

Permits for Possessing Live Game

PROPOSAL 142

5 AAC 92.029. Permit for possessing live game.

Add emu to the to the list of animals allowed to be possessed without a permit as follows:

Add emu to the clean list 5 AAC 92.029 so that no permit is required to own them in Alaska, as is the USDA practice in all other 49 states. Emu would be allowed to be raised as livestock which is current federal law.

What is the issue you would like the board to address and why? I would like to have emu added to the Clean List or list B not requiring a permit. It meets all of the following criteria and is accepted as livestock by the USDA and is already being raised in all other states except Alaska. It's really surprising this wasn't added a long time ago.

- (1) is not capable of surviving in the wild in Alaska;
- (2) is not capable of causing a genetic alteration of a species that is indigenous to Alaska;
- (3) is not capable of causing a significant reduction in the population of a species that is indigenous to Alaska;
- (4) is not capable of transmitting a disease to a species that is indigenous to Alaska;
- (5) does not otherwise present a threat to the health or population of a species that is indigenous to Alaska;
- (6) is not captured from the wild for use as a pet;
- (7) does not present a conservation concern in the species' native habitat outside of this state;
- (8) can be reasonably maintained in good health in private ownership;

Emu are poultry raised for food eggs and leather in every US state except Alaska, and this is only because 5 AAC 92.029 is a backwards law that forces Alaskans to beg for permission instead of the gvt expressing legitimate reasons for a ban against any animals. I would like to raise mu for foods, pets, meat, they are USDA subsidized and meet all the conditions which is also documented by the USDA,

If any information on emu farming or birds is required I am happy to help, and all of it is on the USDA's website including care incubation range species farming methods and the benefits of the most completely utilized livestock being raised today. Thanks.

PROPOSED BY: Pike Ainsworth

(EG-F19-001)

PROPOSAL 143

5 AAC 92.029. Permit for possessing live game.

Add emu to the to the list of animals allowed to be possessed without a permit as follows:

It might read as follows: The Alaska Board of Game has adopted and approved the ownership of emus as a pet. The Board of Game recommends that a new owner of an emu to purchase a book that covers the keeping, care, housing, interaction, diet, and health.

What is the issue you would like the board to address and why? I would like to propose that you add emus to the clean list so I can legally have one as a pet. Emus are very docile and friendly birds. Australian farmers have found that emus make great pets because of their sweet and friendly nature. Emus are very docile and even tempered and are very predictable. Emus are very smart and can be easily trained. Emus like learning things because in part of the attention they get while training them. Emus usually retain what they are taught. A good example of this is the Liberty Mutual commercials with Lemu and Doug. In the first one it shows Lemu with his head out the window. He’s enjoying the wind in his face. When the car stops, he starts biting the seat belt. Lemu was taught to do that. In the most recent one, it shows Doug driving a motor bike with Lemu riding in the sidecar. Doug completes the jingle for Liberty Mutual then Lemu was taught to say “ pay for what you need “. Lemu speaks clear enough that you can understand the words pay for what you need. Emus are very good around children as they like the attention and like to play. That’s why emus are becoming a favorite as a family pet. Emus like lots of love and attention. Once you meet and bond with an emu, they become very attached to you and want the love and attention that you can give them. I bought and received a book from Amazon titled Emu-Emus as pets. It covers emus keeping, care, housing, interaction, diet and health. I am 59 years old, divorced and live alone. I would prefer a female emu as I feel that a female would be more receptive of me than a male would. I also would gladly accept the challenge of caring for an abused female emu that’s been kept in captivity by someone else. I would greatly appreciate it if you would take this proposal to heart and consider approving it. Thank you for your time and patience.

PROPOSED BY: Gary Royal Morrill (EG-F20-022)

PROPOSAL 144

5 AAC 92.029. Permit for possessing live game.

Exempt “sterilized community cats” from the list of species prohibited form being released into the wild as follows:

This proposal is a request to change Alaska Administrative Code Number **5 AAC 92.029, Permit for Possessing Live Game** (<http://www.legis.state.ak.us/basis/aac.asp#5.92.029>). Specifically, I am requesting that **5 AAC 92.029** be changed to exempt “sterilized community cats” (under Cats/Felis catus) from the list of species who are prohibited from being released into the wild.

5 AAC 92.029. Permit for possessing live game.

(a) Except as otherwise provided in this chapter, or in AS 16, no person may possess, import, release, export, or assist in importing, releasing, or exporting, live game, unless the person holds a possession permit issued by the department.

(b) The following species, not including a hybrid of a game animal and a species listed in this subsection, may be possessed, imported, exported, bought, sold, or traded without a permit from the department but may not be released into the wild:

Common Name	Scientific Name
Dog	Canis familiaris
Cat	Felis catus
Sheep	Ovis aries
Goat	Capra hircus
Cattle	Bos taurus
Oxen	Bos spp.
Horse	Equus caballus
Guinea pig	Cavia porcellus
Reindeer (except feral reindeer)	Rangifer tarandus Var.
...	

According to the current regulation, Section (i) it is stated that the board will remove a species from the list in (b) of this section, if there is a preponderance of evidence that the species:

- (1) is capable of surviving in the wild in Alaska;
- (2) is capable of causing a genetic alteration of a species that is indigenous to Alaska;
- (3) is capable of causing a significant reduction in the population of a species that is indigenous to Alaska;
- (4) is capable of transmitting a disease to a species that is indigenous to Alaska;
- (5) otherwise presents a threat to the health or population of a species that is indigenous to Alaska;
- (6) is captured from the wild for use as a pet;
- (7) presents a conservation concern in the species' native habitat outside of this state;
- (8) cannot be reasonably maintained in good health in private ownership; or
- (9) presents a likelihood that concerns about, or threats to human health and safety will lead to adverse consequences to captive animals.

Based upon this section, there is evidence to suggest that cats: (1) is (are) capable of surviving in the wild in Alaska and (6) is captured from the wild for use as a pet.

What is the issue you would like the board to address and why? My name is Shannon Basner, a constituent living in Anchorage and I am submitting this proposal to the Alaska Board of Game. I am a special education teacher in the Anchorage School District working in a self-contained behavior classroom. I have taught in New York and Alaska for 25 years collectively. I am also the founder of Mojo's Hope, a nonprofit organization that rescues, rehabilitates, and re-homes animals with special needs, and provides a loving, peaceful environment through our PAWspice program for those who may be at the end of their life (<http://mojoshope.org/>); Alaska Kitty Advocacy Awareness Adoption Tails (KAAATs), a non-profit organization that promotes advocacy, awareness, and adoptions of cats (<http://www.pawprintshowlsandpurrs.org/alaska-s-kaaats>); and Paw-Prints, Howls and Purrs, a purrtography business

(<http://www.pawprintshowlsandpurrs.org/>, specializing in cat photography). In addition, I am an Associate Certified Cat Behavior Consultant through The International Association of Animal Behavior Consultants specializing in cats with specific behavior needs, such as being fearful, shy, introverted or unsocialized primarily in the shelter or foster environment, with the goal of shaping behaviors so animals are comfortable with themselves, their new environments and if possible, potential adopters. I am also certified as a Pet Loss and Bereavement Counselor through the Association for Pet Loss and Bereavement.

Local Community Cat Information:

Over the past several years, we have monitored the website for Anchorage Animal Care and Control (AACC). AACC is the only open admissions shelter in the Anchorage municipality and the place most people bring cats they have trapped. The actual number of stray cats without a live outcome is not exact due to lack of transparency of the local AACC. We have offered guidance and support for the community regarding trapping, but we are bound by the current regulation. The muni website provides us with the location of the cats being trapped and we follow the outcome to the best of our ability. While this is just a snapshot into the number of community cats in our community, indications are many are coming from the same area of town in clusters and do not have a live outcome. Typically they fail their behavioral evaluation, which would be avoided if this regulation was lifted. These cats are able to thrive outdoors, but are caught by people who may not have an understanding of how to truly help them. There is strong evidence to show, with time and thorough rehabilitation, they can also be adopted into wonderful homes.

The following data has been collected over the past seven months. I am unable to track all of the incoming cats, but I collected what I could from the AACC website based upon the area of town and the number of incoming cats . The number of cats euthanized for behavior is very high and could have been avoided if the regulation was lifted.

