearing gloves. Routinely wash hands after handling all fox carcasses.
- Operators should be wary of the risks of injury when placing and setting traps. Protective clothing, boots and leather gloves may help prevent injuries from shovels, hammers and trap jaws as well as disease risk.
- Do not re-handle PAPP treated traps unless wearing cotton overalls buttoned to the neck and wrists and disposable gloves. Clothing must be laundered after each day's use.

Equipment required

Traps

- Approved foot-hold traps suitable for catching foxes must be used for example, Victor Soft-Catch trap. It is illegal to use serrated, steel-jawed traps in NSW.
- Traps must have the following characteristics:
 - The jaws have no teeth
 - The steel jaws are offset to increase the space between them when closed. (i.e. a gap (minimum 6mm) remains when the jaws are closed)
 - Each jaw has a rubber-like pad to cushion the impact of the jaws on the limb and to prevent the limb sliding out. The padding fills the offset gap when the jaws are closed.
- All traps should be checked for damage, sharp surfaces and malfunctions e.g., loose rubber pads, before they are taken into the field.
- Traps should be handled in a way that eliminates contamination with human related scents. Gloves should also be used when handling and setting traps.
- Traps should also have:
 - A spring placed in the anchor chain to act as a shock absorber, reducing the chance of dislocation of the captured limb. Swivels should be located on both ends of the anchor chain to allow the trap to twist as the animal struggles to escape

- Pan tension adjusted to suit the target species so that an appropriate force is required to depress the pan and trigger the trap. This minimises the chance of non-target animals setting off the trap.

PAPP cloths

- The use of PAPP cloths is not compulsory but is encouraged to reduce animal suffering.
- Use 2.5 g of PAPP paste per trap (placed at a maximum of four treated traps per km²).
- Cut cloth/gauze to size (approximately 60 mm wide and sufficiently long to wrap 3-4 times around the trap jaw - approx. 150- 200mm). Wrap the cloth around the lazy trap jaw two times.
- Dispense the entire contents of a single tube of PAPP paste along the wrapping on the upper face of the jaw (when viewed closed) leaving space at both ends for tying off.
- Continue one more complete wrap of cloth around the trap jaw to cover the paste with a single layer of cloth. Do not apply more than one layer of cloth over the paste.
- Secure cloth/gauze to trap jaw using fine tie wire at both ends.

Lures

- Olfactory stimuli such as fox faeces and/or urine or a commercially prepared lure e.g., synthetic fermented egg may be used to lure foxes into the trap set.
- The attractiveness of lures will vary with season and location.

Meat baits

- A handful of meat bait is placed near the trap. Beef heart, liver rabbit, lamb, chicken, and kangaroo have all been used as bait. The bait can be covered with a light dusting of soil to reduce foraging by corvids and to mimic food cached by a fox. Use of meat baits will however likely increase non-target interaction with traps.
- Attractiveness and palatability of the bait will vary with season and location. Choose lures that do not attract localised non-targets e.g., avoid meat based lures where quolls or goannas are present.

Firearms and ammunition

- Smaller calibre rifles such as a .22 rimfire with hollow or soft-point ammunition are suitable for euthanasia at short range (within 5 metres).
- 12-gauge shotguns with shot sizes of BB or AAA may also be used.
- The accuracy and precision of firearms should be tested against inanimate targets prior to the commencement of any shooting operation.

Procedures

Selection of trap sites

- Traps should be set along tracks and trails or other areas frequented by foxes for example, scent pads, scratch points and around carcasses. Do not set traps near fences and other objects such as trees, bushes etc. in which the trapped fox (or a non-target) may become entangled.
- The location (GPS coordinates) of all trap sites must be accurately recorded and marked. This information should be readily available to others in case the trapper is unable to return to check traps.
- The recording of target and non-target captures as well as injuries can also be valuable in the constant improvement of trapping technique.
- On-line apps such as FeralScan may assist in these processes:
<https://www.feralscan.org.au/>.
- Signage should be deployed on public lands to advise that traps are being used in the area.

