Memo

To: Peter S. Adler, Phd
   ACCORD3.0
From: Kai’anui Graham
Date: July 31, 2013
Re: Feral Cat Management

The estimates of feral cat populations across the United States are at 30 to 60 million cats (Non-lethal and Non-Punitive 20). The growing number of feral cats nationwide has led many public and private entities to evaluate the ways we have dealt with feral animals in the past and the current methods used to manage them. Feral cat populations are becoming increasingly apparent and have the potential to affect other aspects of our communities including health, environmental protection, law and land management. Most if not all of the problems with feral cats are a result of increasing populations. The current methods of dealing with feral cats are no longer sufficient to manage the problem and call for a reevaluation of management solutions. The scope of this memo’s research extends worldwide drawing from different management solutions that have been experimented with around the globe. Some adaptations will be considered to address the implications of managing feral cats on the island of Kaua‘i.

Below is a list of the criteria that I will use to evaluate the proposed methods and solutions.

- **Efficiency** - Evaluates each option’s potential to effectively curb feral cat populations and prevent or mitigate secondary effects of large cat populations.

- **Time Effectiveness** - Time effectiveness highlights the ability of each method to quickly curb cat population growth and alleviate the secondary effects of predation and possible public health issues.

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1 Kai’anui Graham is a student at Brigham Young University – Lā‘ie. As part of a practicum assignment Peter Adler asked him to undertake a search and roundup of internet-available information on jurisdictions that have successfully managed feral cat issues.
**Political feasibility** - Political feasibility addresses the political opposition that each alternative will face.

**Trap Neuter Release**

Trap Neuter Release programs, also referred to as TNR, involve the creation and management of a cat colony that is intended to decrease the population of cats through natural attrition and the consequent sterilization of all cat colony members (Lohr, Cox, and Lepczyk 66). The Stanford University Campus developed a TNR system that successfully reduced the cat population of 500 to 1,500 cats, to two dozen cats over a period of 23 years (Non-lethal and Non-Punitive 18). The Ocean reef community in Florida created a Feral Cat Center to house sick cats and cats for adoption. The colony of cats was reduced from 2000 to 500 by the year 2002 (Levy and Crawford 1359). Although certain TNR programs have reduced the cat population, in most cases it fails to substantially reduce the population. (Jessup 1390) In Florida two different parks utilized TNR, with the unintended consequence of cat owners abandoning their cats at the TNR site. This resulted in an increase rather than decrease in the population size (Jessup 1358) In Hawaii a TNR program grew from 100 to 1000 cats resulting in temporary closure of a nearby day-care center. A report from Italy based TNR programs showed that 55 of the colonies decreased in population, while another 48 colonies increased their population size. This shows that the visibility of cat colonies can encourage abandonment (Daupine and Cooper 212). TNR may be effective in cases with no immigration, a small initial feral cat population and a high rate of neutering, but it is no panacea for managing feral cats. In addition, TNR is consistently a long-term solution. It does not offer any instantaneous population reduction and makes few measures to prevent cat predation. According to Nichole Dauphine and Robert Cooper of the University of Georgia’s School of Forestry and natural resources "TNR generally does not reduce free-ranging cat populations in a reasonable period of time, almost never results in the elimination of feral cat colonies, generally results in perpetual colony maintenance, and may even result in increasing cat populations"(212). In cases that TNR is effective we will not see an immediate result, which is why TNR is not recommended for ecologically sensitive areas (Schmidt, Swannack, Lopez, and Slater 123). Thus cat colonies remain at the heart of the feral cat management debate, contested by many bird advocacy and environmental groups

**Eradication**

Eradication is one of the most commonly used methods to manage feral cats and has been widely used in various geographical regions. A review of eradication of feral cats on islands noted that 48 islands worldwide reported successful eradication programs. These islands are in various geographic regions including Mexico, New Zealand, Australia, and the Caribbean. The four main methods used in eradication are trapping, hunting, poisoning and
disease introduction. The trend showed that toxins and biological controls were effective in the beginning of an eradication program and hunting and trapping seemed to be the only method to successfully remove any remaining cats (Nogales, Martin, Tershy, Donlan, Vietch, Wood and Alonso 313). This study indicates that eradication can be successful on islands, especially without immigration of new cats. A study done on a population models of feral cats in Texas determined that if population increases through immigration were at 0%, then there was no difference in the efficiency of the removal rates for eradication and non-lethal methods such as TNR. Once population increases were added, eradication was shown to be a quicker solution (Schmidt, Swannack, Lopez and Slater 123). This population model suggests that eradication is not as efficient as suggested. Eradication efforts on small uninhabited islands can still take a significant amount of time and resources. On Marian Island, South Africa it took 15 years to eradicate all cats on the island (Nogales, Martin, Tershy, Donlan, Vietch, Wood and Alonso 314). This island was uninhabited, as compared to an island such as Kaua‘i which is highly populated. Even if eradication was favorable it would be complicated and difficult in populated areas, making the effort impractical and lengthy. Public opposition by advocacy groups will also be an obstacle to this solution. A survey done by Hawaii Coalition for the protection of cats indicates that the public may not be favorable for eradication. The survey showed that out of 400 participants by cat owners 87% preferred non-lethal control methods for feral and stray cats (The HSUS and The Hawaii Coalition). In addition, Advocacy groups and human rights professionals will strongly oppose this option.

