Law Offices of **Babak Naficy**

November 10, 2010

Councilmember Greig Smith
Chair, Public Safety Committee
Los Angeles City Council
200 North Spring Street
Los Angeles, CA 90012

Carmen Trutanich, City Attorney
City of Los Angeles
200 North Main Street, 8th Floor
Los Angeles, CA 90012

Gerry F. Miller, Chief Legislative Analyst
City of Los Angeles
200 North Spring Street, Room 255
Los Angeles, CA 90012

Miguel A. Santana, City Administrative Officer
200 North Main Street, Suite 1500
Los Angeles, CA 90012

Eric Garcetti, President
Los Angeles City Council
200 North Spring Street
Los Angeles, CA 90012

Re: Council File 10-0982 - Motion (Rosendahl – Koretz) relative to raising the number of dogs and/or cats allowed per resident/residence from three to five

Dear Sirs:

I am writing to you about the proposal to increase the number of dogs and/or cats allowed per resident/residence in Los Angeles from three to five each (the motion specifies "per resident" but this does not make sense and presumably would be amended to "per residence") that was referred by the Public Safety Committee to the Department of Animal Services on July 19, 2010. On October 12, 2010, the Board of Animal Services Commissioners voted to recommend that the Mayor and City Council change the definition of a cat or dog kennel from 4 each to 6 each, effectively increasing the limit on the number of dogs and/or cats per residence in the City from 3 each to 5 each. The Board of Animal Services Commissioners subsequently voted to approve the General Manager's elaboration and modification of those recommendations on November 9, 2010.

1504 Marsh Street
San Luis Obispo
California 93401

ph: 805.593.0926
fax: 805.593.0946

babaknaficy@sbcglobal.net

These revised recommendations include the following provisions: 1) that if a household has more than three cats, then all cats must be kept indoors, 2) that consideration of the recommended exemption for foster animals be deferred, 3) that the cat kennel ordinance not apply to "non-owned roaming stray cats which may be feral," and 4) that the proposed project may be exempt from CEQA and regardless, that CEQA review would be completed by some entity in the City other than the Department of Animal Services Commissioners.

As elaborated below, these proposals are ill-conceived, violate an existing injunction obtained by my clients, and are designed to avoid the statutory duty of the Department of Animal Services to take up stray animals in a public pound. My clients, the successful plaintiffs in The Urban Wildlands Group, et al. v. City of Los Angeles, have an interest in ensuring that this proposal be reviewed under the California Environmental Quality Act to protect the environment and to be consistent with the Court's order.

Increase in Pet Limit Requires Review Under California Environmental Quality Act

As I wrote in a letter to the Public Safety Committee on July 18, 2010, and will explain again below, before taking any further action on this motion, the City is required by the California Environmental Quality Act ("CEQA"), Public Resources Code § 21000 et seq., to carefully analyze the potential environmental impacts of increasing the pet limit and associated changes in City rules. Quoting case law: "CEQA defines a "project" as an activity that may cause a direct or reasonably foreseeable indirect physical change in the environment and that is either directly undertaken by a public agency, undertaken by another person with assistance from a public agency, or involves the issuance by a public agency of a permit or other entitlement. (Pub. Resources Code, § 21065; Guidelines,[FN6] § 15378, subd. (a).) CEQA applies to any discretionary project proposed to be carried out or approved by a public agency, unless the project is exempt. (Pub. Resources Code, § 21080, subd. (a).)" Plastic Pipe and Fittings Ass'n v. California Building Standards Com'n 124 Cal.App.4th 1390, 1412, 22 Cal.Rptr.3d 393, 407 (Cal.App. 2 Dist.,2004) ("Plastic Pipe")

Secondarily, and importantly, the proposed increase in the number of legally owned cats in the City would be a violation of the current injunction (Urban Wildlands Group et al. v. City of Los Angeles et al., Los Angeles Superior Court Case No. BS115483) which bars the City from "adopting or implementing any new ordinances, measures or policies in furtherance of TNR, including such ordinances, measures or policies as were identified in the June 2005 Report that was submitted to the Board of Animal Services Commissioners." The 2005 Report suggested amending certain City ordinances, including the limits on the number of cats, to allow TNR to be practiced more easily. The obvious purpose of increasing the limit on the number of cats is to facilitate "rescue" and "adoption" of cats from shelters or from other locations so that they are not euthanized. In particular the increase would allow for people to feed more feral cats at their residences without running afoul of the cat kennel limit. But even more shocking is that the General Manager and Board of Animal Services Commissioners have also recommended that stray and feral cats be exempted from the pet limits entirely. This would allow any person in the City of Los Angeles to feed stray and/or feral cats in unlimited numbers at any property, thereby codifying the practice of establishing "backyard colonies" with feral cats that have been redeemed from shelters or relocated from other areas. This would represent a reversal of existing Department policy of using the cat kennel ordinance to reduce the number of stray and/or feral

cats maintained at a property.[1] As elaborated below, the proposed changes, through exemption of feral and stray cats and infeasibility of enforcement of the confusing new scheme, would result in a promotion of the practice of TNR without performing the required environmental review.

