

DAVID Y. IGE
GOVERNOR OF
HAWAII



SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

KEKOA KALUHIWA
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

Testimony of
SUZANNE D. CASE
Chairperson

Before the Senate Committees on
PUBLIC SAFETY, INTERGOVERNMENTAL, AND MILITARY AFFAIRS
and
AGRICULTURE AND ENVIRONMENT

Wednesday, February 8, 2017
1:15 PM
State Capitol, Conference Room 224

In consideration of
SENATE BILL 637
RELATING TO COUNTY ACCESS TO PRIVATE PROPERTY

Senate Bill 637 proposes to authorize counties to enter private property for invasive species control. **The Department of Land and Natural Resources (Department) supports this measure.**

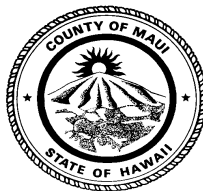
The Department manages and is the administrative host of the Hawaii Invasive Species Council (HISC). The HISC is in the process of developing administrative rules to formally designate invasive species for eradication or control, pursuant to Section 194-5, Hawaii Revised Statutes (HRS). The ability of county governments to enter property to control invasive species pursuant to Section 194-5, HRS, or agricultural pests pursuant to Section 141-3.6, HRS, would assist in timely, thorough implementation of invasive species control efforts.

On Page 3, Line 11, the Department suggests further amending section 194-5(a), HRS, to allow agents of state departments or counties to enter private property, in order to be consistent with section 194-5(d), HRS:

"(a) Whenever any invasive species identified by the council for control or eradication is found on private property, a department or applicable county, or its agent, may enter [~~sueh~~] the premises to control or eradicate the invasive species after reasonable notice is given to the owner of the property and, if entry is refused, pursuant to the court order in subsection (d)."

The Department appreciates the opportunity to provide these comments.

ALAN M. ARAKAWA
MAYOR



200 South High Street
Wailuku, Maui, Hawai'i 96793-2155
Telephone (808) 270-7855
Fax (808) 270-7870
E-mail: mayors.office@mauicounty.gov

OFFICE OF THE MAYOR
Ke`ena O Ka Meia
COUNTY OF MAUI – Kalana O Maui

February 6, 2017

TESTIMONY OF ALAN M ARAKAWA
MAYOR
COUNTY OF MAUI

BEFORE THE SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT
THE SENATE COMMITTEE ON PUBLIC SAFETY, INTERGOVERNMENTAL, AND MILITARY
AFFAIRS

Wednesday, February 8, 2017
1:15 p.m. – Conference Room 224

SB637 RELATING TO COUNTY ACCESS TO PRIVATE PROPERTY.

Senator Mike Gabbard, Chair
Senator Gil Riviere, Vice Chair
Honorable Members of the Senate Committee on Agriculture and Environment

Senator Clarence K. Nishihara, Chair
Senator Glenn Wakai, Vice Chair
Honorable Members of the Senate Committee on Public Safety, Intergovernmental, and Military Affairs

Thank you for this opportunity to testify in SUPPORT of SB637.

This bill will provide the counties a clear tool that is not currently available to us – the authority to enter private property, with the proper court authorization, in order to eradicate invasive species that could be harmful to public health and safety.

Maui County is currently fighting to stave off an infestation of many invasive species. Some of which include: Little Fire Ants (LFA), Coqui Frogs and Coffee Bean Borer beetle (CBB).

LFA has proven to be a threat to public health and safety. The Maui Invasive Species Committee (MISC) and the Hawaii Ant Lab (HAL) has had several property owners or lessees block access to their properties when they tried to address LFA eradication. The state department of Agriculture was able to obtain a court order, eventually, that allowed MISC and HAL to do their assigned duties. However, this is only one instance of many that are currently being faced by these agencies. There are people in Haiku and Nahiku still blocking access to their property to fight LFA and coqui frogs. We are currently getting CBB infestations in the Hana area and already getting resistance from one property owner. The DOA does not have the manpower or resources to get court orders to help these agencies work on the eradication of these pests on a timely basis.

I firmly believe that the counties can be effective where the DOA is not able to be due to their restrictions.

Therefore, I strongly urge the passage of this bill.

Sincerely,

Alan M. Arakawa
Mayor, County of Maui

Council Chair
Mike White

Vice-Chair
Robert Carroll

Presiding Officer Pro Tempore
Stacy Crivello

Councilmembers
Alika Atay
Elle Cochran
Don S. Guzman
Riki Hokama
Kelly T. King
Yuki Lei K. Sugimura



Director of Council Services
Sandy K. Baz

COUNTY COUNCIL

COUNTY OF MAUI
200 S. HIGH STREET
WAILUKU, MAUI, HAWAII 96793
www.MauiCounty.us

February 7, 2017

TO: The Honorable Mike Gabbard, Chair
Senate Committee on Agriculture and Environment

The Honorable Clarence K. Nishihara, Chair
Senate Committee on Public Safety, Intergovernmental, and Military Affairs

FROM: Mike White
Council Chair

A handwritten signature in black ink, appearing to read "Mike White".

SUBJECT: **HEARING OF FEBRUARY 8, 2017; TESTIMONY IN SUPPORT OF SB 637, RELATING TO COUNTY ACCESS TO PRIVATE PROPERTY**

Thank you for the opportunity to testify in **support** of this measure. The purpose of this measure is to authorize counties to enter private property to control or eradicate invasive species and pests.

The Maui County Council has not had the opportunity to take a formal position on this measure. Therefore, I am providing this testimony in my capacity as an individual member of the Maui County Council.