Anchorage Animal Care and Control (AACC) cat collection intake and animal outcomes:

AACC Running List of Cats			
157367	adopted	253564	adopted
251137	euthanized-b	253601	adopted
251138	euthanized-b	253602	adopted
251227	returned to owner	253603	adopted
198263	adopted	253699	euthanized-b
251136	euthanized-b	253716	euthanized-b
251280	adopted	253722	euthanized-b
251281	adopted	253726	euthanized-b
		215667	claimed
251339	adopted	253753	available
251359	euthanized-medical	254449	euthanized-b
251371	euthanized-b	254459	not-evaluated
251376	euthanized-b	254450	euthanized-b
251383	euthanized URI	Twinkle	euthanized-b
251508	euthanized	254508	euthanized-b
251853	Simon got adopted 10/9/19 came from Tudor and Arctic	254481	euthanized-b
251860	euthanized-b	254581	euthanized-b
251885	euthanized uri	254618	euthanized-b
251886	euthanized-b	106487	claimed
251889	euthanized-disease	254468	euthanized-m
251890	euthanized-disease	254625	euthanized-b
251891	euthanized URI	254628	euthanized-b
251894	euthanized-medical	254647	euthanized-b
251895	euthanized-medical	254673	adoption
251897	euthanized-URI	254674	euthanized-b
251969	euthanized-URI	254692	euthanized-b
251970	euthanized-B	254693	euthanized-b
251974	euthanized-b	254694	adopted
251976	adopted	254696	adopted
251979	euthanized URI	254763	euthanized-b
252169	claimed	254765	euthanized-b
252182	claimed	254843	euthanized-m
252186	euthanized-b	254844	adopted
252201	euthanized-b	254902	euthanized-b
252284	euthanized-b	254925	euthanized-b
252302	claimed	254956	claimed
252331	euthanized-b	254961	euthanized-b
252362	euthanized-b	254973	adopted: Pepper
252388	euthanized-b	254975	euthanized-b
252410	euthanized-b	255001	adopted
252431	euthanized-b	255018	adopted
252504	euthanized-b	255019	euthanized-b
252577	euthanized-b	255074	euthanized-b
252587	9/10/2019-euthanized b	255885	euthanized-m
252588	9/10/2019-euthanized-b		
252723	9/10/2019-euthanized-b		
252756	adopted		
252865	euthanized-b		
252933	euthanized-b		
252979	adopted		
253179	found report		
253192	euthanized-b		
253219	euthanized-b		
253220	euthanized-b		
253262	euthanized-b		
253543	adopted		
253559	euthanized-b		
253568	euthanized-b		
253699	euthanized-b		
253716	euthanized-b		
253722	euthanized-b		
253726	euthanized-b		

Working with AACC, Mojo’s Hope has helped rescue, rehabilitate, and rehome over 35 cats in one isolated area. Most of these cats were either trapped or caught, then vetted, spayed/neutered, rehabilitated, and rehomed. The others that were “friendly” on intake went to AACC to be adopted. The ones we didn’t bring to the shelter would not have had a live outcome due to their extreme shy natures. Because of a positive foster home, and with time and patience, they were able to find loving homes and become a family pet.

Another rescue’s efforts tracked a colony over a 15-month time period. They were initially able to trap 27 cats and in the next phase trapped the remaining 22. Out of the 49 cats trapped, two died due to illness, 20 were transferred to other rescues for adoption and 22 stayed with that rescue for vetting, spay/neuter, rehabilitation and later adoption.

In another area of town 16 cats were trapped, 15 of which were rehabilitated and adopted; one was returned to site.

Another area of town, 24 cats were trapped, all were vetted, spayed/neutered and out of the 24, 19 went up for adoption and five were returned to site.

Below is the annual data from AACC from 2017-2020. This data is available on their website. http://www.muni.org/Departments/health/Admin/animal_control/Pages/AnnualStatistics.aspx Paper copies of this data can be found at the customer service desk of AACC, but you must go into the shelter to access the information. They have monthly meetings with the community and share the data, however on their social media presence they do not share all of it . The data that AACC collects does not differentiate between strays and the owner surrenders for no live outcome.

ANCHORAGE ANIMAL CARE AND CONTROL

4711 Elmore Rd. Anchorage, Alaska 99507
(907) 343-8122

For the Month Of December, 2017

Animal Intakes And Outcomes

INTAKES	CATS	DOGS	OTHER	MONTH	YTD
Impounds	4	6	0	10	146
Protective Custody	1	7	0	8	98
Truck Stray	12	19	0	31	611
Office Stray	46	54	1	101	1896
Owner Surrendered	39	29	69	137	1398
Returned	1	2	0	3	108
Owner Request Euthanasia	6	13	0	19	263
Total Intakes	109	130	70	309	4520

OUTCOMES	CATS	DOGS	OTHER	MONTH	YTD
Adopted	96	60	50	206	2024
Claimed	6	54	0	60	1184
Owner Request Euthanasia	6	14	0	20	271
Died	0	1	0	1	36
Missing	0	0	0	0	0
Released To Wild	0	0	0	0	0
Transfer	0	0	0	0	2
Euthanized	24	6	16	46	649
Feral	0	0	0	0	11
Dead On Arrival	9	8	0	17	331
Total Outcomes	141	143	66	350	4497

	CATS	DOGS	OTHER	MONTH	YTD
Total Intakes	109	130	70	309	4520
Total Dead-On-Arrival	9	8	0	17	331
Total Live Animals Received	100	122	70	292	4189

	CATS	DOGS	OTHER	MONTH	YTD
Percent Claimed	11%	69%	0%	45%	53%
Percent Adopted	109%	109%	71%	109%	76%

ANCHORAGE ANIMAL CARE AND CONTROL

4711 Elmore Rd. Anchorage, Alaska 99507

(907) 343-8122

For the Month Of December, 2018

Animal Intakes And Outcomes

INTAKES	CATS	DOGS	OTHER	MONTH	YTD
Impounds	3	9	1	13	189
Protective Custody	0	13	0	13	92
Truck Stray	24	25	1	50	716
Office Stray	51	57	9	117	1978
Owner Surrendered	26	43	29	98	1425
Returned	2	6	0	8	122
Owner Request Euthanasia	7	17	0	24	228
Total Intakes	113	170	40	323	4750

OUTCOMES	CATS	DOGS	OTHER	MONTH	YTD
Adopted	77	61	26	164	2169
Claimed	19	78	0	97	1211
Owner Request Euthanasia	9	17	0	26	242
Died	1	0	0	1	28
Missing	0	0	0	0	0
Released To Wild	0	0	0	0	0
Transfer	0	0	0	0	0
Euthanized	28	15	18	61	772
Feral	1	0	0	1	15
Dead On Arrival	4	7	0	11	314
Total Outcomes	138	178	44	360	4736

	CATS	DOGS	OTHER	MONTH	YTD
Total Intakes	113	170	40	323	4750
Total Dead-On-Arrival	4	7	0	11	314
Total Live Animals Received	109	163	40	312	4436

	CATS	DOGS	OTHER	MONTH	YTD
Percent Claimed	28%	80%	0%	57%	49%
Percent Adopted	93%	89%	65%	91%	72%

ANCHORAGE ANIMAL CARE AND CONTROL

4711 Elmore Rd. Anchorage, Alaska 99507

(907) 343-8122

For the Month Of December, 2019

Animal Intakes And Outcomes

INTAKES	CATS	DOGS	OTHER	MONTH	YTD
Impounds	1	17	0	18	185
Protective Custody	3	3	0	6	81
Truck Stray	13	18	7	38	682
Office Stray	70	60	6	136	2358
Owner Surrendered	40	52	48	140	1499
Returned	2	4	0	6	149
Owner Request Euthanasia	7	8	0	15	214
Total Intakes	136	162	61	359	5168

OUTCOMES	CATS	DOGS	OTHER	MONTH	YTD
Adopted	76	54	49	179	2285
Claimed	18	69	0	87	1423
Owner Request Euthanasia	7	11	0	18	225
Died	6	1	1	8	40
Missing	0	0	0	0	0
Released To Wild	0	0	0	0	2
Transfer	0	0	0	0	3
Euthanized	24	15	11	50	824
Feral	1	0	0	1	12
Dead On Arrival	6	10	0	16	342
Total Outcomes	137	160	61	358	5144

	CATS	DOGS	OTHER	MONTH	YTD
Total Intakes	136	162	61	359	5168
Total Dead-On-Arrival	6	10	0	16	342
Total Live Animals Received	130	152	61	343	4826

	CATS	DOGS	OTHER	MONTH	YTD
Percent Claimed	22%	78%	0%	51%	51%
Percent Adopted	72%	70%	80%	71%	72%

Additional benefits of removing the barrier to the regulation:

By removing the current regulatory barrier we can move towards implementing Trap-Neuter-Return (TNR) programs to manage community cat populations.