CEQA requires public agencies to consider the potential environmental impacts of their discretionary actions prior to approval. Adopting or amending regulations may amount to a project within the meaning of CEQA. Plastic Pipe, supra. ("A regulation fitting the description of a discretionary project is a discretionary project under CEQA. citing Wildlife Alive v. Chickering (1976) 18 Cal.3d 190, 206, 132 Cal.Rptr. 377, 553 P.2d 537 [held that the enactment of regulations by the Fish and Game Commission fixing the dates of a hunting season was a project subject to CEQA])"). The current proposal to amend the Municipal Code to increase the number of cats and dogs that residents may lawfully own is a discretionary "project" within the meaning of CEQA because raising the limit on the number of cats and dogs a resident may own could and likely will increase the overall number of domestic animals in the City, thereby significantly increasing the overall impacts of cats and dogs on the City's environment. Furthermore, the proposal to exclude stray and feral cats from the pet limit ensures increases in these populations in the City. The impacts that will result from an increase in the number of cats and dogs include but are not limited to an increase in the total volume of cat and dog feces in the environment, transmission of zoonotic diseases to humans and wildlife, and an increase in depredation of wildlife by free-roaming or feral cats.

Although an increase in the number of dogs allowed may have additional environmental impacts (and these have been elaborated by others), our concern is with the increase in the number of cats allowed. We note that increasing the legal number of pet dogs does not pose the same risks to wildlife because dogs must be confined on properties or restrained on a leash.

Analysis by Department of Animal Services Does not Substitute for CEQA

My clients are deeply concerned about the adequacy of the public input process pertaining to this proposal that was undertaken by the Department of Animal Services, which consisted of two "town hall" meetings at two of the City's animal shelters and apparently primarily advertised to those on the Department's mailing list and perhaps in other pet-related venues. This type of selective notification is not an adequate substitute for the public disclosure and input process required by CEQA. In a formal CEQA process stakeholders and trustee agencies are notified and consulted. Indeed, the California Department of Fish and Game has specifically requested that the City consult it when preparing environmental review for its TNR program. For cats, a proposed increase in the allowed number should not be considered at all until it is set forth as part of a feral cat management program, lest it violate the existing injunction as a piecemealed implementation of the Department's TNR program.

[1] See Departmental Press Release, "Cat Hoarder Busted for Cruelty" http://www.laanimalservices.com/PDF/actf/pressrelease/PressRelease-Cat_Hoarder.pdf, which cites Section 53.50 of the Municipal Code in the prosecution of a cat hoarder with too many cats outside.

Animal Services' Proposal to Keep Cats "Indoors" Is Unenforceable

The October 12, 2010 Staff Report for the recommendation approved by the Board of Animal Services Commissioners states, "We recommend that the pet limit increase include stating that the five cats to be indoors [*sic*], which benefits the safety of cats and also reduces the possibility of cats being turned to the Department as strays [*sic*]." The Staff Report claims that the requirement for cats to be indoors is for the health of the cat and to avoid cats becoming strays, but the General Manager previously stated in an email to a local animal rights blogger:

> I don't disagree that eliminating pet limits, especially cats, is the way to go. However, *we know that we must specify indoor cats to get the limit raised* and this will not demonstrate ownership by anyone of outdoor cats. [emphasis added]

This statement indicates that the General Manager is seeking to keep the cats indoors as some sort of concession and not exclusively for the welfare of the cats, since she is also eager that ownership not be demonstrated for outdoor cats. Ms. Barnette's statement is, in contrast with the rationale provided in the Staff Report, a tacit admission that letting additional cats to roam free would have an adverse impact on the environment or possibly be an admission of awareness that the increase would violate the injunction in our lawsuit. If keeping cats indoors is to be a mitigation measure for adverse environmental impacts resulting from the increase in the number of cats, then the feasibility and effectiveness of this measure must be evaluated as part of the environmental review process.

In the November 9, 2010 Staff Report, the General Manager clarified the vague admonition that the five cats would be kept indoors, and proposed that a household with three or fewer cats would be allowed to continue to let those cats to roam freely if they were spayed or neutered, but if a household had more than three cats, then all cats at that household would be kept indoors all the time. This is a bizarre and unenforceable proposal.

The General Manager asserts, and the Board of Animal Services Commissioners somehow agreed, that it would be easy to enforce an ordinance that required any household that owned 4–5 cats to keep all 5 cats indoors, while a household with 1–3 cats could allow them to roam freely outdoors. This would create a confusing mix of regulations that would be easily avoided by a cat owner. Because the City is not also requiring cat licensing, which would establish the number of cats at a residence, any person accused of not keeping his or her 4–5 cats indoors could simply claim that only 3 cats were owned and the remainder were non-owned strays, which the General Manager proposes to exempt from any limits at all.