I support this measure for the following reasons:

1. Environmental protection through the eradication of invasive species is a statewide and intergovernmental effort. The County of Maui understands this partnership and works closely with agencies such as the Maui Invasive Species Committee (MISC) in the fight against invasive threats to our endangered species, native plants, fragile ecosystems and overall quality of life.
2. Currently, MISC's ability to implement its programs are hampered by their inability to access private property where invasive species are reported. This measure would solve this ongoing issue by allowing counties and its authorized agents, following necessary notice requirements, to enter private property for eradication efforts.
3. This tool is critical for counties to be true partners in the fight against invasive species and fulfilling the broader goal of preserving the environment for future generations.

Mahalo for your consideration.

For the foregoing reasons, I **support** this measure.

Council Chair
Mike White

Vice-Chair
Robert Carroll

Presiding Officer Pro Tempore
Stacy Crivello

Councilmembers
Alika Atay
Elle Cochran
Don S. Guzman
Riki Hokama
Kelly T. King
Yuki Lei K. Sugimura



Director of Council Services
Sandy K. Baz

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February 7, 2017

TO: The Honorable Mike Gabbard, Chair
Senate Committee on Agriculture and Environment

FROM: Robert Carroll
Council Member

DATE: February 7, 2017

SUBJECT: **TESTIMONY IN SUPPORT OF SB 637, RELATING TO COUNTY
ACCESS TO PRIVATE PROPERTY**

Thank you for the opportunity to testify as an individual in support of this important measure. The purpose of this measure is to authorize counties to enter private property to control or eradicate invasive species and pests.

I **support** this measure for the following reasons:

1. Environmental protection through the eradication of invasive species is a statewide and intergovernmental effort. The county understands this partnership and works closely with Maui Invasive Species Committee (MISC).
2. Currently, MISC's ability to implement its programs are hampered by their inability to access private property where invasive species are reported.
3. By adding this new section to part I of Chapter 46, Hawaii Revised Statutes is the appropriate tool and critical for counties to be true partners to help in this fight to preserve the environment for future generations.

For the foregoing reasons, I **support** this measure.

RC:dna

Council Chair
Mike White

Vice-Chair
Robert Carroll

Presiding Officer Pro Tempore
Stacy Crivello

Councilmembers
Alika Atay
Elle Cochran
Don S. Guzman
Riki Hokama
Kelly T. King
Yuki Lei K. Sugimura



Director of Council Services
Sandy K. Baz

COUNTY COUNCIL
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200 S. HIGH STREET
WAILUKU, MAUI, HAWAII 96793
www.MauiCounty.us

February 7, 2017

TO: Honorable Mike Gabbard, Chair
Senate Committee on Agriculture and Environment

Honorable Clarence K. Nishihara, Chair
Senate Committee on Public Safety, Intergovernmental, and Military Affairs

FROM: Stacy Helm Crivello
Councilmember

A handwritten signature in cursive script, appearing to read "Stacy Helm Crivello", is written over the printed name.

DATE: February 8, 2017

SUBJECT: **SUPPORT OF SB 637, RELATING TO COUNTY ACCESS TO PRIVATE
PROPERTY**

I **support** SB 637 for the reasons cited in testimony submitted by the Maui County Council Chair, and urge you to **support** this measure.

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 7, 2017 2:23 PM
To: PSMTestimony
Cc: yukilei.sugimura@mauicounty.us
Subject: *Submitted testimony for SB637 on Feb 8, 2017 13:15PM*

SB637

Submitted on: 2/7/2017

Testimony for PSM/AEN on Feb 8, 2017 13:15PM in Conference Room 224

Submitted By	Organization	Testifier Position	Present at Hearing
Yuki Lei Sugimura	Maui County Council	Support	No

Comments:

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

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HAWAII GOVERNMENT EMPLOYEES ASSOCIATION

AFSCME Local 152, AFL-CIO

RANDY PERREIRA, Executive Director • Tel: 808.543.0011 • Fax: 808.528.0922

The Twenty-Ninth Legislature, State of Hawaii
The Senate
Committee on Judiciary and Labor

Testimony by
Hawaii Government Employees Association

February 8, 2016

**S.B. 637 – PROPOSING AMENDMENTS TO
THE CONSTITUTION OF THE STATE OF HAWAII
TO AMEND THE MANNER IN WHICH JUSTICES
AND JUDGES ARE APPOINTED, CONSENTED
TO, AND RETAINED**

The Hawaii Government Employees Association, AFSCME Local 152, AFL-CIO strongly opposes the purpose and intent of S.B. 637, which proposes amendments to the Constitution of the State of Hawaii relating to the appointment and retention of justices and judges and authorizes the senate to approve or reject subsequent terms of office for justices and judges.

It is essential for our judicial system to be composed of justices and judges who have the authority and autonomy to exercise their independent judgement. When justices and judges must return to the Senate for confirmation to renew each term, they are exposed to political influence and their rulings on controversial cases may be swayed to ensure another term. While it can be argued that there could be more transparency in the process, the current composition of and criteria for Hawaii's judicial merit selection system works.

Thank you for the opportunity to testify in strong opposition to S.B. 637. We respectfully request the Committee defer this measure.

Respectfully submitted,

Randy Perreira
Executive Director

**Testimony before the
Senate Committee on Public Safety, Intergovernmental, and Military Affairs
and the Senate Committee on Agriculture and Environment**

**by
The Hawaiian Electric Companies**

**Wednesday, February 8, 2017
1:15 p.m., Conference Room 224**

Senate Bill 637 –Relating to County Access to Private Property

Chairs Nishihara and Gabbard, Vice Chairs Wakai and Riviere, and Members of the Committees:



The Hawaiian Electric Companies are submitting this written testimony in strong support of SB 637.