Management of Community Cats

Community cats are unowned, free-roaming cats who live outdoors. These cats may have been born in the wild, or they may be lost or abandoned pets. Most community cats are not socialized to people (i.e., feral cats), so they are unable to adjust to living indoors. If community cats are brought to an animal shelter, they experience intense suffering due to the stress of being confined and their fear of people. As a result, virtually all community cats are killed since they are not suitable for adoption. Therefore, the term “community cats” reflects the reality that for these cats, “home” is within the community rather than in an individual household.

Local governments may explore strategies to manage their municipality’s community cat population for a variety of reasons, including reducing animal control and shelter costs, stabilizing the number of cats living outdoors, and reducing nuisance complaints. They have three options

1. **Trap-And-Remove (i.e., Catch-and-Kill):** Cats are trapped, brought to a shelter, and, because most are not socialized to people and are unadoptable, killed. Any remaining cats in the area quickly breed to capacity, or new cats move in to take advantage of the newly available resources.
2. **Trap-Neuter-Return (TNR):** Cats are humanely trapped, spayed or neutered, vaccinated, ear-tipped, and returned to their outdoor home where they will continue to live while keeping newcomers at bay. Over time, TNR stabilizes or reduces community cat populations by stopping the breeding cycle and preventing unwanted litters of kittens.
3. **Do Nothing:** Cats continue to live outdoors without being spayed or neutered, vaccinated, or provided veterinary care if injured or sick. As a result, community cat populations are not managed, public health and resident concerns are not addressed, and animal welfare implications are not considered.

Why the Regulation Is Being Proposed:

Alaska has a large population of community cats, yet the current Alaska Department of Fish and Game regulations allow only one option to manage them: Catch-and-Kill. Along with giving Alaska’s local governments, shelters, residents, and animals a second option: Trap-Neuter-Return (TNR), cats fit the criteria for being removed from the current list under section (i) for numbers (1) and (6). The methods of catch and kill are not reducing the population and also has hindered the process of rehabilitating those with adoption possibilities.

TNR is recognized worldwide as the most effective, sustainable, and humane approach to community cat management. Cities and shelters across America have stopped using the Catch-and-Kill approach because it is expensive, time-consuming, and ineffective. Today, over 650 municipalities have adopted a TNR ordinance or policy, and thousands more welcome the

TNR efforts of citizens. This regulation change is being proposed so communities in Alaska can legally implement a TNR program to manage their community cats.

Please see the Appendix for case studies on how TNR has transformed communities across the country, and key scientific studies that demonstrate the effectiveness of TNR programs.

There are residents and animal rescue groups who want to practice TNR in Alaska for the health and wellbeing of community cats. For example, one rescue group receives requests to trap feral cats and kittens approximately two to three times a month (sometimes higher in the summer). Since TNR is illegal, they must limit their actions to kittens who are young enough to be socialized and cats who are most likely domesticated strays. When the group explains the limited options for most of these community cats, finders are typically unwilling to trap the cats/kittens and take them to AACC to be killed. The good news is this group regularly traps, sterilizes, and vaccinates cats and kittens who are good candidates for socialization and adoption, which does help reduce the number of breeding cats in the community. The bad news is that cats and kittens who are not capable of being socialized and adopted cannot be sterilized and vaccinated because it is illegal to return them to their outdoor homes. This group continues to look forward to a time when they no longer must deny assistance to the many concerned residents who want to help *all* community cats.

My organization, Mojo's Hope, is interested in working alongside other local nonprofits to implement a TNR program in Anchorage. In March 2014, I began a dialogue with our local animal control about the effectiveness of TNR. I presented case studies, informational packets, and statistics on the impact of such programs in the lower 48. It was at this time that we discovered regulation **5 AAC 92.029** creates a barrier to TNR. Our TNR program entails humanely trapping community cats and transporting them to a veterinary clinic where they are spayed or neutered, vaccinated, and ear-tipped, which involves removing the tip of the cat's left ear, indicating he or she has been sterilized and vaccinated. Based on an assessment by the veterinary team and a cat behaviorist, healthy feral cats are then returned to their outdoor home and healthy socialized cats are brought to the local open admissions shelter or one of the local rescue groups for rehabilitation and adoption. We will work to educate the community about these community cats and respond to questions about the program and the cats. Our goal is to help the community cats of Anchorage live happy and healthy lives, mitigate concerns in the community, and help our animal control officers and shelter personnel focus their resources on animals in need.

Further Benefits Why the Regulation Change Should Be Adopted

The proposed change to Alaska Administrative Code **Number 5 AAC 92.029, Permit for Possessing Live Game**, should be adopted to give local municipalities the opportunity to experience the many benefits of Trap-Neuter-Return (TNR).

TNR stabilizes or reduces community cat populations by:

- Increasing the number of cats who are spayed or neutered
- Decreasing the number of unwanted litters

TNR helps local governments and shelters save money by:

- Decreasing shelter intakes

- Every animal impounded at a shelter requires expenses for housing, sanitation, comfort, medical care, and, especially for community cats, euthanasia. Once a shelter stops taking in feral cats, and their population is stabilized or reduced, fewer animals enter the shelter and fewer expenses are incurred.
- Decreasing shelter disease and euthanasia rates
- Crowded conditions and stress increase incidences of shelter disease, especially upper respiratory infections (URI). For many shelter animals, health deterioration due to preventable illnesses results in euthanasia. When shelter intakes decrease due to TNR, more space and medical resources are available, fewer animals become sick, and fewer animals are euthanized.
- Increasing shelter save rates
- As TNR reduces the strain on a shelter's financial and physical resources and personnel, more resources are available for adoptable and special needs pets. Rather than euthanize for space, behavior, or health issues, all animals are given the best opportunity to lead happy and healthy lives.
- Increasing shelter employee morale
 - There is a growing understanding of the negative impact animal euthanasia has on the mental health and morale of shelter employees and volunteers. When they no longer bear the burden of euthanizing healthy community cats simply because they are not socialized to people, shelters save money through reduced employee turnover rates, time away from work, and worker's compensation claims.

TNR benefits local communities by:

- Increasing community support
 - When local governments and shelters support TNR, residents receive a clear message that the humane treatment of animals is a priority, and the community is transformed. Elected officials garner more support because they have addressed community concerns. Shelters grow their volunteer network because they have improved working conditions, services, and morale. Animal control officers improve their relationship with the public because they are saving more lives.
 - Decreasing nuisance complaints
 - Most cat-related complaints to animal control are due to behaviors and stresses associated with mating and pregnancies, such as yowling, roaming, and fighting. When community cats are spayed or neutered, these behaviors and stress patterns stop, complaints are reduced, and animal control officers save time (and taxpayers' dollars) by responding to fewer calls.
 - Increasing vaccination rates
 - Vaccinations are an integral component of TNR programs, which protect the

- health of individual cats and reduce the disease burden in the community.
- TNR programs are often the number one provider of rabies vaccinations.

Please see the Appendix for more information on how TNR benefits public health.

In conclusion, the proposed change to Alaska Administrative Code Number 5 AAC 92.029, Permit for Possessing Live Game, should be adopted because cats fit the criteria for items (1) and (6) in section (i) and that TNR is sound public policy.

What Would Happen if the Regulation Is Not Changed?

If the proposed change to **Alaska Administrative Code Number 5 AAC 92.029, Permit for Possessing Live Game**, is not adopted, Alaska’s local governments, shelters, and residents will continue to be limited to only one option to manage community cats: Catch-and-Kill. The purpose of this proposal is to remove the regulatory barrier to Trap-Neuter-Return (TNR) so Alaska’s communities have a second option to manage community cat populations. The change will not impact the authority of municipalities to develop programs and policies that best fit their needs. In fact, this regulatory change will support the discretion of municipalities by allowing them to choose whether TNR is right for them.

CASE STUDIES OF SUCCESSFUL TNR PROGRAMS

Below are examples of communities across the country that have been transformed by Trap-Neuter-Return (TNR) programs!

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ALBUQUERQUE, NEW MEXICO

When Jim Ludwick joined the city’s Animal Welfare Department in 2007, he realized several thousand cats were being euthanized each year without any evidence it successfully controlled the community cat population. Per Ludwick, “It was adding to crowding in our catteries, at a time when crowding was a major contributing factor in the suffering and death of domestic, adoptable house cats at the shelters.” In 2008, the city began covering the cost for community cat spay and neuter at clinics organized by New Mexico Animal Friends, a local nonprofit organization. Four years later, Ludwick reported that the shelter’s intake of cats was down 24 percent and the euthanasia rate for cats was down 72 percent. As of July 2016, the city’s animal intake is down from more than 27,000 nearly a decade ago, to less than 18,000 now.