The rationale provided by the General Manager for not establishing a rule that would keep all cats indoors is that it would "impact resources and procedure," yet the proposed rule to require all cats to be kept indoors if a fourth cat is adopted by a 3-cat household presents even more problematic enforcement issues. How could an Animal Control Officer determine if a household has 3 or fewer cats or more than 3 cats? The roughly 50 ACOs in a city of millions of households are not going to be able to drive down the street and say, "Hmm, Mrs. Jones doesn't have a gray cat," remember that Mrs. Smith used to have 3 cats and conclude that the new, gray cat, and the other 3 cats, should now be kept indoors all the time. The difficulty of enforcement of such a rule leaves the impression that the General Manager does not want the Department to

be able to enforce any rules regarding the number of cats at a residence, and indeed Ms. Barnette has expressed publicly that she opposes pet limits altogether.

To satisfy CEQA, proposed mitigation measures must be shown to be both effective and enforceable. See, Pub.Res.Code § 21081.6(b) ("A public agency shall provide that measures to mitigate or avoid significant effects on the environment are fully enforceable through permit conditions, agreements, or other measures;"), Sacramento Old City v. City Council (1991) 229 Cal.App.3d 1011, 1027 (agency's conclusion that mitigation measures will be effective must be supported by substantial evidence.) The proposal that the impact from the increased number of cats can somehow be mitigated if the cats are kept indoors fails as a mitigation measure in that it has not been shown to be effective or enforceable.

Cat Limit Intersects With Proposed Trap-Neuter-Return Program for Feral Cats

The 3-cat limit is one of the few tools that the City has to address problems deriving from people feeding feral or stray cats at a property that have unacceptable environmental, public health, or nuisance impacts. It is common practice for cat advocates to maintain feral and stray cats at their residences, and also for so-called "rescue" groups or individuals to pull cats from City shelters or move stray or feral cats from a location where they are causing a nuisance (e.g., at a business) to unenclosed "backyard colonies." Raising the cat limit is strongly supported by the cat rescue community, because it would allow residents to minimally maintain more cats (which are not confined to their properties) without exceeding the limit. Raising the cat limit would facilitate these activities, which are part of the approach described in the City's previously proposed TNR program for feral cats, thereby violating the current injunction. Furthermore, exempting feral and stray cats from pet limits altogether, as is now recommended by the General Manager, is on its face part of the City's attempt to promote TNR. Either increasing the limit or exempting stray and feral cats from such limits would be discretionary actions that require environmental review both as specified in the existing injunction and as standalone projects under CEQA.

The underlying purpose of the pet limit increase, at least from the apparent perspective of feral cat advocates, seems to be to provide a safety valve for cats that are at risk of being euthanized at City shelters.[2] In order to respond to the political pressure from a small but vocal group of advocates who believe that all euthanasia of domestic animals must be avoided, the current proposal essentially seeks to make residences (houses, condominiums, and apartments) into overflow shelters so that cats are not euthanized. Responsible humane organizations used to screen individuals for the quality of care they could provide before adopting animals to them. The current proposal seeks to simply warehouse as many animals as possible in the community.

Revenue Can Be Raised Through Cat Licensing Without Environmental Impacts

The Staff Report to the Board of Animal Services Commissioners expressed support for increasing the pet limit because it would increase revenue through licensing of dogs. Why is the City not considering licensing of cats? Requiring cats to be licensed would dramatically increase

[2] Ms. Barnette wrote of the proposal on Facebook, "On the surface it looks like more lives saved and more licensing revenue and both seem like the right answers." In this context Ms. Barnette only meant more licensing revenue from dogs.

revenues to the City and would provide another mechanism to deal with the problem of stray and feral cats by better identifying ownership. By requiring licensing, owners would then have to take responsibility for their cats in the same way that dog owners are already do. Also, if increasing revenue is really an objective, the City could do so simply by requiring the licensing of cats without increasing the per resident/residence limit.

The October Staff Report to the Board of Animal Services Commissioners asserts that increasing the pet limit would decrease the number of strays but does not provide any evidence to support this assertion. This conflicts directly with an assertion earlier in the report, which claimed that most people are not aware of the limit and that the limit does not appear to have any effect on behavior unless there is a reported problem. It is fuzzy thinking unbecoming a public agency to assert that an ordinance of which people are unaware and do not obey can be changed and result in a significant improvement in behavior. The November Staff Report then proposes to exclude strays from the pet limits altogether, further undermining this statement in the October Staff Report. With this new proposal it becomes absurd to claim that the proposed changes would reduce the number of strays in the City because it would eliminate the one enforcement tool available to control the number of "un-owned" cats at a property.

