

Canine Catch-Neuter-Return (CNR) Good Practice Guides

How to assess the dog population and evaluate the impact of Catch Neuter Return

Learning Outcomes:

1. Explain how to plan a repeatable street survey of dog populations, including what should be recorded and why
2. Discuss why it is important to understand the public perception of the dog population and the method used to do this

For more detailed guidance on monitoring of dog population management, please see the International Companion Animal Management Coalition resource 'Are we making a difference? A guide to monitoring and evaluating DPM interventions'. Available on the International Companion Animal Coalition website: <https://www.icam-coalition.org/download/are-we-making-a-difference/>

Why assess the dog population?

In order to choose appropriate services that together create a dog management system for the dog population of interest, you need to identify what are the problems related to dogs locally, which dogs are involved in these problems and understand where these dogs come from. Using more than one method for this assessment is ideal, including secondary sources of data (examples include dog bites recorded by hospitals, complaints about dogs recorded by municipalities and numbers of animal or human cases of rabies recorded by public health officials), surveys of roaming dogs on the street, and questionnaires or focus groups of local people. Together these methods provide data that helps you understand problems relating to dogs and local dog population dynamics, including the source of roaming dogs. Such methods may also highlight if there are specific geographical areas that should be targeted as a priority, this may be indicated by places with high densities of roaming dogs or high numbers of rabies cases.

Is CNR the right thing to do?

For CNR to be an appropriate service to include in a dog population management system, the assessment needs to find that the following is true:

- There is a high level of tolerance of roaming dogs and feeding by local people so that released sterilized dogs can maintain reasonable welfare.
- There are many unowned or community owned dogs the street, it's not only owned roaming dogs. If the roaming dog population comprised of all, or nearly all, owned roaming dogs then other methods should be used that engage owners to seek reproduction control services as owned dogs must not be sterilized through CNR without an owner's consent.
- The unowned or community dogs are breeding and therefore are a source of future roaming dogs. This will be evident from a high percentage of roaming females that are lactating and puppies on the streets with no apparent signs of ownership.
- There must be government collaboration and support for CNR, it must not be carried out without consent of the government who may be running counter approaches like catch and shelter or kill.
- There are other dog population management services in place that address the owned dog population, who will also be a source of roaming dogs.

Why monitor the dog population?

The assessment of the dog population provides a baseline, by repeating the same methods you can establish how the dogs and peoples' opinions and behavior with dogs is changing over time. This provides evidence for the impact of your work which can strengthen political support and further



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funding applications. It also provides the data needed for evidence-based learning and adaptation which ensures that funds can be used effectively.

‘What we can measure, we can manage!’

How can street surveys help?

The direct observation of roaming dogs during street surveys requires minimal investment of resources, provides information about individual dog welfare and about the dog population. Using dog density, which is the number of roaming dogs per kilometre or mile of street surveyed, is now recommended as an indicator, instead of an estimate of the total free-roaming dog population size. Although the estimates are useful for project planning and budgeting it takes more survey time and careful analysis to establish a robust estimate, whilst density can be very fast to measure.

In order to get a measure of ownership, breeding activity and dog welfare, every dog seen on the survey is visually examined, and the information recorded. This information should include ownership status, age/lifestage, sex including if neutered or not and lactating females, and body and skin condition. This is particularly important for monitoring your CNR programme as it tells you what percentage of the population you have reached and whether you are achieving the decline in breeding and improvement in welfare you wanted – just as important is when it tells you about ‘failure’, where there are pockets of dogs that have not been reached or where the density of dogs is actually increasing despite a lot of CNR – this will tell you there are other sources of dogs in action, such as abandonment.

1. What is the public perception of the dog population?

As well as the street surveys, focus groups or questionnaires should be used to identify what the public perceive the problems are with the free-roaming dog population. These questionnaires can be quite time consuming to carry out and analyse, but if designed and used appropriately can provide a huge amount of information on public perception and attitude towards dogs. They also provide information on the number of owned dogs, the dog welfare of owned dogs and public’s attitudes towards neutering dogs.

We recommend anyone interested in implementing DPM in their communities enrol on the e-learning course called ‘Humane Community Development’ (HCD) developed by the International Companion Animal Management (ICAM) coalition. This course provides a participatory framework for communities to work together to find humane, sustainable solutions to dog issues that are having negative consequences for people and animals. Because human-dog conflicts stem from many different causes and human-dog relationships differ community to community, HCD planning begins by engaging the community about their concerns and helps them to identify and take ownership of their own solutions.