SB 637 gives authority to each county through its employees or authorized agents to enter private property within the respective county to control or eradicate pests and invasive species. The Hawaiian Electric Companies support the bill for the following reasons:

- Albizia trees are a hazard to public safety and critical infrastructure.
- Stands of brittle, invasive Albizia trees up to 250 feet tall grow on many public and private properties. Tropical Storm Iselle brought down many Albizia trees, blocked roadways, and caused millions of dollars in damage to homes and important electric utility lines. Broken tree trunks continue to send out new growth creating even more unstable conditions, while seedlings are rapidly germinating in disturbed areas.
- There are many landowners that either refuse or fail to respond to repeated notices to control or eradicate invasive species on their property.
- The County's ability to enter private property in order to control or eradicate invasive species like the albizia tree, is essential to mitigating issues and ensuring that Hawai'i's public safety and critical infrastructure needs are met.

Thank you for the opportunity to testify on this matter.



 | 808-733-7060
 | 808-737-4977

 | 1259 A'ala Street, Suite 300
Honolulu, HI 96817

February 8, 2017

The Honorable Clarence K. Nishihara, Chair

Senate Committee on Public Safety, Intergovernmental, and Military Affairs

The Honorable Mike Gabbard, Chair

Senate Committee on Agriculture and Environment

State Capitol, Room 224

Honolulu, Hawaii 96813

RE: S.B. 637, Relating to County Access to Private Property

HEARING: Wednesday, February 8, 2017, at 1:15 p.m.

Aloha Chair Nishihara, Chair Gabbard, and Members of the Committees,

I am Myoung Oh, Director of Government Affairs, here to testify on behalf of the Hawai'i Association of REALTORS® ("HAR"), the voice of real estate in Hawai'i, and its 9,000 members. HAR **supports** S.B. 637 which authorizes the counties to enter private property to control or eradicate invasive species and pests.

REALTORS® are vitally concerned about issues that affect the value of real property and the quality of life in our State. The introduction and infestation of detrimental invasive species is a growing concern that is increasingly impacting the very way of life for our friends and families in our communities. HAR would support efforts to empower the Counties to join the effort to eliminate this threat.


According to the recently released Hawaii Interagency Biosecurity Plan (2017-2027), Hawaii's ever increasing interconnectedness with the rest of the world has led to an onslaught of exotic species from around the world arriving in our harbors and airports and ultimately becoming established here.


The plan suggests that 10 percent of those invading species will prove to be harmful to our economy, our environment, and our very way of life. Seriously dangerous species like the Little Fire Ant (LFA) have established themselves in various locations in the State, and particularly on Hawaii Island. From there the State has continued to allow the shipment of material infested with LFA to other islands, spreading this potential environment disaster farther.


The Maui Invasive Species Committee (MISC) is estimating that Maui will experience the same level of LFA and coqui frog infestation that is now prevalent in the Hilo and Puna





 | 808-733-7060

 | 808-737-4977

 | 1259 A'ala Street, Suite 300
Honolulu, HI 96817

Districts of the Big Island in the next 10 years if governmental agencies do not take a more proactive stance. The Biosecurity plan essentially says the same thing.

A key part of the eradication effort is the need to address infestations wherever they occur. One major problem is that certain recalcitrant property owners refuse to manage the invasive species on their property and refuse access to State agents to do the work for them. The species then spread to surrounding properties making eradication impossible.

Currently, to enter such properties requires the active involvement of the State Attorney General's office, which does not have a full-time presence on the Neighbor Islands. If the Counties participate in this effort, then the Counties' attorneys can obtain the necessary warrants to enter private property.

HAR feels the current plan for managing detrimental invasive species is not working. Laws that must be amended to correct this situation and give our local communities a better chance at addressing this problem, including Chapter 46, which gives the Counties their powers, and Chapter 194 which makes the State Department of Agriculture the agency responsible for this function.

Mahalo for the opportunity to testify.

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 7, 2017 1:24 AM
To: PSMTestimony
Cc: owlit1@gmail.com
Subject: Submitted testimony for SB637 on Feb 8, 2017 13:15PM

SB637

Submitted on: 2/7/2017

Testimony for PSM/AEN on Feb 8, 2017 13:15PM in Conference Room 224

Submitted By	Organization	Testifier Position	Present at Hearing
Frances Pueo	Hui Pono Holoholona	Oppose	No

Comments: I oppose this for many, many reasons: As written gives to much power over private property right. It also will be misused to targeted cats, as "pest". History shows round-up-to kill felines doesn't decrease animal overpopulation. In fact, it has an opposite effect. Organized T-N-R-M of feline colonies, and working with caregivers in designated areas, away from threaten bird habitats: decreases unwanted kitten births, animals are healthier and better controlled, and less likely to hunt for birds. Birds flight ability keeps them relatively able to escape danger. Keep in mind that we humans are the greatest habitat destroyers of bird feeding and nesting areas with our housing, shopping malls, poisons, and other pollutions. Additional factors of native bird extinction are increasing warm climate changes, increase diseases of avian malaria, and avian poxvirus. Also, competition from non-native birds and from invasive plant that overtake their usual food sources. Rats have been observed to climb trees to attack baby bird fledging's, are carriers of leptospirosis bacteria and easily can contaminate fresh water....our drinking water! Rats are carriers also of the dreaded Rat Lung Disease that too many of our islanders have been fatally affected with. The damages to food crops as oranges, avocados, bananas, breadfruit and more, is in the millions. Rats easily adapt to poisons, so the best and most effect rat control is the CAT. Remove the cat, the rats return. The irony is that the real villain on the bird population is the rats killing more birds then any free roaming cat. Frances P. Pueo, P.O. Box 943, Mt. View, HI 96771

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

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Reducing Homeless Cat Populations on Kauai *Compassionate Approaches are Working Better*

Many people see trapping, removing and killing homeless outdoor cats as a necessary, fast and permanent way to reduce the cat populations, but the real experience on Kauai shows otherwise. An estimated 12,000^{i,ii} homeless cats live in Kauai's towns and neighborhoods. Over the last decade, about 23,000 of these "community" cats have been trapped, removed, and killed.ⁱⁱⁱ And yet, their numbers seem relatively unchanged.