Animal Services Appears Ready to Abandon Animal Control Responsibilities

The Board of Animal Services Commissioners and the Staff Report supporting their recommendation do not appear to have substantively engaged in an objective analysis of what impacts might result from increasing the pet limit. If the ordinance has any effect at all, and it certainly does in the case of enforcing complaints about too many dogs and cats at a residence, then there are potential impacts resulting from an increased total number of dogs and cats. With more dogs and cats overall it is likely that there will also be more stray dogs and cats, thereby increasing the demand for services on the City. Furthermore, according to local animal rights blogger Ed Muzika, a member of the City's Animal Cruelty Task Force stated in 2009 that the biggest problem facing the ACTF was people who have too many cats and people who feed feral cats. The Staff Report and leadership of Animal Services appear to be out of touch with the impacts that cats have on the environment, residents, and neighborhoods, and the resources necessary to deal with those impacts.

Finally, in arguing against pet limits, General Manager states that, "Conversely, there can be situations in which complaints lead to enforcement of limit laws despite a lack of any serious humane or public safety concern, because of neighboring property owner complaints, for example." This is a very problematic statement, which clearly shows what the Department thinks of any complaints that don't raise "humane" or "public safety concerns." The Department and the City have obligations to protect public health and the environment that range well beyond what the Department might characterize as "serious humane and public safety concerns." "Public safety" in this context usually refers to dogs and aggressive breeds. There are public health and safety issues associated with cats as well. The City has a duty to protect the environment, which includes impacts to wildlife, water quality, and public health, as elaborated below.

Deferring the Foster Animal Exemption Does Not Represent a Change in Policy

The Board of Animal Services first recommended, and then changed course and deferred inclusion of the recommendation from the General Manager that all animals being fostered from City shelters be exempted from the cat and dog kennel ordinances in its final recommendation. The General Manager admits, however, to the initiation of a new program to foster animals in private homes (for which no environmental review was conducted), and clearly intends to return to this issue in the future. The General Manager apparently intends for there ultimately to be no limit on the number of animals that can be fostered or the duration that they can be fostered. This intention was reinforced by the recent press release from the Department announcing expansion of the foster program and encouraging Angelinos to foster animals in their garages, basements, and bathrooms. Given that the City is not proceeding with environmental review of this program, the Department of Animal Services should suspend the new foster program until and unless the Department has conducted adequate review as required by CEQA.

Exempting "Non-Owned Roaming Stray Cats" from the Cat Kennel Law Violates Injunction and Further Ensures that Enforcement of Cat Limits Will Be Impossible

Astoundingly, the General Manager and Board of Animal Services Commissioners have recommended that stray cats, which may be fed by a resident, be entirely exempted from the cat kennel ordinance.

First, this directly violates the injunction in The Urban Wildlands Group et al. v. City of Los Angeles because it indirectly promotes TNR of feral cats. This "clarification," which in reality is a sleight-of-hand attempt at rulemaking, was part of the City's original Trap-Neuter-Return program. The injunction bars the City from revising any ordinance, including the cat kennel ordinance, until the city has conducted appropriate CEQA review.

Second, despite claims that this patchwork regulation would be easy to enforce, it would have the exact opposite consequence of making enforcement impossible. The General Manager's proposal would establish two kinds of cats in the City of Los Angeles, owned cats and "non-owned roaming stray cats which may be feral." Owned cats would be subject to the (increased) cat kennel limit, while stray cats would have no limits. The problem is that because the City does not have a mandatory licensing scheme for cats, it would be impossible in the field to distinguish between an owned and non-owned cat. Any person could claim that any cat was non-owned and therefore not subject to limits. This undermines the entire purpose of having cat limits, which is to avoid the nuisance and neighbor disputes that occur, not to mention to reduce the adverse impacts on the environment. With this proposed change, the City would legalize unlimited stray and feral cats throughout the City, which would, without doubt, have significant adverse environmental impacts.

Finally, we note that the proposal to exempt cats from the kennel ordinance is itself an action capable of affecting the environment and therefore subject to CEQA review. Moreover, the City has failed to provide adequate public notice of revising the ordinance by exempting stray and feral cats. The proposed increase in pet limits has no conceptual connection with the proposed

exemption for stray and feral cats, and as such the notice of the pet limit increase does not put the public on notice that the City is considering revising the ordinance to exempt stray and feral cats.

General Manager's Proposed CEQA Exemptions Do Not Apply

The General Manager suggests that the proposed changes would be exempt from CEQA under two dubious legal theories. First, she suggests that there is no possibility that the proposed project would have adverse impacts. Based on the evidence presented in this letter, this is simply false. The project meets the legal standard of having a reasonable possibility that the proposed action may result in a significant adverse environmental impact. See, City of Pasadena v. State (1993) 14 Cal.App.4th 810, 824.

