



Final Position Statement Wildlife Fertility Control

Many native and invasive wildlife species have become overabundant on a local or regional scale throughout the world. These overabundant species often negatively impact native, sensitive, and threatened and endangered species (Hall et al. 2016, Coates et al. 2022), and disrupt ecological processes. They may also cause conflicts with humans, ranging from minor nuisance problems to serious habitat and crop destruction, spread of disease, and collisions with vehicles and aircraft. Traditional population management techniques for overabundant wildlife, such as hunting and trapping or sharpshooting, may be restricted or infeasible. Wildlife fertility control (hereafter fertility control) may be an important management tool in these and other situations. Successful population management may need to be multi-faceted, using a combination of techniques. The challenge for wildlife managers is integrating fertility control with conventional methods, and also communicating realistic expectations about costs and timelines compared to lethal or other control. Further, engagement and cooperation from/amongst multiple entities and landowners must be recognized and prioritized, especially in developed areas.

Wildlife fertility control may be considered in urban or suburban areas, and in situations where immigration of wildlife is limited or lethal control/removal is restricted or insufficient. Fertility control, however, is not a direct substitute for lethal management and wildlife removal. Fertility control does not result in an immediate reduction in the number of animals that are causing ecological or property damage. Fertility control offers potential to reduce the rate of increase, possibly even causing decline if reproduction is sufficiently inhibited in enough animals. Where wildlife management discussions with the public can become emotionally charged, non-lethal methods such as fertility control may be supported by stakeholders. However, fertility control will not immediately reduce damage resulting from overabundance. Regardless of the method, management strategies should consider immediate needs to remove animals to reduce damage, as well as realistic options to maintain acceptable population levels long-term.

Relevant aspects of fertility control should be thoroughly understood and considered early in the decision-making process. Key initial considerations include the costs, effectiveness, and legality of fertility control techniques within the management area(s). Managers must evaluate access to the required number of animals needing treatment. Regulatory agencies may mandate the marking and tracking of treated animals, which is essential for assessing the effectiveness of the fertility control program. Marking is also important to identify treated individuals if multiple treatments or boosters are necessary. In most cases



involving free-ranging wildlife populations, consideration must be given to the movement of treated animals out of the program area, and the movement of untreated animals into the program area. It is vital to acknowledge the various landowners and stakeholders involved. Education and outreach will be essential to support informed decision-making, clarify the timelines and limitations of fertility control versus lethal methods, and to reach appropriate consensus for successful management. Collaboration across borders or property lines is essential to secure resources, land, and infrastructure for effective management.

Fertility control methods include hormone implants, surgical procedures, chemical sterilants, or vaccines. Historically, these techniques have shown limited success, partly due to incomplete understanding of wildlife reproductive biology and inadequate delivery systems for free-ranging wildlife, but also because of minimal efficacy and the high costs of materials and labor (Collins and Kasbohm 2017). Fertility control has progressed with increased research on contraceptive development, a better understanding of animal reproductive systems and behaviors, and field studies. However, practical, long-term examples of successful programs are limited. Wildlife fertility control is currently being tested on a number of species on small scales as a wildlife management tool for specific situations. Surgical sterilization of ungulates has proven effective in some communities because managers and veterinarians only need to handle individuals once in that animal's lifetime. However, modeling and field applications have shown that a high proportion of individuals must be sterilized to achieve rapid population declines (Raiho et al. 2015, Folt et al. 2022). Also, the size of the area treated and immigration rates are potential limitations to success. Significant hurdles remain, including biological feasibility, economic practicality, regulatory compliance, development of cost-effective delivery systems for effective products, reducing potential impacts to non-target species, and treating potential human food animals. Also, public and natural resources agencies' acceptance of fertility control as a wildlife management practice and commercial availability of vaccines or baits is essential.

In North America, chemical reproductive inhibitors for wildlife must undergo extensive jurisdictional review before being approved for commercialization. To support a new animal drug approval, a drug sponsor must provide substantial evidence of the drug's effectiveness through adequate and well-controlled studies. The safety of the drug in the target species must also be proven, as well as safety for human consumption (where indicated). The high cost of regulatory approval, coupled with a limited commercial market, may discourage private investment in product development. Public funding is often needed to support research and authorization. Regulatory oversight adds to the complexity of using fertility control techniques for population management.

Application of fertility control may have potential for use in urban or suburban areas, in other situations where lethal control or removal is restricted or impractical, and where



immigration is low. Responsible agencies may be willing to consider fertility control as a possible management alternative if research demonstrates that this technique can successfully reduce the rate of increase, or actual numbers, in free-ranging wildlife populations, and there are no adverse or unintended effects on wildlife or human health. Public forums discussing the advantages and disadvantages of various management techniques are important. The challenge for managers will be to (1) integrate potentially valuable fertility control technologies with more traditional methods of wildlife population management, and (2) provide the public with accurate information about the length of time required for fertility control, likely combined with traditional approaches for the foreseeable future, to reduce abundance of long-lived species and the costs associated with fertility control.

The position of The Wildlife Society regarding wildlife fertility control is to:

1. Reaffirm a commitment to humane, effective, and science-based methods for resolving human-wildlife conflicts associated with overabundant species.
2. Recognize that species overabundance in localized or isolated areas is often largely influenced by landscape features and human manipulation of the environment, and these factors may not be easily modified to produce desired changes in the size of wildlife populations.
3. Recognize that the application of fertility control should be based on appropriate science and species population biology.
4. Promote educational efforts to provide accurate, science-based information about solutions for reducing problems with overabundant wildlife, and discussion of the practicality, costs, efforts, benefits, and limitations of various fertility control methods.
5. Recognize that in situations where fertility control is insufficient by itself, the use of lethal methods to manage wildlife, such as regulated hunting, sharpshooting, or other means of euthanasia where they are legal and practical, may be required to achieve population objectives.
6. Encourage research and evaluation of cost-effective fertility control tools, including development of safe, practical delivery systems.
7. Support the use of fertility-control products that have minimal negative health and behavioral effects on target and nontarget animals, and are safe for human consumption if used for game or animals that could be used for food.
8. Recommend that local communities consult with appropriate federal, state, provincial, and tribal wildlife agencies and wildlife professionals early in the decision-making process when considering application of fertility control.



9. Recognize that the authority to permit field applications of fertility control measures lies with the appropriate federal, state, provincial, or tribal wildlife agency.

References

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