The primary reason for this apparent contradiction is the cat's high reproductive rate. Homeless female cats, living outdoors without optimal nutrition, can produce up to 550 kittens per 100 adult females each year.^{iv, v} After cat removal, population growth rates can be as high as 95%.^{vi} Since this greatly exceeds the 20% annual catch rate, no significant population reduction was ever possible.

While most of the cat removal has been geographically scattered and short-term, some has focused within specific areas for longer time periods. This is more likely to achieve the high removal rates necessary to reduce cat populations significantly. To assess how well these focused removal efforts are working on Kauai, KCCP obtained records of 16 such projects.^{vii} These were conducted over the last 6 years, and trapped about 500 cats.

None of these have permanently removed the cats, and three were intentionally stopped due to exploding rat populations. Total population suppression is estimated at 255 cats,^{viii} or 2.1% of the island total. The most successful projects are in four wildlife areas where continuous trapping is employed: within these areas population suppression is over 90%. For the other areas, it was only 30%. The low rate is due to intermittent trapping and subsequent repopulation from high birth rates and immigration.^{ix}

Since cats' high reproductive rate is the primary factor that is confounding efforts to reduce the population, why not target their reproduction? This is what TNR does.

In the last decade, about 5400 cats have been Trapped-Neutered-Returned^x (TNR'd) on Kauai,^{xi} and these projects have reduced the island-wide population of neighborhood cats by an estimated 2200,^{xii} or 18%. The estimated population suppression from trapping and killing over four times the cats – the 23,000 – is only 11%.^{xiii}

In addition to reducing cat populations, TNR also reduces predation^{xiv, xv, xvi, xvii} and disease^{xviii, xix} for the cats that remain. The total impact mitigation from the combination of population reduction, less predation and reduced disease is much greater than the 18% through population reduction alone. Analysis shows it's up to 30% island-wide.^{xx}

TNR is significantly less expensive than trap and remove,^{xxi} has proven that it can scale island-wide, and is working better! It should be the preferred method to resolve cat population problems within our towns and neighborhoods.

To fully solve the community cat problem we must address its source. Both sides of the debate agree on this. That means available, inexpensive spay/neuter for all. A low kill rate approach like TNR is needed for those who see lethal removal as unacceptable and who won't cooperate if this is the only supported choice.^{xxii}

References and Notes

- ⁱ Feral Cat Task Force Final Report, from Accord3.0 Website, <http://www.accord3.com/pg79.cfm>, estimate is 15,000 to 20,000 in wild and populated areas combined.
- ⁱⁱ Scott, Kauai's Feral Cats, The Scope of the Problem, 2013. This is source of the Feral Cat Task Force estimate, and it shows that about 75% live in populated areas. Available on request.
- ⁱⁱⁱ From Kauai Humane Society statistics, FOIA information from US Fish and Wildlife, and UIPA information from Hawaii's Dept. of Land and Natural Resources. See Appendix 2.
- ^{iv} Nutter, Evaluation of a Trap-Neuter-Return Management Program for Feral Cat Colonies: Population Dynamics, Home Ranges, and Potentially Zoonotic Diseases, NCSU Comparative Biomedical Science, 2005. The author reports on a sample of over 2000 cats.
- ^v Schmidt et. al., Survival, Fecundity, and Movement of Free-Roaming Cats, *Journal of Wildlife Management* 71(3):915-919; 2007)
- ^{vi} Appendix 1, calculation 1
- ^{vii} KCCP obtained information from State and Federal agencies via information requests. KCCP itself removed certain cats (non-lethally). Records from 19 projects were obtained, but long-term results are not known for 3 of these. See Appendix 2.
- ^{viii} Appendix 1, calculation 2
- ^{ix} Miller et. al., Simulating Free-Roaming Cat Population Management Options in Open Demographic Environments, *PlosOne*, 2014
- ^x TNR (Trap-Neuter-Return) captures fertile cats, surgically sterilizes them, returns them to their outdoor home, and then manages the cats to reduce their population over time.
- ^{xi} Estimates from KCCP data (2007 – present) and Kauai Humane information, see Appendix 3
- ^{xii} See Appendix 3.
- ^{xiii} See Appendix 1, Calculation 2.
- ^{xiv} TNR Fact Sheet 2, Predation, http://voxfelina.com/voxfelina/Vox_Felina_Fact_Sheet_Predation_v_1.1.pdf
- ^{xv} Loyd et. al. Quantifying free-roaming domestic cat predation using animal-borne video cameras, 2013
- ^{xvi} Silva-Rodríguez, E.A. and Sieving, K.E., "Influence of Care of Domestic Carnivores on Their Predation on Vertebrates." *Conservation Biology* 2012. 25(4): p. 808-815.
- ^{xvii} From FOIA, US Fish and Wildlife field notes, 20140114 Email Marie McKenzie to Kim Uyehara_Botulism DB.pdf
- ^{xviii} Nutter, Evaluation of a Trap-Neuter-Return Management Program for Feral Cat Colonies: Population Dynamics, Home Ranges, and Potentially Zoonotic Diseases, NCSU Comparative Biomedical Science, 2005
- ^{xix} VanWormer, *Toxoplasma gondii*, Source to Sea: Higher Contribution of Domestic Felids to Terrestrial Parasite Loading Despite Lower Infection Prevalence *EcoHealth*, September 2013
- ^{xx} Appendix 3
- ^{xxi} Zawistowski et. al., Simulating different approaches for managing free-roaming cat populations, ACC&D, 2011
- ^{xxii} On Kauai, animal abandonment rates tripled in some areas after high kill rates for cats at the Kauai Humane Society became highly publicized in mid-2013. Requests for no-kill service from KCCP have tripled since then as well.