Second, the General Manager suggests that the project would be categorically exempt because it would constitute "minor alterations in land use limitations in areas with an average slope of less than 20%, which do not result in any changes in land use or density." This exemption is intended to apply to lot line adjustments, minor encroachment permits, and other minor changes, not an action that would fundamentally change the regulatory scheme surrounding cats in the City. Clearly, this exemption was not created to cover this type of action and does not apply to an increase in pet limits. Moreover, courts must construe exemptions narrowly (Dehne v. County of Santa Clara (1981) 115 CA3d 827, 842). This exemption was intended to apply only to those land use changes that affect "density or allowed land uses." The proposed increase in pet limit is not the type of action that changes the density (i.e. number of dwellings per acre) or allowed land uses. This exemption is inapplicable to the proposed increase in pet limit. Wildlife Alive v. Chickering (1976) 18 C3d 190, 205. (Scope of exemptions should not be unreasonably expanded.)

Furthermore, the General Manager's proposed requirement that additional cats be kept indoors is a de facto attempt at mitigation, which indicates that the project could have significant adverse impacts and therefore requires review. It is well settled that an agency may not rely on mitigation measures to approve a categorical exemption. Salmon Protection and Watershed Network v. County of Marin (2004) 125 Cal.App.4th 1098, 1102, 23 Cal.Rptr.3d 321, 322 (Cal.App. 1 Dist., 2004) ("Mitigation measures may support a negative declaration but not a categorical exemption. [Citation]." The Salmon Protection Court aptly explained that

> Only those projects having no significant effect on the environment are categorically exempt from CEQA review. (Pub. Resources Code, §§ 21080, subd. (b)(9), 21084, subd. (a).) If a project may have a significant effect on the environment, CEQA review must occur and only then are mitigation measures relevant. (*Azusa Land Reclamation Co. v. Main San Gabriel Basin Watermaster* (1997) 52 Cal.App.4th 1165, 1199-1200, 61 Cal.Rptr.2d 447.) Id.

Accordingly, the very fact that the General Manager recognizes that the potentially significant impacts of the proposed increase in pet limits must be mitigated demonstrates that, as a matter of law, the project is not categorically exempt from review.

Proposal Must Receive Proper Review Under CEQA

I request that the City commit to conducting CEQA review on the proposed increase in the pet limit and all associated rule changes. Review of this proposal under CEQA should include the following topics, among others, and consider that at a minimum a fair argument can be made that the proposal would increase the number of free-roaming cats in the City and result in significant adverse impacts to biological resources, public health, and water quality. Because the proposed set of rule changes would make it infeasible to enforce cat limits and would exempt all stray and feral cats from limits altogether, the analysis must assume that the proposed changes would result in an increase in the total number of cats roaming outdoors in the City and evaluate the adverse impacts that would then result.

Proposal Could Have a Significant Adverse Impact on Wildlife

The City of Los Angeles provides important habitat to native wildlife[3] that would be impacted by an increase in the number of cats with access to the outdoors.[4] Wildlife species are not only found in designated wildlife areas but in neighborhoods as well, which provide important resources for migratory and resident birds and other animals vulnerable to cat predation. The impacts of domestic cats that are allowed to roam outside to wildlife are well known and include direct and indirect pathways. Direct impacts occur from predation on wildlife species from outdoor cats. As discussed above, the City has not proposed any rational means to enforce the "indoor" provision for additional cats and has proposed to lift limits on the number of stray and feral cats that can be maintained at a property under the proposed ordinance so one must assume that the result of the new policy will be additional outdoor cats in the City. The negative association between the activity of cats in habitats where birds are found and native bird diversity is well documented.[5] Furthermore, cats need not kill birds directly to depress their numbers; a negative behavioral effect from the presence of cats would be sufficient to exclude

---

[3] See e.g., B. Gumprecht. 1999. *The Los Angeles River: its life, death, and possible rebirth.* Seattle: University of Washington Press, D.S. Cooper. Annotated checklist of extirpated, reestablished, and newly-colonized avian taxa of the Ballona Valley, Los Angeles County, Califoornia. *Bull South Calif Acad Sci* 2006; 105: 91–112, T. Longcore. 2006. The Green Visions Plan for 21st Century Southern California: A Guide for Habitat Conservation, Watershed Health, and Recreational Open Space. 8. Conservation of Biodiversity in the City: An Assessment of MRCA Projects in the Upper Los Angeles River Watershed. Los Angeles: University of Southern California Center for Sustainable Cities: 1–29.