[xx]

ARLINGTON, VIRGINIA

In 2009, Arlington County approved a countywide TNR program. The decision came after years of trapping and killing community cats resulted in a continued increase of cat populations, nuisance calls, and euthanasia rates. The shelter performed spay and neuter surgeries at no cost to the public, started a foster kitten program, loaned humane traps for TNR, organized community training workshops, and stopped euthanizing feral cats. Six years later, cat-related nuisance complaints decreased 94 percent, total cat intake decreased 30 percent, and total cat euthanasia decreased 73 percent. Shelter staff morale improved and animal control officers developed positive relationships with community cat caregivers. Susan Sherman, COO of the Animal Welfare League of Arlington, the county’s animal control shelter, says, “I have been surprised that almost every resident who has complained about feral cats has chosen to participate in TNR once they understand it.”

BUCKS COUNTY, PENNSYLVANIA

In late 2015, the Bucks County Municipal Government brought in animal organizations Animal Lifeline and Red Rover to initiate a TNR program in Core Creek Park, where a population of nearly 500 community cats lived. The goal was to achieve zero cats in 10 years. Animal Lifeline and Red Rover united officials, shelters, rescues, donors, and volunteers for a TNR effort that began in April 2016. Within 10 days of the start of the program, 465 cats and kittens were trapped and spayed or neutered. Over half of those were found to be adoptable, and the 169 cats who were returned to the park now live in a safe environment with trained caregivers. The project also put in place strict measures to prevent additional cats from being abandoned in Core Creek Park. Since the 10-day TNR program ended, only one new cat and a few kittens have been found in the park. Over 80 percent of the park’s cats are estimated to have been neutered, which means the colony numbers will decline. The Core Creek Park project shows that even large-scale TNR can be done over a short time period.

Appendix

The appendix, references, and additional information submitted with the proposal are available on the Board’s proposal book webpage at www.adfg.alaska.gov/index.cfm?adfg=gameboard.proposalbook or by contacting the ADF&G Boards Support Section at 465-6046.

PROPOSED BY: Shannon Basner (HQ-F20-029)

PROPOSAL 145

5 AAC 92.029. Permit for possessing live game.

5 AAC 92.230. Feeding of game.

5 AAC 92.990. Definitions.

Classify *F. catus* as deleterious exotic wildlife and prohibit their release into the wild, feeding, and maintaining unconfined populations as follows:

PROPOSAL: (Revision of former 'Proposal 63', submitted before Alaska Board of Game, November 2017, Anchorage, AK)—**ref.** 5 AAC 92.029--permit for possessing live game; 5 AAC 92.230--prohibition against releasing pets; 5 AAC 92.029 (b), (d), (h), 5 AAC 92.990 (21), Alaska Statute 16.05.940--restrictions for and definition of "game" and "deleterious exotic wildlife":

(1) Add language to 5 AAC 92.029 (b) which specifically prohibits release of domesticated cats (*Felis catus*) into wild, rural and urban environments for any reason in the state of Alaska.

(2) Add language to 5 AAC 92.029 which specifically and by name prohibits maintaining any unconfined population or individuals of *F. catus* under the aegis of "trap-neuter-release", "trap-neuter-vaccinate-release", "return-to-field" or other so-called "no-kill" practices predicated on trapping, providing veterinary treatment for and then releasing stray/feral cats outdoors anywhere in the State of Alaska.

(3) Add language to 5 AAC 92.230 which specifically prohibits feeding unconfined *F. catus* or aggregations of same anywhere in the State of Alaska.

(4) Add language to 5 AAC 92.230 which prohibits Alaskan animal control agencies from placing *F. catus* with members of any organization practicing "no-kill" management schemes, including those which maintain unconfined *F. catus* on their own properties and/or distribute "barn cats" or "working cats" to farms or businesses ostensibly for "rodent control".

(5) Specifically prohibit keeping or maintaining unconfined/unrestrained *F. catus*--regardless of 'owned' status or lack thereof--on either public or private property in wild, rural or urban environments for any reason in the State of Alaska per 5 AAC 92.029 (b) and 5 AAC 92.230; add language specifically requiring all specimens of *F. catus* only be allowed outdoors under direct owner control, e.g. in escape-proof enclosures or restrained on leashes per 5 AAC 92.029 (d) (1).

(6) To classify all specimens of *F. catus* as deleterious exotic wildlife per definitions and relevant restrictions outlined in 5 AAC 92.990 (21), 5 AAC 92.029 (b), (d), (h) and AS 16.05.940.

What is the issue you would like the board to address and why? On March 15th, 2018 the Western Governors Association, which represents 22 US states and--at the time--included former Alaska Governor Bill Walker, ranked feral cats (*Felis catus*) among the five most deleterious invasive species established in our western states. Authors of the above proposal herein respectfully submit this determination constitutes a long-overdue precedent for providing an effective remedy--indeed the *only* effective remedy--to the stray/feral cat overpopulation scourge, which presents a dire threat to both public health and biodiversity.

We note the Board of Game has previously classified the following domesticated, semi-domesticated and/or wild species as deleterious exotic wildlife: domestic dogs (*Canis familiaris*), European rabbits (*Oryctolagus cuniculus*), ferrets (*Mustela putorius*), raccoons (*Procyon lotor*), turkeys (*Meleagris gallopavo*), African hedgehogs (*Antelerix* spp.), Norwegian rats (*Rattus norvegicus*) and house mice (*Mus musculus*). Its status as a "pet" notwithstanding, *F. catus* is far more destructive to naturally-occurring fauna than other terrestrial species currently included on the deleterious exotic wildlife list, many of which are likewise regarded and kept as 'pets'.

Such animals are termed "game" per 5 AAC 92.029 (d) and AS 16.05.940. This term includes feral domesticated animals. A game animal defined as deleterious exotic wildlife is *feral* if the animal is not under direct control of the owner, not confined in a cage or other physical structure, or not restrained on a leash; per 5 AAC 92.029 (i) such an animal may NOT be released--even temporarily--anywhere in the State of Alaska if there is a preponderance of evidence indicating the species:

- (1) is capable of surviving in the wild in Alaska;**
- (2) is capable of causing a genetic alteration of a species that is indigenous to Alaska;
- (3) is capable of causing a significant reduction in the population of a species that is indigenous to Alaska;**
- (4) is capable of transmitting a disease to a species that is indigenous to Alaska;**
- (5) otherwise presents a threat to the health or population of a species that is indigenous to Alaska;**
- (6) is captured from the wild for use as a pet;
- (7) presents a conservation concern to the species' native habitat outside of this state;

- (8) cannot reasonably be maintained in good health in private ownership; and
- (9) presents a likelihood that concerns about, or threats to human health and safety will lead to adverse consequences for captive animals.

Items (1) and (3)-(5) from the above list clearly disqualify *F. catus* from being considered a species suitable for even temporary release into the wild, and just as clearly qualify them for designation as "deleterious exotic wildlife". Authors emphasize this qualification and proposed designation apply to the species *F. catus*--'owned' or 'un-owned'. We predicate this argument on:

(1) *F. catus* is capable of surviving in the wild in Alaska. In 2016 the Mat Su Borough animal shelter euthanized 364 feral cats--on average one a day. Shelter staff warned the numbers were increasing. The Borough has by law prohibited outdoor cats unless they're restrained on leashes or held in enclosures.

Feral cat populations have existed for many years in Anchorage, Wasilla, Soldatna, Kenai, Homer, Houston, Bethel, North Pole, Unalaska, Wrangell and Ketchikan, to name but a few locations.

Private 'cat-rescue' organizations such as 'Loving Companions Animal Rescue' (North Pole) and 'St. Francis Animal Rescue' (Wrangell) feed and maintain unconfined feral cat 'colonies' on their properties, which is unlawful per 5 AAC 92.230, per which maintaining and feeding unconfined 'pet' species, *even on one's own property* is prohibited (authors' *emphasis*). The former group has been doing so for 15 years, and the latter claims to have 'rescued' 467 abandoned and/or feral cats in the last four years. Disposition was either 'adoption' or release onto their properties. One of the authors (FHM) verified the above from the organizations' websites and with organization spokespersons in February 2019. <https://www.adfg.alaska.gov/index.cfm?adfg=pets.releasing>

Since at least 2013 Wasilla-based 'Clear Creek Cat Rescue' has argued that "*...cats need and have a right to the outside as much as humans or dogs...and to enjoy the wonders of the natural world.*" <https://clearcreekcatrescue.org/about/>

Prior to 2017 this group openly declared on their website they fed and kept unconfined feeding aggregations of cats (so-called 'colonies') in the Mat-Su Valley. Since the Alaska Board of Game ruling against legalizing such colonies in 2017, the group no longer publicly admits this. However, they still admit to placing so-called 'barn cats' in southcentral Alaska and the Kenai Peninsula. On their website they describe this process as follows:

"An adopter of barn cats will need to provide...food and water...each day, as well as shelter...They will also need to be provided with health care... In exchange for these essentials, the cats will help control the rodent population in the adopter's barns, outbuildings, gardens and around homes.