Appendix 1: Calculations

Calculation 1: Cat Reproductive Rate

All estimates are from mainland studies, and many feel that birth and survival rates would be higher on Hawaii due to full-year breeding seasons and richer environmental resources.

	Nutter North Carolina	Schmidt et. al. Texas
Birth Rate	4.2 (median)	5.6 (mean)
Kitten Survival	50% (3 months), 25% (6 months) *Est. annual: 17%	50% (3 months, feral) 75% (3 months, semi) Est. Annual: 30%, 20%
Population ratio M/F	33%/67%	Not given
Adult survival M/F	0.40 / 0.60	0.57 / 0.88
Total Birth rate	50% or 0.5	80% to 120% or 0.8 to 1.2
Population growth rate, r	3% or 0.03	60% to 95% or 0.6 to 0.95

*Nutter presents a Kaplan-Meier analysis indicating that after 125 days, kitten death rates approach those of adults. Accordingly, annual death rates are calculated by:

$$6 \text{ month survival} \times \sqrt{\text{adult annual survival}} = \text{kitten annual survival}$$

Nutter's death rate of 47% is very close to the birth rate, so this represents a stable population, as one would find in a "full" biological environment.

Schmidt's data suggests that higher values are possible when food is plentiful. This value is used in analysis below (Calculation 2) for maximal rates when cats are removed from an area.ⁱ These birth rate values greatly exceed the death rate, so that the population growth rate is quite high.

Multiple authors report lower numbers as well, with birth rates as low as 40% of Nutter's. These suggest negative population growth rates (contraction) when populations are too high, i.e. above the environment's carrying capacity.

We believe this analysis is conservative for Hawaii. Lohr postulated birth rates of 0.75 for Hawaii under normal situations.ⁱⁱ This would suggest population growth rates, r, of 0.55, just under Schmidt's lower value. This higher value supports the assertion by many that birth and population growth rates will be higher in Hawaii due to its warm climate.

Calculation 2: Island-wide impact mitigation from Trap and Remove

Details for the population suppression resulting from removal of the 23,000 cats in the last decade are presented below. Some of the trapping was focused, for example, local hotels that trap cats on their property. Most of the trapping was not focused, e.g. residence obtained a trap from KHS, trapped one or two cats on their property, and returned the trap.ⁱⁱⁱ

Known Focused Trapping at 16 locations

The island-wide neighborhood cat mitigation from known focused trap and remove can be determined from the tables in Appendix 2. Some of this trapping was in wildlife areas adjacent to but not within neighborhoods. Nonetheless, all the cats are included. Total cat suppression is estimated as 255 of the original population. This is a 2.1% reduction of the island-wide total of 12,000 neighborhood cats. This trapping was performed on an estimated original population of 480 cats, or 4% of the island-wide total.

Trapping for 22,500 Cats: Casual, Intermittent Focused, and Continuous Focused

The results from Appendix 2 are used as a model. An estimated 20% of the trapping is focused in one area.^{iv}

	Focused, Continuous	Focused, Intermittent	Casual
Percentage of trapping	5%	15%	80%
Population suppression	80%	20%	10%*
Total, Island-wide	4%	3%	8%

*The justification for the 10% value is shown in calculation 3.

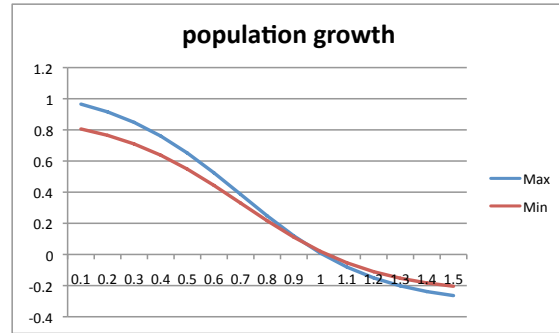
Total population suppression is 15% of cats from the entire population less cats in the known focused trapping or under TNR management. Thus, total cat suppression is:

$$15\% \times (100\% - 4\% - 34\%) = 9.3\% \text{ or } 1120 \text{ cats}$$

$$\text{Combined total: } 9.3\% + 2.1\% = 11.4\% \text{ or } 1375 \text{ cats}$$

Calculation 3: Casual Trapping Metrics

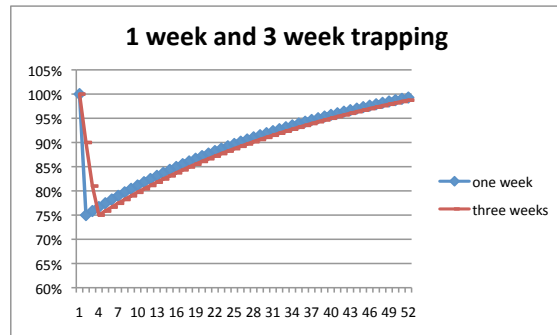
The estimated effect of casual trapping is based on a growth rate analysis. Two logistic growth curves are shown in the graph at the right, based on values from Schimdt et. al., which was referenced in calculation1 above. The values establish a range for maximum values of the logistic function, which occurs for very low population levels. The value at a 100% population level (biological carrying capacity) is very near zero.