[4] C.A. Lepczyk, et al. Landowners and cat predation across rural-to-urban landscapes. *Biol Conserv* 2003; 115: 191–201, Y. van Heezik, et al. Do domestic cats impose an unsustainable harvest on urban bird populations? *Biol Conserv* 2010; 143: 121–130, Y. van Heezik. Pussyfooting around the issue of cat predation in urban areas. *Oryx* 2010; 44: 153–154, K.R. Crooks & M.E. Soulé. Mesopredator release and avifaunal extinctions in a fragmented system. *Nature* 1999; 400: 563–566, K. Crooks. Tabby go home: house cat and coyote interactions in southern California habitat remnants. *Wild Earth* 1997; 7: 60–63, N. Dauphiné & R.J. Cooper. 2009. Impacts of free-ranging domestic cats (*Felis catus*) on birds in the United States: a review of recent research with conservation and management recommendations. In *Tundra to tropics: connecting birds, habitats and people: Proceedings of the Fourth International Partners in Flight Conference.* T.D. Rich, et al., eds. McAllen, Texas: Partners in Flight.

[5] Crooks & Soulé. Mesopredator release and avifaunal extinctions in a fragmented system.

some species from areas where outdoor cats are found.[6] Cats can have indirect effects through the transmission of disease to wildlife[7] (and to humans, as discussed below).

The scientific literature on the adverse effects of outdoor cats on wildlife is regularly attacked on blogs and in other un-reviewed venues by feral cat advocates. In response to one such critique a group of over 30 Ph.D. and veterinary scientists sent a letter to the State of New Jersey clarifying some of the adverse environmental impacts of free-roaming and feral cats. This letter, coordinated by the New Jersey chapter of The Wildlife Society, provides a helpful review of several of the issues covered here and is attached for reference. (NB: A section of this letter emphasizes the transmission of rabies, which is not as great a risk in the western United States as in the east.) The letter conclusively states, "there is no debate among wildlife managers and conservation biologists about the need to control feral and free-ranging cats as part of any effort to protect native biodiversity."

Proposal Could Have a Significant Adverse Impacts on Public Health

Increasing the total number of cats by increasing the per resident/residence limit will increase the probability of transmission of disease to humans and to wildlife from cats that are allowed to roam outdoors, whether tame, stray, or feral. One of these diseases is toxoplasmosis, caused by the protozoan parasite *Toxoplasma gondii*, which once acquired by a human (or by other animals) remains in the brain for a lifetime, potentially causing a range of adverse impacts. Some risks of this infection have been known for some time, with a focus on pregnant women or immunocompromised individuals (e.g, those with AIDS), and usually with reference only to acute toxoplasmosis when the parasite is first acquired. However, more information is being learned about the effects of chronic *Toxoplasma* infection. The parasite forms cysts in the brain following the initial acute infection. The City should be aware, and factor into its decisions regarding exposure of its residents to additional outdoor cats, that research has identified associations between chronic infection with *Toxoplasma* and incidence of Parkinson's disease,[8] autism spectrum disorder,[9] schizophrenia (both through exposure of mother and direct exposure to individual),[10] psychosis,[11] increased risk of dying in a vehicular accident,[12] suicide,[13] and

---

[6] A.P. Beckerman, et al. Urban bird declines and the fear of cats. *Anim Conserv* 2007; 10: 320–325.

[7] D.A. Jessup, et al. Feline leukemia virus infection and renal spirochetosis in free-ranging cougar (*Felis concolor*). *J Zoo Wildl Med* 1993; 24: 73–79.

[8] O. Miman, et al. The probable relation between *Toxoplasma gondii* and Parkinson's disease. *Neurosci Lett* 2010; 475: 129–131.

[9] J. Prandota. Autism spectrum disorders may be due to cerebral toxoplasmosis associated with chronic neuroinflammation cuasing persistent hypercytokinemia that resulted in an increased lipid peroxidation, oxidative stress, and depressed metabolism of endogenous and exogenous substances. *Research in Autism Spectrum Disorders* 2010; 4: 119–155.

[10] A.S. Brown, et al. Maternal exposure to toxoplasmosis and risk of schizophrenia in adult offspring. *Am J Psychiatry* 2005; 162: 767–773, E.F. Torrey & R.H. Yolken. *Toxoplasma gondii* and schizophrenia. *Emerging Infect Dis* 2003; 9: 1375–1380, R.H. Yolken, et al. Toxoplasma and schizophrenia. *Parasite Immunol* 2009; 31: 706–715.

[11] S. Zhu. Psychosis may be associated with toxoplasmosis. *Medical Hypotheses* 2009; 73: 799–801.