By enrolling on the e-learning course, HCD guides users to:

- Identify the root causes of the issues related to dogs in their community.
- Develop a realistic, custom-designed community plan.
- Successfully implement humane, long-term solutions that improve the community for people and dogs.

The result is a community-owned program that cultivates empowered participants and humane, sustainable change.



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For more detailed information, see the ICAM coalition website: www.icam-coalition.org/tool/humane-community-development-hcd/

How to perform street surveys

Street surveys are simple and cheap to run, observers travel along routes and record every roaming dog they see. The survey itself should take less than 2 hours to complete, because observers can tire and start to make mistakes. Counting of dogs along these routes must be as accurate as possible, pausing to observe each dog, but keeping a reasonable rate of progress so you avoid double counting. The observers need to get close enough to visually assess the dogs but not interfere or influence their movement. If you are travelling by car, motorbike or bicycle you can survey between 20 to 30km of street in under 2 hours, less if travelling by foot. Using a motorbike or bicycle is ideal because observers can travel off main roads into narrow streets but they also move faster than the dogs thereby reducing the risk of double counting. If using a motorbike, you need two observers as this allows one observer to focus on navigating the route and the other observer to record the dogs along that route. The mode of transport selected will depend on the accessibility of roads and the preference of the surveyors but once a specific transport is selected it must be maintained for all future street surveys.

Indeed, maintenance of the whole survey protocol is very important. The survey method has to be consistent so the only reason the number of dogs counted has changed is due to a real change in population density and not a change in method. So the survey must be conducted at the same time of year, as roaming dog numbers vary with season. They must also happen at the same time of day, because roaming dogs change their behaviour in response to people, at dawn is usually best as this tends to be peak roaming time and traffic is quiet. Observers should also avoid surveying in adverse weather conditions when dogs may take shelter. Additionally, the staff should wear normal clothing not their work uniforms when surveying so that the dogs don't positively or negatively associate them with the CNR programme. It is necessary to invest time in staff training, ensuring all staff involved in surveying are knowledgeable about the protocol, the equipment for recording information as well as what needs to be recorded. For consistent and accurate data collection, the same staff members should be performing the street surveys, but if new staff are involved they should at least be trained and supervised by the experienced staff surveyors.

The survey routes themselves will need to be carefully planned, because they are a key part of the protocol that must be kept consistent. If the area of interest is large, it will need to be divided up into smaller areas, this is often conveniently done using administrative boundaries. Routes come in two types: unbiased and hotspot routes. Unbiased routes should include different road types and housing, in approximately the same ratio as the wider area of interest. Ideally these are set by someone who doesn't know the dog movements in the area to prevent bias. The number of dogs counted on such an unbiased route can be extrapolated to calculate the estimated dog population in the wider area. Hotspot routes work *with* bias, by first identifying the places where dogs are most likely to be seen and then creating an efficient route that maximizes those hotspots. This ensures the maximum proportion of the dog population is seen in the available survey time, so increases the sensitivity to changes in dog numbers. These routes are best for monitoring change in dogs over time and for surveying where dog density is low in many places, with dogs clustered only in certain neighborhoods. Online maps with both map and satellite imagery can be useful to plan and record routes. There are several mobile phone apps available for recording the information during these street surveys, some of which are free, and allow data to be recorded and stored quickly.

Evaluating the impact of CNR on the dog population

The exact same street surveys should be repeated at least every 12 months at the same time of year, and ideally more frequently. The community surveys should also be repeated, however because



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these are more costly, the frequency may be less. Maintaining consistent methods allows the monitoring results to be compared against the data collected in the initial assessment. In this way the impact of CNR on the dog population and on the public can be accurately evaluated to ensure it is successful in its aims. Without collecting data, there is no way to identify when and where changes need to be made to the CNR focus or method or to demonstrate that a CNR project is succeeding and this can negatively impact on the support and funding for the project.

Checklist:

- ✓ Invest time in initial assessment of the dog population
- ✓ Engage with government bodies
- ✓ Street surveys can provide information on dog density, individual dog welfare, reproductive rate and life expectancy
- ✓ Public perception questionnaires provide information on dog population size, dog welfare and attitudes towards the dogs
- ✓ Repeatability of surveys and questionnaires enable accurate monitoring and evaluation of the impact of the CNR programme

References:

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