In most cases we offer barn cats in pairs or multiples where they have a support system...With a friendly group or companion, the cats are more likely to remain at their new home...we bring them to your home and get them set up for a 'settling in' period that will last 2 or 3 weeks. During this time they are kept in an enclosed area--tack room, garage, shed or a cage if...warm enough. They must be provided food, water and litter...until they are adjusted to the new place...after that time the door of the enclosure is opened and they are allowed to roam in and out until...settled" (authors' *emphasis*).

It's mentioned in passing that *F. catus* are non-hierarchical and do not form 'colonies'. What groups such as Clear Creek Cat Rescue inflict on our environment and communities are human-subsidized feeding aggregations--without feeding cats will disperse into the environment.

Obviously Clear Creek Cat Rescue distributes feral cats with the intention of their being fed and maintained *unconfined* in our rural communities, and has been doing so for years. This is just as obviously in violation of 5 AAC.92.029 and 5 AAC 92.230. <https://clearcreekcatrescue.org/barn-cat-project/>.

The group describes itself as 'non-shelter', but claims to 'rescue and rehome' 500 stray, feral and 'lost' cats *annually*. In March 2019 Clear Creek Cat Rescue's founder verbally admitted to one of the authors (FHM) via telephone her group still released 'barn cats' in rural south-central Alaska and the Kenai Peninsula. When advised this was illegal she hung up.

Anchorage-based rescue group 'Mojo's Hope'/'KAAATS' have likewise admitted online to feeding and harboring illegal cat 'colonies', and declared their intention to *continue* doing so. The group's president most recently stated this online on 11/17/17, the same day the Alaska Board of Game unanimously rejected her group's proposal to allow exemptions to 5 AAC 92.029 to accommodate trap-neuter-release (TNR). She posted that the group had removed their illegal 'colonies' to undisclosed locations. Since then the group has apparently deleted all mention of this from their website.

Conclusion: invasive felines have persisted unconfined in Alaska since at least the 19th century, and probably arrived much earlier with Russian settlers. Local 'animal rescue' groups currently enable and perpetuate this in defiance of Alaska Administrative Code and state law. They essentially function as permit-less 'cat ranchers' on both public and private land in Alaska.

(3) *F. catus* is capable of causing significant population reductions of native species. Scott R. Loss and Peter P. Marra, both of the Smithsonian Institute's Migratory Bird Conservation Center and National Zoological Garden, and Tom Will of the US Fish & Wildlife Service's Division of Migratory Birds released in 2013 a systematic review of 84 cat predation rate studies from the lower 48 US states and found that cat predation may constitute the single greatest cause of anthropogenic bird and small mammal mortality in the US. Their results indicated that unconfined cats--both "owned" and "unowned"--slaughter on average 2.7 billion (range 1.3-4.0 billion) wild birds and 14.3 billion (range 6.3 to 22.3 billion) mammals in the US each and every year.

This and subsequent studies by these and other researchers have found that invasive feline predation is a greater cause of bird mortality than wind-turbine, power line, building, window and auto collisions, open oil container/oil-spill entrapment, agricultural toxins and hunting--*combined*. USFWS estimates current wild bird populations at ~10 billion. This estimate more-or-less doubles during peak migration season (which is for most species also peak breeding season). Cats take from 15% to 33% of the US wild bird population annually. This is tantamount to each cohort (or 'year-class') of fledglings launching themselves from their nests directly into cat gullets. <https://www.nature.com/articles/ncomms2380>

Authors noted during the November 2017 Board of Game meeting some board members' comments that scientific data presented by opponents and proponents of TNR offered "conflicting

scientific reports" in support of their respective arguments. Respectfully, this was not the case--the only *scientific* data was presented by opponents of (pro-TNR) Proposition 62.

Proposition 62 authors offered--at best--misrepresentation of three peer-reviewed studies which did not in fact support their position, and at worst outright propaganda from well-funded "nonprofit" feral cat-advocate groups which demonstrated no regard for accuracy and was predicated on no viable data. Two groups in particular--"Animal Best Friends Society" and "Alley Cat Allies"--had previously initiated science-denial campaigns attacking Loss, Will and Marra's findings, mostly via social media. The primary writers of these were P. J. Wolf and G. J. Matthews.

In June of 2018 Loss, Will, Marra and Longcore published point-by-point refutations of these groups' criticisms. To date neither Wolf, Matthews nor their respective sponsors have publicly responded to the authors' defense of their work, but have simply continued to repeat the same misinformation they've promulgated since release of the original study.

https://www.researchgate.net/publication/326379872_Responding_to_misinformation_and_criticism_regarding_United_States_cat_predation_estimates

Nor is theirs the only such study demonstrating the ecological devastation caused by domestic cat predation. Similar findings have been outlined in studies published in the US, Canada, Mexico, UK, Australia, New Zealand, Israel, South Africa, Oceania, the Caribbean and elsewhere. Feral cat proliferation has become a dire threat to Australia's unique and irreplaceable wild fauna. John C. Z. Woinarski, B. P. Murphy et al released in June of 2018 a meta-analysis of 80 separate studies involving data garnered from stomach content analyses of ten thousand feral cats. From this data he found that feral cats slaughter 1.8 million native Australian reptiles each and every *day*. This carnage cuts a swath across 25% of Australia's more than 1,000 described reptile species.

Note that this toll is only attributable to *feral* cats--it doesn't count predation by the ~ 4 million unconfined 'pet' cats in Australia, which were estimated to take an additional 53 million reptiles annually. Such needless destruction of wildlife is inexcusable, unnecessary and above all unsustainable.<https://thylation.com/wp-content/uploads/2018/12/WR17160-Cats-eat-reptiles.pdf>

Authors are unaware of any specific studies of cat predation of wild species in Alaska. Yet we see no reason to expect, given the preponderance of data demonstrating invasive cats' global impacts on naturally-occurring wildlife assemblages, that the growing presence of this invasive species in Alaska will prove any less deleterious to our state's native wildlife.

Firstly, many of the migratory avian species which spend much of their yearly life cycles in Alaska have been shown to undergo significant cat-engendered population declines elsewhere in North America. Indeed, current estimates for all native North American bird species together are *one-third* what they were three decades ago.

Hence invasive cats deplete Alaskan bird populations even if much of the actual killing occurs in the lower 48 states (or beyond). Secondly, the board has in the past demonstrated due diligence by placing other species on the deleterious exotic wildlife list because of their known destructive impacts elsewhere--and rightly so.

An example is the Eurasian ferret, or polecat (*M. putorius*). Ferrets are popular pets in many regions, and were in fact domesticated in the Old World for rodent control long before cats were; nonetheless they, along with *F. catus*, are primarily responsible for the extinction of half of New

Zealand's endemic bird species, and remain an egregious threat not only to that country's surviving birds, but to nearly all of its more than 60 indigenous reptile and amphibian species, status of most of which ranges from 'threatened' to 'critically endangered'. In light of such destructive history, it hardly seems necessary to require a local study to justify placing ferrets--and even more so *cats*--on the Deleterious Exotic Wildlife List.

(4) *F. catus* is capable of transmitting a disease to a species that is indigenous to Alaska

F. catus transmits the following zoonotic diseases to other species, including taxa which naturally occur in Alaska.

Rabies: All mammals are susceptible to the rabies virus, although some taxa such as rodents only rarely become infected and almost never transmit it. Rabid caribou, little brown and Keen's myotis bats, Arctic and red foxes, wolves, domestic dogs and polar bears have been documented in the State of Alaska. Rabid black bears (*Ursus americanus*) have been recorded in Canada, and coyotes (*Canis latrans*)--the range of which has expanded into Alaska--have been documented rabid in Canada and the lower 48 states.

The primary wild rabies vectors in Alaska appear to be Arctic and red foxes. Endemic or "native" strains of the virus--including a self-maintaining strain in Arctic foxes (*Alopex lagopus*) which apparently doesn't kill its hosts--occurs in Alaska's north and west coastal regions, including the Aleutian Chain. Non-native strain(s) dominate in the Alaskan interior, including the Fairbanks area, where the primary vectors are invasive red foxes (*Vulpes vulpes*). Further, studies have postulated climate change may affect rabies' ecological niche in Alaska--a Scandinavian study found positive correlation between rabies incidence and increasing temperatures, and generated a model that predicted reduction of endemic Arctic strains and increase of non-endemic strains.