[12] J. Flegr, et al. Increased risk of traffic accidents in subjects with latent toxoplasmosis: a retrospective case-control study. *BMC Infect Dis* 2002; 2: 11., stating "acquired toxoplasmosis might in fact represent a serious and highly underestimated public health problem, as well as an economic problem", J. Flegr, et al.

personality changes.[14] Some of these associations are not yet confirmed to be causal, but science and medicine continue to learn more about the adverse impacts of chronic infection by this parasite. These associations are, however, consistent with the documented changes in behavior shown by rats when their brains are infected with the parasitic cysts formed by *Toxoplasma gondii*.[15]

More cats in the environment will increase the environmental burden of the oocysts that are shed by infected cats with their feces. These are shed in the millions for a period when a cat is first infected and stay viable in the soil for up to 18 months.[16] Infection of humans in the developed world is caused primarily through exposure to soil contaminated by cat feces rather than through consuming undercooked meat.[17] Allowing additional cats and thereby increasing the environmental burden of oocysts would foreseeably increase the risk and rate of infection by *Taxoplasma gondii* and potentially expose the City to liability as the health impacts of this parasite become more well known. Indeed, a recent peer-reviewed scientific paper on the public health implications of toxoplasmosis included the following summary [quoting]:

- Cat owners who allow their pets outdoors should be made aware that their free-roaming cats can acquire and faecally shed the protozoan parasite, *Toxoplasma gondii*.
- Cat owners should be encouraged to keep their pets indoors and collect cat faeces in litter boxes destined for disposal in sanitary landfills.
- Persons who work with soil or garden regularly should wear gloves to protect themselves from pathogens in soil, such as *Toxoplasma gondii*, that are spread by owned and feral free-roaming cats.[18]

Proposal Could Have a Significant Adverse Impact on Water Quality

Cats that are allowed outdoors cumulatively deposit large quantities of fecal matter into the environment. Cats from only 12,000 households around Morro Bay (the cities of Los Osos, Cayucos, and Morro Bay), deposited an estimated 105.9 tons of feces outside each year in an area of 11.5 square miles.[19] Cat feces contribute to impaired water quality[20] and are carried to

---

Increased incidence of traffic accidents in Toxoplasma-infected militrary drivers and protective RhD molecule revealed by a large-scale prospective cohort study. *BMC Infect Dis* 2009; 9: 72.

[13] T.A. Arling, et al. *Toxoplasma gondii* antibody titers and history of suicide attempts in patients with recurrent mood disorders. *Journal of Nervous and Mental Disease* 2009; 3: 905–908, F. Yagmur, et al. May *Toxoplasma gondii* increase suicide attempt-preliminary results in Turkish subjects? *Forensic Sci Int* 2010; 199: 16–17.

[14] K.D. Lafferty. Can the common brain parasite, *Toxoplasma gondii*, influence human culture? *Proc R Soc Lond, Ser B: Biol Sci* 2006; 273: 2749–2755.

[15] M. Berdoy, et al. Fatal attraction in rats infected with *Toxoplasma gondii*. Ibid. 2000; 267: 1591–1594.

[16] J.K. Frenkel. 2000. Biology of *Toxoplasma gondii*. In *Congenital toxoplasmosis: scientific background, clinical management and control*. P. Ambroise-Thomas & E. Petersen, eds. Paris: Springer-Verlag: 9–25.

[17] A.M. Tenter, et al. *Toxoplasma gondii*: from animals to humans. *Int J Parasitol* 2000; 30: 1217–1258, H.A. Dabritz & P.A. Conrad. Cats and *Toxoplasma*: implications for public health. *Zoonoses and Public Health* 2010; 57: 34–52.

[18] Dabritz & Conrad.

[19] H.A. Dabritz, et al. Outdoor fecal deposition by free-roaming cats and attitudes of cat owners and nonowners toward stray pets, wildlife, and water pollution. *J Am Vet Med Assoc* 2006; 229: 74–81.

water bodies through runoff, where they have adverse effects on wildlife.[21] Los Angeles is 44 times larger and much denser than the Morro Bay region that was studied. It would not be surprising if the annual burden of feces from outdoor cats in the City is already orders of magnitude larger (1.3 million households in Los Angeles vs 12,000 in the Morro Bay yields a rough estimate of 10,000 tons of cat feces yearly in Los Angeles, assuming similar rates of cats per household, outdoor access and proportion of feral cats). This is not merely an issue relevant to the coast or near watercourses; the storm drain system in Los Angeles drains all portions of the City to its waterways and into the ocean.

The City of Los Angeles Stormwater Ordinance, consistent with the Clean Water Act and California Water Code, defines "animal waste" from domestic animals ("such as discharge from confinement facilities, kennels, pens, recreational facilities, stables, and show facilities") as a "pollutant" (LAMC §64.70). The City has an obligation to reduce pollutants in stormwater to the maximum extent practicable. Increasing the number of cats that can legally roam free in the City would increase, not decrease, this pollutant in receiving waters within the City. (As mentioned before, there is no way to enforce a restriction that these additional cats be "indoors.") Allowing pet waste to be discharged into the storm drain system (which drains essentially the entire City) is a crime under the Stormwater Ordinance (LAMC §64.70.02). Dog owners pick up after their dogs and the Department of Animal Services has a program to encourage this. Cat waste is also a pollutant, with pathogens dangerous to humans and wildlife,[22] and the City has no program to reduce this pollutant and in fact with this motion is taking steps to increase it across the City. The City of Los Angeles already faces severe water quality problems, including bacterial contamination, and a complete study of the possible addition of 66% more owned cats plus unlimited legalized stray and feral cats deserves thorough study and consultation with the appropriate agencies through the CEQA process.