The number of animals trapped annually in casual trapping is 80% of 22,500/10 or 1800. This is 25% of the of the total cat population of 7000 that is being casually trapped.v

At a population level of 75%, the growth rate (27% to 31%) exceeds the removal rate. Immigration, while modest, adds more. Simplistically, this means there is a zero population reduction. This is not what actually happens. In a real situation, there is a time lag between cat removal and cat rebound. The length of time between removal and rebound back to a 100% population level determines the average number of cats and thus the degree of cat suppression.

Two examples are shown in the graph. One traps 25% in 1 week. This might correspond to removing one cat from a small neighborhood population. The second traps 5 cats in 3 weeks. This might correspond to removing 5 cats from a condominium area. Each shows a resulting annual average cat population of approximately 90%. Thus, the cat suppression from ongoing casual trapping is approximately 10%. In both cases, the permanent suppression is zero, i.e. the cat population returns to 100% after about one year.



Population rebound within one year is very typical on Kauai, so both examples are realistic.

References

ⁱ Maximum population growth rates, r , are assumed when 80% of cats are removed; for lesser removal percentages, the maximal rate is linearly prorated to lower values.

ⁱⁱ Lohr, C. et. al, Costs and benefits of trap-neuter-release and euthanasia for removal of urban cats in Oahu, Hawaii, *Conserv Biol.* 2013 Feb;27(1):64-73. doi: 10.1111/j.1523-1739.2012.01935.x. Epub 2012 Sep 25.

ⁱⁱⁱ KCCP requested data from KHS to determine how much focused trapping versus scattered trapping has been performed in the last 6 years, but KHS declined to provide the information.

^{iv} Apparent continuous trapping is between 5% and 10% based on anecdotal observations in the KHS lobby (random sampling). Here the assumed 20% is quite high and thus conservative.

^v 12,000 - 440 (16 known trapping areas) - 620 (focused trapping) - 4080 (TNR) \approx 7000

Appendix 2: Trap and Remove Activities Analyzed on Kauai

	Location	Date	Event	Outcome	# rem	base #	Source	remain	Comment
1	Salt Pond 1	mid-2012	30 cats removed	cats back by mid-2013	30	40	ACO/KHS	100%	
2	Salt Pond2a	late 2014 - mid 2015	2 TNR colonies removed (17) plus additional 20 (estimated)	cats back by late 2016	37	40	ACO	100%	near complete removal
unk	Salt Pond 2b	late 2014 - mid 2015	total of 70 cats removed by ACO, but some were from park	one time trapping; estimated return rate to wild area is 0.1	50	55	ACO	25%	% remain estimated from immigration rate = 0.1
3	HNWR	2010 - 2015	continuous trapping	cats continuously present but at very low levels	130	90	USFWS	5%	base numbers are projected from immigration rates of .25, .25, .05 and 0.8 growth rate
4	KNWR		intermittent trapping		70	50	USFWS	5%	
5	HNWR		intermittant trapping		15	10	USFWS	10%	
n/a	mahalepu	2013	58 cats removed from wild areas and near GC	unknown **this is mostly a wild area and is excluded	58		DLNR	excluded	
6	Kukuiula	mid-2015	cats removed	all cats returned in ~1 year	12	15	KCCP	100%	cats now in a rescue
7	Larsen's beach	mid-2015	10 colony cats plus unknown other cats	subset of cats back in 4 months **wild area abuts farms and illegal camping areas	20	25	KCCP	70%	based on reports from illegal campers
8	Small boat harbor	late 2015 - early 2016	colony of 25-30 apparently removed	cats gone for several months, but a large populatio is back in 6 months	25	30	KCCP & ACO	100%	virtually no effect
9	Waimea PC	late 2015 - early 2016	~ 10 cats removed from one area, but other cats present on the property	cats continue to be present with no reported bird issues	10	12	KCCP	50%	

	Location	Date	Event	Outcome	# rem	base #	Source	% remain	Comment
10	Coffee fields	10 & 11 2014	trapping near bird colonies	11 cats trapped, but assess that cats are still present	11	15	DLNR	100%	due to non-continuous
11	Kaumakani	Oct 2014 - Jan 2015	trapping near bird colonies	4 cats; OK for several months; but trapping stopped	4	4	DLNR	100%	due to non-continuous
	Private trapping, Albatross	2014	30 cats removed	unknown **excluded; too little is known	30		COK UIPA	excluded	
12	Princeville SC	2012	12-15 cats removed	large number of rats; 5+3 cats brought back	15	15	KCCP	50%	
13	Regency Resort	2016	maintained colony removed	rat invasion; unk number of cats brought in	12	12	KCCP	50%	estimated # cats returned based on volunteer information
14	PMRF base	2013	cats on base removed	rats eating signal cables; allowed TNR on base	30	35	KCCP	50%	
15	PMRF wetlands	2013-2105	cats removed around wetland restoration	ongoing cat removal; no reports of predation problems	50	25	DLNR	10%	DLNR data
16	Lagoons GC	ongoing	cats removed in nesting season	~10 cats removed annually	30	10	DLNR	50%	ongoing with 6 months on, 6 months off

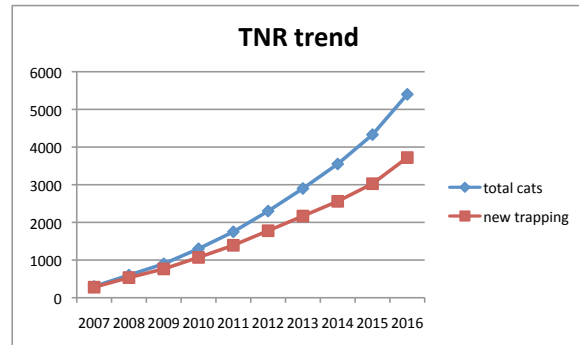
Summary:

reduction in 4 continuous areas	93%
reduction in 5 intermittent areas	31%
reduction in 7 one time areas	29%
total original cat population (est.)	483
cats removed (est.)	255
percentage removed	53%

Appendix 3: TNR Conducted over the Last 10 Years

About 5400 cats were trapped for TNR over the last decade. Data is from KCCP, KHS and members of the community who practice TNR independently. The KHS data is used to estimate TNR spay and neuter done by volunteers not associated with KCCP.