<https://tandfonline.com/doi/pdf/10.1080/22423982.2018.1475185>

Enter feral cats. Outside Alaska red foxes and other wild vectors, including raccoons and skunks, have been shown to readily transmit rabies to feral cats, and vice-versa. Today cats are the leading domesticated vectors of the rabies virus in the US. They have been the source of one-third of annual human rabies exposures--that's ~13,000 human exposures each and every year--for the last three decades. Without treatment, rabies is almost invariably fatal:

<https://www.documentcloud.org/documents/681002-zoonotic-diseases-associated-with-free-roaming.html>

Toxoplasmosis

Cats are the definitive host of a highly dangerous pathogenic protozoan—*Toxoplasma gondii*—which sexually reproduces exclusively in feline digestive tracts. In the US between 40% and 70% of free-roaming cats are infected with it and can be reinfected throughout their lives, usually by consuming infected rodents (secondary hosts).

From 15% to 20% of the US human population is also infected, and ~750 fatalities from this pathogen occur each year. Toxoplasmosis is per the CDC also the leading cause of pathogenic blindness. It is particularly dangerous to pregnant women and unborn fetuses, causing ~190,000 stillbirths, blind-births and other serious birth defects in the US annually.

https://www.academia.edu/24189429/Toxoplasma_gondii_in_Circumpolar_People_and_Wildlife

<https://www.sciencemag.org/news/2019/04/scientists-decry-usdas-decision-end-cat-parasite-research>

The pathogen's oocysts are its infectious agents, and infected cats shed hundreds of millions of them with their feces. *Only* cats shed the oocysts; the single exception is dogs which ingest feces from *T. gondii*-infected cats.

The oocysts persist and remain infectious for up to 1.5 years on land, and 4.5 years in water (including seawater). With an average feral cat population growth rate of ~38 million annually in North America, *T. gondii* oocysts now occur in our environment at densities of from three to 434 per square foot. They are capable of infecting and utilizing any warm-blooded animal, including humans, as secondary hosts. Infection is permanent, even if symptoms don't immediately manifest. Toxoplasmosis is killing thousands of marine mammals from Arctic Canada to New Zealand and from the California coast to the North Sea.

https://www.researchgate.net/publication/236608342_Detection_of_Toxoplasma_gondii_in_environmental_matrices_water_soil_fruits_and_vegetables

Both Atlantic and Pacific beluga (*Delphinapterus leucas*) populations are succumbing to the pathogen--a 2014 outbreak of congenital toxoplasmosis-induced stillbirths, birth defects and chronic miscarriages among Inuit women in western British Columbia was caused by consumption of infected beluga. Between 2009-2012, toxoplasmosis killed more than ten beluga a year off Quebec:<https://news.ubc.ca/2014/02/13/bigthaw/>

Canadian researchers found that sea-ice retreat due to climate change has apparently enabled *T. gondii* oocysts to spread into waters from which they were formerly absent, and advocate ongoing toxoplasmosis screening of beluga and seal meat prior to consumption. Their studies also cited the human-assisted proliferation of domestic cats, with resulting feces-contaminated runoff from unprecedented numbers of cats causing toxoplasmosis-induced marine mammal deaths--either directly or from strandings.

<https://pressfrom.info/ca/news/canada/-98482-belugas-infected-with-cat-parasite-study.html>
https://www.academia.edu/24189429/Toxoplasma_gondii_in_Circumpolar_People_and_Wildlife?email_work_card=view-paper

Further studies indicated *T. gondii* oocysts from feces-contaminated runoff accumulate in sessile filter-feeding organisms such as geoduck clams, mussels and oysters, as well as in those which feed in the water column like herring, anchovies and sardines. They postulated this was the route whereby toxoplasmosis is causing marine mammal die-offs. However, more recent studies suggest aquatic organisms ingest oocysts directly from water, macro-algae and substrates in their contaminated habitat, and that this may be the primary means of marine mammal infection. In any event the proliferation of *T. gondii* oocysts in Alaska's inshore marine environment poses a threat not only to our State's marine mammals, but to Alaskans who harvest them for subsistence.

https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=NERL&dirEntryId=213670

Nor is it necessary to consume seal or whale, or even raw shellfish, to contract toxoplasmosis. Sheep, both wild and domesticated, are particularly susceptible to toxoplasmosis--this frequently manifests as chronic miscarriage/abortion in ewes, usually followed by barrenness. Toxoplasmosis is so prevalent among domesticated sheep, women are cautioned to avoid contact with them if

pregnant. The risk to human females is likewise chronic miscarriage/abortion, barrenness, stillbirths and serious birth defects in fetuses carried full-term.

Recent studies found as much as 66% of Ohio's white-tailed deer population is infected with toxoplasmosis. This is almost *entirely* from unconfined *F. catus* feces-contaminated browsing areas. Except for the bobcat (*Lynx rufus*) Ohio's native cats are extinct. Bobcat numbers there are minuscule compared to those of domestic cats, thus representing negligible contribution to this disease's prevalence among white-tailed deer. An equally alarming situation exists in Illinois, where ten Canadian hunters contracted toxoplasmosis from consuming deer they shot on a hunting trip there last December. Canadian authorities now warn against consuming deer harvested in Illinois. Toxoplasmosis is also sexually transmissible from infected males to their partners.

https://montrealgazette.com/news/local-news/quebec-outbreak-of-toxoplasmosis-linked-to-undercooked-venison?fbclid=IwAR3mh6xoA72ZFk8O_AoVVY-IQmx14dd792BJyCB0dKQu_KtAZv9DtaffRg0

Although *T. gondii* oocyst density in Alaska is probably less than in the lower '48—if for no other reasons than our colder climate and relatively lower human--and therefore cat--populations, toxoplasmosis has persisted and appears to be gaining ground in the north and is infecting a variety of mammalian and avian species.

Toxoplasmosis represents a significant food safety hazard for Alaskans, among whom subsistence hunting is greater per capita than further south. A pregnant woman in Anchorage consumed toxoplasmosis-infected flesh from a moose her husband shot in October 2013, and passed *T. gondii* oocysts to her unborn child, who nearly died. At birth the infant presented with a 200 bpm heart rate and organ cavities filled with lymphocyte fluids. Thanks to heroic measures the child was stabilized, but he remains at risk of partial or complete blindness as well as hearing loss, cardiac, respiratory and seizure disorders. He will in any event be infected for life. 80% of newborns who congenitally contract toxoplasmosis will manifest usually severe symptoms within months, or years, of birth.

<https://www.adn.com/alaska-news/article/link-found-between-moose-meat-and-unborn-babys-infection/2013/10/11/>

The following is a partial list of nearctic species in which toxoplasmosis has been documented--those marked with an asterisk (*) have been recorded in Alaska. Others were from extralimital populations of species which also occur in Alaska, most documented in Arctic Canada: moose (*Alces alces*)*, caribou (*Rangifer tarandus*), musk ox (*Ovibos moschatus*), humpback whale (*Megaptera novaeangliae*), Risso's dolphin (*Grampus griseus*), beluga (*D. leucas*), killer whales (*Orcinus orca*), narwhal (*Monodon monoceros*), fin whale (*Balaenoptera physalus*), Minke whale (*B. acutorostrata*), Arctic foxes (*A. lagopus*)*, red foxes (*V. vulpes*), gray wolves (*Canis lupus*), black bears (*U. americanus*)*, brown bears (*U. arctos*)*, polar bears (*U. maritimus*), bearded seals (*Erignathus barbatus*)*, spotted seals (*Phoca largha*)*, ringed seals (*P. hispida*)*, harbor seals (*P. vitulina*), northern fur seals (*Callorhinus ursinus*), elephant seals (*Mirounga augustirostris*), Stellar's sealions (*Umetopias jumatus*)*, walrus (*Odobenus rosmarus*)*, wolverines (*Gulo gulo*), mink (*Neovison vison*), river otters (*Lutra canadensis*) and sea otters (*Enhydra lutris*)*.

We again emphasize this is a *partial* list of Alaskan mammals in which toxoplasmosis has been found--nearly all warm-blooded vertebrates are susceptible to toxoplasmosis, with carnivores being particularly vulnerable. However, as previously shown herbivores also become infected by browsing *T. gondii* oocyst-contaminated areas and/or drinking contaminated water. Wild mink have ingested the oocysts directly from water in their habitat and become infected, and farmed mink from contaminated meat/offal used as feed.

The pathogen is increasingly prevalent in Nearctic wildlife--in Saskatchewan, 60% of Arctic foxes are seropositive. Infection among Canadian polar bears has doubled in the last decade to where 46% are now seropositive. In Minnesota 52% of wolves (reestablished from Alaskan stock) and 45% of river otters are infected, as are 52% of California's southern sea otter population. The latter have incurred mass die-offs from toxoplasmosis.