Placing and setting the trap

- Traps should be set at the end of each day and checked early each morning. If traps are left set during the day, they should be checked again in late afternoon.
- Before setting each trap ensure that it is functioning properly.
- Traps should only be anchored to stakes or fixed objects if there is a shock absorbing device such as a spring fitted to the anchor chain and a swivel attaching the chain to the trap. It is recommended to use a short length of chain (approx. 30-50 cm). Alternatively, the trap can be tied to 'drags', objects such as solid pieces of steel or timber that will move when the fox pulls against the trap. The drag may need to be sufficient to restrain larger predators such as dogs. Use of drags should be minimised as they can potentially have greater welfare concerns than anchor points.
- Set the trap and place into position in the hole in the ground. Ensure that surrounding shrubs or debris will not interfere with the spring mechanism.
- Carefully camouflage the area around the trap with leaves, grass debris etc. but leave a slightly cleared area (10-15cm) over the area of the plate.
- Place the meat bait and/or lure a suitable distance away so that the fox is likely to step on the trap to smell it for example, on a slightly elevated clump of grass, stick or rock behind the trap.

Shooting of foxes

- Trapped live foxes should be euthanased by shooting whilst still held by the trap.
- Unnecessary people should keep away from the area to allow the fox to become less agitated. The shooter should approach the animal in a calm and quiet manner.

- To maximise the impact of the shot and to minimise the risk of misdirection the range should be as short as possible that is, 5-20 cm from the head if using a rifle, 1–2 metres if using a shotgun.
- Never fire when the fox is moving its head, be patient and wait until the fox is motionless before shooting. Accuracy is important to achieve a humane death. One shot should ensure instantaneous loss of consciousness and rapid death without resumption of consciousness.
- Shots must be aimed to destroy the major centres at the back of the brain near the spinal cord. This can be achieved by one of the following methods (see also Figure 2).

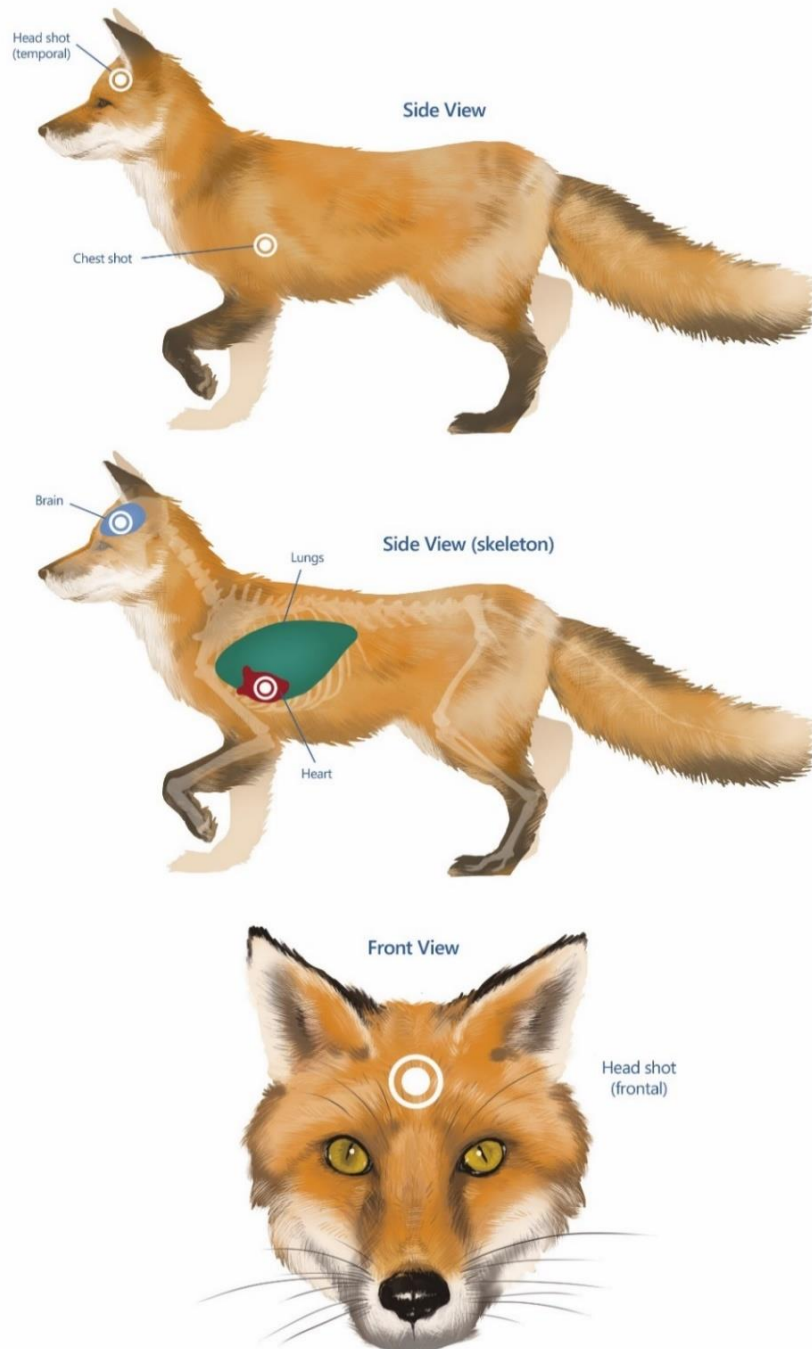
Frontal position (front view)