Many of the cats trapped are within areas where 100% of cats have already been spayed or neutered, but new cats have immigrated in. These are designated as re-trapped cats. The re-trapping is necessary to maintain population counts at reduced levels and quantifies the inefficiency caused by cat immigration.



Total cats trapped	5400
New Cat Trapping	4080
TNR population reduction	1165
Cats pulled	1005
Total population reduction	2170
Reduction within TNR areas	60%
Island Population %	18%

Explanations:

- New Cat Trapping is the initial near-100% trapping that occurs when TNR is started in a new area. For example, if trapping was conducted in 50 areas, which altogether contained 600 cats when trapping started, then New Cat Trapping would equal or be very close to 600. However, after the initial trapping, additional trapping would occur in these areas due to immigration of new cats. This might result in total trapping of 750 cats.
- TNR population reduction is the attrition from natural causes or accidents.
- Cats pulled are the adoptable animals that were removed

TNR provides mitigation in addition to the direct population reduction because disease is reduced by 60% to 75% (see sources in main paper). Predation is reduced by 75% to 90% according to various sources (see main paper). Calculating both as a 75% reduction gives the following:

Reduction from 100% in TNR area	60%
Remaining cats in TNR area on average	40%
Mitigation of disease and predation	75%
% disease/predation remaining	10%
% of total neighborhood cats TNR'd	4080/12000 = 34%
Total island-wide mitigation	30%

Please Oppose Lethal Methods in HB 606 and HB 904

Dear Sirs/Ma'ams,

As a citizen of Hawaii, I ask that you oppose lethal methods of population control in House Bill 606 and House Bill 904. These bills would give to each county in Hawaii the right to send employees onto private property--with or without a property owner's consent--to kill animals labeled, often arbitrarily, as invasive. Killing one species under the guise of protecting another isn't the answer.

Hawaii has taken the unusual and aggressive stance of labeling cats as invasive species. Many other states and most other countries do not label cats or dogs as an invasive species. Though cloaked in scientific language, the decision about what creatures are or are not called invasive is a judgment in which the lives of certain animals are given priority over the lives of others. This is often predicated on a false belief that we could return to a state of nature before humans arrived and under a mistaken view of ecosystems that is a zero sum game. Attempts to remove species usually fail at the objective of removing the species and often cause unforeseen other disruptions to the ecosystem.

HB 606 authorizes counties to allow employees or agents to enter private property to "control or eradicate invasive species" --with or without a property owner's consent. One should give serious pause before invading a person's property in this manner. This would create situations in which animals loved and cared for by property owners are gathered up and killed. People's pet cats or dogs could potentially be killed, as well as countless community cats. Many Hawaii citizens work hard to care for unowned, community cat or dog every day. They've invested thousands of their own dollars and time in caring for these cats and dogs. By spaying and neutering cats and returning them to their outdoor homes, these efforts are helping to control the population of outdoor cats in Hawaii. Countless studies prove that this approach--Trap-Neuter-Return--works far better than the lethal control methods being proposed in these two bills.

HB 904 establishes an "invasive species rapid response fund... for the purposes of mitigating or eradicating newly detected invasive species threats in the state." We, and a growing group of conservation scientists, take issue with the proposition that any animals should be killed in the name of conservation. In addition, we take exception to the notion that cats or dogs are an invasive species.

Killing in the name of conservation is not warranted. Many communities embrace humane tools to allow species to coexist side-by-side. Lethal control is cruel and costly. It also--as noted above with regard to cats--doesn't work.

Cat and dogs live side by side with humans, as they have for thousands of years. They live where people live, largely dependent upon the resources that come from living in close proximity to people--from refuse to kind-hearted individuals. When cats are

removed, but resources remain, as they inevitably do, new cats move into the empty territory and quickly breed to capacity again. This renders targeting cats pointless. Trap-Neuter-Return (TNR) is the best and only solution. Spaying and neutering eliminates the cycle of reproduction and stabilizes cat populations so they decline over time, as existing cats, territorial by nature, prevent most newcomers from moving in.

Many organizations and countless individuals in Hawaii dedicate time and money to practice Trap-Neuter-Return and care for community cats. I do not want these bills to impede their good work

Please oppose lethal measures in HB 606 and HB 904, and any and all instances in which cats are labeled as an invasive species. Rather than investing in costly, cruel, and failed policies, please work to see that state resources focus on what works, including Trap-Neuter-Return.

Thank you for your time and consideration.