By no means have all Alaska's native species been tested for toxoplasmosis--the CDC refers to toxoplasmosis as a 'neglected' parasitic infection even with respect to humans. Example, authors could find no research mentioning toxoplasmosis in martens (*Martes americana*). Yet martens are commercially trapped in Alaska more than any other furbearer, and their diet is almost exclusively rodents. This strongly suggests martens may serve as secondary *T. gondii* hosts. It is an obvious--and *serious*--potential health concern for fur trappers.

All studies reviewed in preparation for this proposal documented *acute* cases of toxoplasmosis--most were fatal to the animals sampled. Said studies also included observations concerning the public health significance of toxoplasmosis in northern regions--one 1974 study found 28% of n = 1,572 Native Alaskans tested positive for toxoplasmosis antibodies. This was thought to reflect the *high percentage of families with cats* in the sampled villages; incidence of infection in targeted subsistence species was not measured in that study (see second link below). A more recent (2009) study in Nunavut, Canada found 60% of the Inuit population was seropositive for toxoplasmosis. This was attributed to harvesting/ingesting toxoplasmosis-infected terrestrial and marine mammals and waterfowl for food.

https://www.researchgate.net/publication/14608928_Serologic_survey_of_Toxoplasma_gondii_in_grizzly_bears_Ursus_arctos_and_black_bears_Ursus_americanus_from_Alaska_1988_to_1991

https://www.researchgate.net/publication/12362457_Prevalence_of_Toxoplasma_gondii_Antibodies_in_Muskox_Ovibos_moschatus_Sera_from_Northern_Canada

http://www.epi.alaska.gov/bulletins/docs/b2005_07.pdf

The worst recorded toxoplasmosis outbreak in North American history occurred in 1995. The source was Humpback Reservoir, which serves as the Victoria, BC municipal water supply. Intake filter mesh did not exclude *T. gondii* oocysts, and chlorination at levels used in drinking water do not kill them. The result was 110 acute cases in the first nine months of 1995, including 42 pregnant women, 11 newborns and at least seven cases of toxoplasmosis-induced ocular lesions. Ultimately as many as 7,000 Canadians suffered (mostly) acute infections. The life history of the pathogen with respect to its asexual reproduction in secondary hosts suggest ultimately all, or nearly all, will manifest acute infections/disease.

Victoria has what the BC SPCA admits is an "enormous" stray/feral cat population. There are numerous feral cat 'colonies'--by definition this means someone is *feeding* them--with some colonies having up to 200 cats. In adjacent Surrey, cat advocates estimate there are 20,000 unconfined cats.

<https://www.cdc.gov/mmwr/PDF/International/e-2118.pdf>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC106314/>

Of particular concern in light of the above is the threat *T. gondii* poses to drinking water supplies in rural Alaska--chlorination of these water sources is frequently as low as 0.02 ppm--insufficient to kill oocysts--and overall state of rural water treatment facilities maintenance is, if anything, worse than that of Victoria, BC a quarter-century ago.

Authors have so far mentioned only two of at least 70 cat-vectoring zoonotic diseases. "Zoonotic" is defined herein as diseases transmissible between different animal species, including humans:

Flea-born typhus (*Rickettsia typhi*)--in May 2018 a case of cat-vectoring *R. typhi* was reported in San Diego Co., CA. It has since become an outbreak, spreading to and through Riverside and Los Angeles counties. Hundreds of cases have been reported. In Los Angeles typhus-carrying fleas have infected Los Angeles City Hall personnel, causing temporary closure of some offices;

R. felis--another form of cat-vectoring typhus which may be transmitted from them to humans and other animals by ticks, true bugs, lice, mosquitoes and other blood-sucking arthropods--it can cause infections serious enough to require emergency medical intervention;

Bartonella henselae and ***Afipia felis*** are both etiological agents of "cat-scratch disease"--the latter less common than the former. Transmitted by cat scratches or bites. Immunocompromised individuals are vulnerable to potentially lethal systemic complications. Infections have sometimes been misdiagnosed as adult-onset schizophrenia;

Pasteurella motocida--an oral bacterium in 70%-90% of cats, and transmitted through their bites. Systemic infections can be serious and cause cardiovascular damage. Cat bite wounds are frequently deep, which facilitates sepsis. Elderly people and recipients of immunosuppressive therapy are particularly vulnerable;

Toxocara catii (e.g. toxocariasis, or larval migrans)--is a parasitic roundworm transmitted through contact with cat feces, causing potentially serious infections of central nervous system, ocular and renal tissues. Young children are particularly vulnerable and may be subject to developmental disability and blindness. P. J. Hotez, Dean of the Tropical Disease Institute at Baylor College of Medicine, states one-third of black American children living in low-income communities are infected. CDC recognizes toxocariasis as another 'neglected' disease;

Giardiasis (*Giardia lamblia*)--likewise transmitted via contaminated feces from Felids to Canids, Ovines and humans--and vice-versa. Transmissible to wildlife to the extent it can be contracted from drinking feces-contaminated water in seemingly 'pristine' areas. Also can be passed as an STD from infected to uninfected humans;

Camphylobacteriosis (*Camphylobacter jejunei*)--cats are a common vector. The organism is transmitted via incidental ingestion of feces by other animals (including humans);

Capnocytophaga canimorsus--associated with exposure to cat body fluids, including saliva. Has caused septicemia and meningitis. Elderly and immunocompromised people are particularly vulnerable;

Tularemia (*Francisella tularensis*)--the causative organism is common in the Alaskan interior--rabbits and hares are particularly susceptible. The disease can be transmitted by tick and fly bites, by consuming raw/undercooked flesh from an infected animal, drinking contaminated water in which an infected animal has died or inhaling/ingesting aerosolized *F. tularensis* bacteria. Is associated with dressing infected animals. Cats also carry and transmit the disease. The causative organism has been weaponized by the US, Russia and Japan. One application of 50 kg of *F. tularensis* aerosol can kill 19,000 people;

Salmonellosis, including a recently-described 'super strain' first identified in cats. *Salmonella* is per the CDC the leading cause of fatal food-borne illness (toxoplasmosis is second-place);

More than nine species of **Platyhelminthines**, i.e. flatworms or flukes, are transmissible from cats to humans. Worldwide they infect *millions* of people. Consequences include tuberculosis-like URI symptoms, cerebral hemorrhaging and seizures. Some can enter through skin on the soles of the feet;

Q fever (*Coxiella burnettii*)--ruminants are particularly vulnerable, but cats also carry and transmit the disease. It's highly infectious with a variety of transmission pathways. Acute cases can present as severe (life-threatening) URI, chronic endocarditis--usually fatal--and hepatitis;

Leptospirosis--is a potentially fatal disease caused by as many as ten different *Leptospira* bacterial strains. As it commonly infects rodents, it's commonly transmitted to cats and thence to people. Transmission may occur via skin contact or through cat urine. Severe symptoms include pulmonary hemorrhage, meningitis and hepatitis;

MRSA--an antibiotic-resistant *Staph aureus* strain which can cause extensive tissue necrosis--sometimes called 'the flesh-eating disease', and is potentially lethal. Commonly carried by cats and is transmissible by direct contact;

Feline leukemia virus (FeLV)--transmissible to wild felines such as Canada lynx. Has killed endangered Florida panthers (*Puma concolor cougar*);

Sporothrix schenckii and *S. brasiliensis*--these are fungal diseases transmitted by contact with spores in soil, on vegetation and via infected cat scratches, bites and skin lesions. Domestic and wild felines--and humans--are susceptible. Also transmissible to other mammals. *S. brasiliensis* infection, until recently largely restricted to cats, produces more severe symptoms than *S. schenckii*. In Brazil thousands of cases of cat-vectored *S. brasiliensis* in people are being reported, and it's spreading to neighboring countries. *S. schenckii* is widespread in the US. *S. brasiliensis* hasn't reached here--yet.