- The firearm is aimed at a point midway between the level of the eyes and the base of the ears, but slightly off to one side so as to miss the bony ridge that runs down the middle of the skull. The aim should be slightly across the centreline of the skull and towards the spine.

Temporal position (side view)

- The firearm is aimed horizontally at the side of the head at a point midway between the eye and the base of the ear.
- Death of shot animals should always be confirmed by observing the following:
 - no heartbeat
 - no breathing
 - no corneal reflex (no blinking when eyeball is touched)
 - no response to a toe pinch (a firm squeeze of the pad or large toe).
- If death cannot be verified, a second shot to the head should be taken immediately.

Figure 2: Shot placement for foxes.



Head shots (temporal or frontal) should be used for shooting foxes caught in traps. See text for details.

Note that shooting an animal from above or below the horizontal level as depicted here will influence the direction of the bullet through the body. Adjustment to the point of aim on the external surface of the body may need to be made to ensure that the angled bullet path causes extensive (and therefore fatal) damage to the main organs in the target areas.

References

- American Veterinary Medical Association (AVMA). (2020). *AVMA guidelines for the euthanasia of animals: 2020 edition*. American Veterinary Medical Association. Available at: <https://www.avma.org/sites/default/files/2020-01/2020-Euthanasia-Final-1-17-20.pdf>
- Boggess, E. K. et al. (1990). Traps, trapping and furbearer management: A review. *The Wildlife Society. Technical Review*, 90: 1-30
- Fleming, P.J.S., Allen, L.R., Berghout, M.J., Meek, P.D., Pavlov, P.M., Stevens, P., Strong, K., Thompson, J.A. & Thomson, P.C. (1998). The performance of wild-canid traps in Australia: efficiency, selectivity and trap-related injuries. *Wildlife Research*, 25: 327-338.
- IAFWA (2003). *Best Management Practices for Trapping Coyotes in the Eastern United States*. International Association of Fish and Wildlife Agencies.
- Kreeger, T. J., White, P. J., Seal, U. S. & Tester, J. R. (1990). Pathological responses of red foxes to foothold traps. *Journal of Wildlife Management*, 54: 147-160.
- Longair, J. A., Finley, G. G., Laniel, M. A., MacKay, C., Mould, K., Olfert, E. D., Roswell H. & Preston, A. (1991). Guidelines for euthanasia of domestic animals by firearms. *Canadian Veterinary Journal*, 32: 724-726.
- Meek, P. D., Jenkins, D. J., Morris, B., Ardler, A. J. & Hawksby, R. J. (1995). Use of two humane leg-hold traps for catching pest species. *Wildlife Research*, 22: 733-739.
- Meek, P.D., Brown, S.C., Wishart, J., Milne, H., Aylett, P., Humphrys, S., Ballard, G. & Fleming, P. (2019). Efficacy of lethal-trap devices to improve the welfare of trapped wild dogs. *Wildlife Research*, 46: 89-95.
- Meek, P., Ballard, G., Milne, H., Croft, S., Lawson, G., and Fleming, P. (2020). Satellite and telecommunication alert system for foot-hold trapping. *Wildlife Research*. Available at: <https://doi.org/10.1071/WR20043>.
- Meek, P., Fleming, P., and Ballard, G. (In press). *Best practice padded foot-hold trapping guidelines*. NSW Department of Primary Industries, Orange.
- Saunders, G., Coman, B., Kinnear, J. & Braysher, M. (1995). *Managing vertebrate pests: foxes*. Australian Government Publishing Service, Canberra.