Sincerely,
Allan T. Yoza
91-937 Puhikani St.
Ewa Beach, HI 96706
allan.yoza@hawaiiantel.net

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 1, 2017 2:17 PM
To: PSMTestimony
Cc: sue.leeloy@hawaiicounty.gov
Subject: *Submitted testimony for SB637 on Feb 8, 2017 13:15PM*

SB637

Submitted on: 2/1/2017

Testimony for PSM/AEN on Feb 8, 2017 13:15PM in Conference Room 224

Submitted By	Organization	Testifier Position	Present at Hearing
Susan L.K. Lee Loy	Individual	Support	No

Comments:

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Sent: Saturday, January 28, 2017 4:13 PM
To: PSMTestimony
Cc: nredfeather@kohalacenter.org
Subject: Submitted testimony for SB637 on Feb 8, 2017 13:15PM

SB637

Submitted on: 1/28/2017

Testimony for PSM/AEN on Feb 8, 2017 13:15PM in Conference Room 224

Submitted By	Organization	Testifier Position	Present at Hearing
Nancy Redfeather	Individual	Comments Only	No

Comments: I am a farmer in Kona. This bill will be essential to even thinking about the eradication of the Little Fire Ant on Hawai'i Island, or elsewhere. So many people either will not take care, do not understand how to, etc. We stopped bunchy top virus in the banana here many years ago by killing ALL the bananas in the quarantine area, so there must already be some kind of protocol at HDOA for this.

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To: PSMTestimony
Cc: victor.ramos@mpd.net
Subject: *Submitted testimony for SB637 on Feb 8, 2017 13:15PM*

SB637

Submitted on: 2/7/2017

Testimony for PSM/AEN on Feb 8, 2017 13:15PM in Conference Room 224

Submitted By	Organization	Testifier Position	Present at Hearing
Victor K. Ramos	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
Sent: Saturday, February 4, 2017 8:28 AM
To: PSMTestimony
Cc: carolyndillon4@gmail.com
Subject: Submitted testimony for SB637 on Feb 8, 2017 13:15PM

SB637

Submitted on: 2/4/2017

Testimony for PSM/AEN on Feb 8, 2017 13:15PM in Conference Room 224

Submitted By	Organization	Testifier Position	Present at Hearing
Carolyn Dillon	Individual	Support	No

Comments: Thank you for this opportunity to testify in favor of SB376, companion to HB606, Relating to County Access to Private Property. As a community organizer I have worked for the past two years with my neighbors living in a 1/2 mile radius of my home in the Historic Coffee Belt to educate and encourage property owners to test and treat for Little Fire Ants (LFA). In this time, as the outreach expanded, the areas of infestation have continued to grow. At last tally, we have confirmed approximately 25 acres of known infestation. Testing is ongoing, and it is likely that the areas we currently know about will grow. Several of these lots are either vacant or belong to absentee owners. Of the owners who live on-island, a fair portion are following the remediation directives of the Big Island Invasive Species Committee (BIISC). However, numerous other neighbors whose properties are interspersed throughout the overall area in all directions are unwilling to address the infestation upon their lots. Despite many offers of help, several attempts at persuasion, and finally begging and pleading, too many of these "neighbors" remain unwilling to take responsibility for the public nuisance they persist in harboring upon their lot. Their obstinance is not only unproductive, but makes it impossible to adequately curtail and contain the infestations on lots owned by people who are actively trying to address their infestations. The basic reason is that the infestations are, by nature, a community-wide problem that demands community-wide solutions. The Hawaii Interagency Biosecurity Plan (HIBP) delves into strengthening criminal charges for such behavior, but that does not address the real and immediate need to stop the ants. The longer the delay the more entrenched the LFA become, expanding in area and density exponentially. Accordingly, economic, environmental, social and health costs will continue to climb - exponentially - as well. The general public is still not aware that the west side of Hawaii County has many areas of LFA infestations up and down our coastline. To allow LFA to continue to spread unabated on the Big Island is a serious mistake and a grave threat to the public health and agricultural production of the entire state. Passage of SB376 & HB606 are imperatives for LFA control. Allowing LFA-infested lots to persist is a public nuisance and must be swiftly dealt with. This Bill is a logical, constructive vehicle for efficient and effective control. We must act now before we pass the tipping point with LFA control and containment. We are already at that tipping point.

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This statement supports the adoption of Senate Bill 637, a proposed statute that would allow county officials to more effectively contend with the many harmful invasive species that threaten our communities. It also supports the adoption of House Bill 606 that addresses county access to private property as a counterpart to SB 637.

In Hawaii, infestations by invasive species already constitute public nuisances under both statutory and common law. Moreover, public nuisances are particularly suited for class action treatment under Hawaii law due to both the liberal standing rules that allow members of the public to institute such cases and the various obligations of state agencies to police and combat invasive species infestations. Those types of cases, however, are not the best use of state judicial resources nor are they effective to timely address the nature of the problem. A statute that allows the state to more rapidly intervene and assist in active management of invasive species is preferable to any such litigation.

Communities such as ours in Holualoa are beset by invasive species that by nature and effect have no relation to the individual properties that constitute those communities. In fact, individual property rights, the rules of homeowners associations, absentee ownership, and the various government property rights are often functionally inimical to effectively contending with these species. Swift and coordinated cooperation is essential, yet is often lacking when it comes to current efforts to deal with invasive species that have existed for many years already. As a result, those issues have become worse. If the government of Hawaii is serious about doing something about invasive species, action to prevent individual property rights from trumping community based health and safety concerns is essential.

In short, insects, frogs, fungi, and bacteria don't care where property lines are or who "owns" what. They will exploit any chink in the armor we are attempting to use to defend our communities from them, whether those chinks are absentee owners of properties who are unaware of any issues or property owners who intend to obstinately obstruct any sound strategy to deal with them. Invasive species can't be effectively dealt with unless there is a coordinated approach that allows for treatment of the broader areas they are invading.

As a result, I urge you to pass SB 637.

Respectfully,

Clyde Platt
Holualoa, HI