Leishmania infantum--Leishmaniasis, is caused by at least 20 Leishmania bacterial strains, and is also referred to as a 'flesh-eating disease'. It's transmitted by biting flies. The disease in humans is serious and may be chronic. Cats, dogs--including wild Canids--are reservoir animals;

Chagas' disease (Trypanosoma cruzii)--formerly restricted to the neotropics, it has spread north with migrating human populations. It is a deadly disease from which one-third of its victims will sustain life-threatening cardiovascular complications. It's transmitted by blood-sucking 'true bugs' (order Hemiptera, family Reduviidae). Feral cats are a reservoir species, which when bitten by a Hemipterid can transmit the disease to humans. Transmission has been associated with individuals who sleep with cats;

Chlamydia psittacii--although usually called 'parrot fever', strains occur in pigeons and gallinaceous birds as well. Domestic mammals, including cats, are likewise hosts. It can be spread to other animals and humans via direct contact and/or respiratory droplets;

Cryptosporidiosis (Cryptosporidium spp.)--are pathogenic protozoans most commonly contracted by drinking water contaminated by infected animal feces. Cats (and other animals) shed Cryptosporidium oocysts with defecation. Oocysts survive in the environment for lengthy periods. Cryptosporidiosis is per the CDC a leading cause of water-borne illness;

Plague (Yersinia pestis)--like cats themselves, plague is invasive to North America. Cats are particularly susceptible and transmit bubonic, septicemic and (most commonly) pneumonic strains. The latter is the deadliest and hardest to diagnose and treat. Without early treatment 70% of infections are fatal.

Authors have listed less than *half* of the known zoonotic diseases carried and transmitted by cats. These diseases are more prevalent and infectious in regions with large unconfined cat populations. By demonstrating the destructive potential of this invasive disease-vector to public health and biodiversity, it is authors' hope to prevent Alaska from becoming like those regions.

SARS-Cov2 (causative viral agent of "coronavirus")--the origin of the SARS-Cov2 pandemic is believed to be the Chinese horseshoe bat (Rhinolophus sinicus) which ranges through much of China, Nepal, Vietnam and India). Bat life history seems to lend itself to generation of novel virus outbreaks because bats roost together in dense numbers, thus facilitating spread/transmission. Such viruses can travel via respiratory droplets and possibly other body fluids, and sometimes move across species-barriers.

For example, bats' propensity for huddling in dense populations is probably the reason they're the primary wild rabies virus vector. Bat-to-human transmission of rabies via respiratory droplet inhalation has been proven.

At this point the intermediate vector between bats and humans is said to be unknown. However, it has been shown that Felids and Mustelids process the virus more effectively than other species. At least one laboratory study has demonstrated transmission between cats placed in adjacent cages. With onset of SARS-Cov2 in Wuhan, China, local authorities undertook systematic killing of cats and dogs in infected households as a precaution.

<https://www.biorxiv.org/content/10.1101/2020.03.30.015347v1.full>

It has also long been known that cats carry and transmit SARS-Cov1, precursor to the current virus and which shares 70% of its genome with SARS-Cov2. Cats have tested positive for SARS-Cov2 in the US, Belgium and more than one location in China, as have several tigers and lions at the Bronx Zoo. Recently SARS-Cov2 rapidly infected caged mink kept in large numbers on two Netherlands mink ranches. While speculated the mink originally caught the virus from humans, this has not been demonstrated--but without question it was transmitted between mink.

https://wwwnc.cdc.gov/eid/article/10/5/04-0022_article?fbclid=IwAR1VAV8dZXdPWl377JbNkpaTzBSFAJRQau2QxChLhXroSZ_76EOaJy2d5I

<https://nltimes.nl/2020/04/26/mink-found-infected-covid-19-two-dutch-fur-farms-areas-now-closed-public>

In light of these facts, allowing people to deliberately feed and maintain dense populations of domestic cats is to say the least problematic. Subsidizing dense artificial aggregations of invasive predators with food, usually near to human dwellings, is unsound in terms of public health, particularly in our current circumstances. However, so far the WHO has not found evidence of cat-to-human transmission of SARS-Cov2.

One potentially very serious problem, if it's determined that cats do consistently act as SARS-Cov2 vectors, is that this may hinder attempts to establish monitoring of the virus' spread via "contact tracing", which has in the past proved to be effective for, indeed essential to, controlling viral outbreaks. Thanks to human-driven proliferation of *F. catus*, it is now the most common and widespread terrestrial predator in North America.

(5) Otherwise presents a threat to the health or population of a species that is indigenous to Alaska

The International Union for the Conservation of Nature lists cats the second-most destructive invasive terrestrial vertebrate--only commensal rodents (*Rattus rattus*, *R. norvegicus*, *R. exulans* and *M. musculus*) are worse.

Unconfined *F. catus* represents an overarching ecological threat to native Alaskan wildlife even beyond direct predation and transmission of zoonotic disease. In high numbers they represent significant ecosystem destabilization risks. Whether "owned" or "unowned", humans subsidize cats through consistent feeding. This enables *F. catus* to exist at densities beyond the environmental carrying capacity of any naturally-occurring predator. This in turn engenders 'cascading trophic effects' through the elimination of prey species on which native predators depend.

Population growth is entirely dependent upon food supply. Natural systems reflect cyclical increases and decreases of food. With increase of Arctic grasses, ferns and shrubs, snowshoe hare populations increase, as does that of Canada lynx. With decrease in such vegetation, snowshoe hare populations decline, followed by lynx populations. This cycle of naturally-occurring organisms co-evolving through struggle to eat-and-not-be-eaten over millennia results in mutually-

sustainable numbers of predators and prey such that the latter don't exhaust their food supply and then starve, and the former don't eradicate their prey and then starve.

Feral cats have no place in such a system--they are domesticated reflex-killers. Cyclical population decrease is mitigated--or eliminated outright--by human feeding. Their killing and feeding impulses are controlled by separate regions of their brains. Humans bred them this way, perhaps even 'passively' by only supporting (and/or not culling) individuals which exhibited such behavior. This has been demonstrated experimentally in both laboratory and field.

In a San Diego, CA study by K. R. Crooks and M. E. Soule' ('Nature' 1999), wildlife kills by 35 *well-fed*, free-roaming 'pet' cats were tallied. It was estimated these cats killed ~840 mammals, 525 birds and 595 reptiles each year. Adjusted for native species percentages (64%, 95% and 100% respectively), the cats' toll would have been ~563 native mammals, 499 native birds and 595 native reptiles--or 16 native mammals, 14 native birds and 17 native reptiles per cat/per year.

The authors warned their findings were probably underestimates, as they only counted prey items brought back to the cats' residences, not those eaten or abandoned in situ. A subsequent study by Loyd, Hernandez et al ('Biological Conservation', 2013) which utilized collar-mounted video cameras on 50 unconfined 'pet' cats found the cats only brought home 25%-50% of their prey. A similar South African study found that pet cats only returned on average 22% of the animals they killed.

If Crooks' and Soule's' death toll is adjusted to include an 'average' of the above estimates of animals killed but not recovered or counted by owners, the estimated toll becomes 944 native mammals, 837 native birds and 998 native reptiles annually--or 27 native mammals, 24 native birds and 29 native reptiles per cat/per year. This is not an unreasonable estimate. 80 native wild animals per cat/per year is slightly less than one prey animal killed every five days.

Predation varies in different regions according to prey type and availability. For example, there are no reptiles in Alaska, so cats wouldn't be expected to kill them there. In Florida, established exotic reptile species outnumber native reptile species by more than two-to-one, so it's to be expected non-native reptiles would be well-represented in cat-kills there. Nonetheless the above calculated results are comparable to (and were derived from) findings from actual cat-predation studies, and are thus offered to demonstrate cats' destructive impacts on natural ecosystems.

SPCA estimates of US stray and feral cat populations average 84.5 million (range 47 million-122 million). Add to this 58 million (range 50 million-66 million) unconfined 'pet' cats. If the above calculations are representative, then unconfined US cats slaughter *11.4 billion* native mammals, birds and reptiles annually. Recall this represents each cat taking one prey item every five days--and that it may still be an underestimate.

This highlights *F. catus*' destructive and unsustainable impact on ecological systems. 11.4 billion smaller prey items annually removed by invasive felines represents 11.4 billion food items made unavailable to native lynx, raptors, foxes, wolves and mustelids each year. Therefore these native predators must expend more energy to obtain food, thus driving the 'energy-exchange balance' (i.e. the amount of energy expended in obtaining food vs. the amount of energy obtained from it) sharply against native predators. This is an example of a cascading trophic effect. The more energy required to obtain food, the more native predators are subject to starvation, injury and/or

exposure to predation themselves. Note this is much less an issue for domestic cats subsidized by human feeding.

Alaska is one of the few regions in which North American 'apex predators' survive--trohic 'disruption' by invasive *F. catus* in Alaska may prove to be at least as intense--and as ecologically destabilizing--as its impacts globally, if the species is permitted to increase in numbers at the rate they're expanding elsewhere in the world. Alaska is home to the Canada lynx (*L. canadensis*) and--possibly--the cougar (*P. concolor*), which may be naturally expanding its range into southeast Alaska from British Columbia. Alaska needs no other cats.

http://www.elkhornsloughctp.org/uploads/files/1238046095Crooks_Soule_1999_Nature_Mesopredators.pdf

<https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1656&context=natrespapers>

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