Sanctuary

Cat sanctuaries offer a more favorable compromise between Bird and Cat advocacy groups. Sanctuaries act as a home for Feral Cats while protecting other wildlife from possible predation. Sanctuaries are enclosed and offer food and veterinary services to cats. The protection of wildlife from cats in sanctuaries is extremely high and the ability to neuter and monitor cats due to the lack of immigration from other cats is very high (Duffy and Capece 193). However, most of these sanctuaries also have TNR program because the available room in sanctuaries is quickly taken up (Levy and Crawford 1357). Implementing this strategy on Kaua‘i may be more favorable due to the isolated nature of the island. Immigration from cat populations will be minimal and easier to control. If resources are sufficient and there is adequate space to house a large population of cats this method would be very time effective and could greatly relieve the burden of current concerns with feral cats. Politically this effort can be sensitive due to the nature of some cat owner advocates who do not want to restrict cats and confine them or set boundaries. However, this method is not as politically charged as Eradication or TNR.

Deterrence
In areas where biodiversity is sensitive to predation and conservation is needed or already mandated, deterrence devices can be an extra counter measure to feral cats. Arid recovery is a conservation project focusing on exclusion fences for foxes, rabbits and feral cats. Australia’s exclusion fences have been implemented for over 100 years to protect agricultural, livestock and more recently biodiversity (Moseby and Read 429). Fences intended to protect from cats and foxes are estimated at AUD $6500-$11000 per Kilometer (Moseby and Read 430). Arid recovery created a model that was highly effective at preventing feral cats from penetrating. Design 9 is a fence with a “floppy” or hanging overhead that prevents cats from quickly jumping over the fence. Due to the time it takes to climb onto the unusually shaped fence the cats are electrocuted, which prevents them from continuing through the fence. Arid Recovery noted that electrical wires needed physical barriers in order to be efficient (Moseby and Read 436). This deterrence method is very successful in areas that it was implemented. The effectiveness of this method will depend upon the geography and size of conservation areas on Kaua’i. Although costly, this method can be quickly assembled to protect wildlife while other population control methods are planned and decided upon. Time effectiveness is moderate to high. Politically, fence issues are tense in Australia where certain wildlife animals such as emus are hurt and killed because of the large fence areas (Laurie). An environmental impact statement may be needed to determine the effect of fences on other biodiversity. However it still remains a politically viable option.

Education

Education must be an aspect of every management option. According to Dauphine and Cooper, education is critical because many cat owners do not understand the impact that their cat can have on local wildlife. Many cat owners are dismayed over the death of birds by their cats but do not take the measures necessary to help protect wildlife (213). Dauphine and Cooper recommend that conservation scientists and environmentalists become involved, informed and vocal about the issue. One example of successful advocacy is the American Bird Conservancy, which has campaigned for a decade about the benefits of keeping cats indoors (214). The American Veterinary Medical Association has also advocated the need for cat owners in urban and suburban areas to place their cats indoors (Winter 1357). A second issue that concerns cat owners is the problem of overpopulation. Numerous surveys indicate that 80% of cat owners across the US have their cats neutered. Without these measures there would surely be a greater amount of pets and feral cats, yet the small amount of cats that are still allowed to reproduce can significantly increase population growth. According to Olson and Johnson, two cats that give birth to eight kittens a year could easily attain a family of 175,000 descendants in seven years (Clive and Rochlitz 124). Phillip Kass contends that if measures are not taken to educate the other 20% of Americans about the problems of overpopulation then it will continue to occur (Clive and Rochlitz125). In areas such as Kaua’i the importance of this concept cannot be overstated.
Conclusion

The population of feral cats in Hawaii place pressures that are unique to islands, including a high percentage of endemic species that are endangered or that have already crossed the threshold to near or actual extinction. Attitudes of the general public, government entities, and advocacy groups need to be examined to effectively explore solutions to the complex feral cat issue. A synthesis of the management options presented will be needed to effectively solve this issue, as well as adaptations to reconcile the views of the various parties invested in this issue.
References