---

[20] J.L. Ram, et al. Identification of pets and raccoons as sources of bacterial contamination of urban storm sewers using a sequence-based bacterial source tracking method. *Water Res* 2007; 41: 3605–3614.
[21] M.A. Miller, et al. Coastal freshwater runoff is a risk factor for *Toxoplasma gondii* infection of southern sea otters (*Enhydra lutris nereis*). *Int J Parasitol* 2002; 32: 997–1006.
[22] P.A. Conrad, et al. Transmission of *Toxoplasma*: clues from the study of sea otters as sentinels of *Toxoplasma gondii* flow into the marine environment. Ibid. 2005; 35: 1155–1168, Miller, et al.

This discussion is meant to be educational and does not represent an exhaustive consideration of these issues. It does illustrate that an increase in the legal number of cats in the City could have significant adverse impacts on the environment that require review under CEQA.

Sincerely,

Babak Naficy
Attorney for The Urban Wildlands Group, Endangered Habitats League, Los Angeles Audubon Society, Palos Verdes/South Bay Audubon Society, Santa Monica Bay Audubon Society, and American Bird Conservancy

Cc: Councilmember Bill Rosendahl
Councilmember Paul Koretz
Deputy City Attorney Mary Decker
Deputy City Attorney Dov Lesel
General Manager Brenda Barnette, Department of Animal Services

New Jersey Chapter
The Wildlife Society

200 Stamets Rd., Milford, NJ 08848
phone (908) 735-0737, fax (908) 735-0744

Governor Chris Christie
Office of the Governor
PO Box 001
Trenton, NJ 08625

June 22, 2010

Dear Governor Christie:

The Wildlife Society (TWS), founded in 1937, is an international non-profit scientific and educational association dedicated to excellence in wildlife stewardship through science and education. Our mission is to enhance the ability of wildlife professionals to conserve diversity, sustain productivity, and ensure responsible use of wildlife resources for the benefit of society. The Wildlife Society encourages professional growth through certification, peer-review Publications, Conferences, and working groups.

Enclosed for your review is a letter sent to Dave Chanda containing information about an important wildlife management and public health issue. Please review this letter and save it for future reference regarding discussions about the practice of "Trap -Neuter-Release" (TNR) of domestic cats

Thank you for your consideration of this issue and for your continued interest in fish and wildlife conservation.

Sincerely,

Evan Madlinger
President
New Jersey Chapter of The Wildlife Society

Cc: Bob Martin
Amy Cradic
Endangered & Nongame Species Advisory Committee (ENSAC)
Jeannette Vreeland
Poonam Alaigh
Faye E. Sorhage
Colin Campbell

May 19, 2010

David Chanda, Director
New Jersey Department of Environmental Protection
Division of Fish and Wildlife
P.O. Box 400
Trenton, NJ 08625

Dear Director Chanda:

It has come to our attention that feral cat advocacy groups have been communicating misinformation and misinterpretation of the scientific literature to you and others regarding the effects of feral and free-ranging domestic cats on the environment. Their purpose appears to be to undermine efforts of the New Jersey Fish and Game Council to address these impacts. We are troubled in particular by the assertions contained in the April 5, 2010 letter to you by Gary and Laurie Goldstein, who identify themselves as "Senior Equity Research Analysts on Wall Street." This letter sets the record straight on some of their more egregious errors.

Please understand that there is no debate among wildlife managers and conservation biologists about the need to control feral and free-ranging cats as part of any effort to protect native biodiversity. The leading professional societies, including The Wildlife Society, American Ornithologists' Union, American Society of Mammalogists, American Association of Wildlife Veterinarians, and Wildlife Disease Association, are clear on this point and have all taken positions noting the harms to the environment caused by feral and free-ranging cats and opposing trap-neuter-release (TNR) as a management approach for feral cats. These concerns about the ecological impacts of feral cats and criticisms of TNR have been echoed in the scientific literature (most recently Longcore et al. 2009, Lepczyk et al. 2010, van Heezik 2010). The conservation and wildlife science communities are in agreement that feral cats should be controlled. The Goldsteins and other feral cat advocates are attempting to manufacture uncertainty to cast doubt on the need for action.

Although we hope that it is not necessary, and that your office will have already recognized the errors in the Goldsteins' letter, following are corrections to their attempts at interpreting the scientific literature.

Claim: Feral Cats Are Not Invasive Exotic Species

The Goldsteins attempt to argue that domestic cats fall into a "gray area" where it is not clear that they are an invasive species. This is categorically false; cats are "notoriously invasive" worldwide (Clout 2002) and feral cats are recognized by federal authorities as invasive mammals throughout the United States (Bergman et al. 2000). A review of the economic costs of invasive species in the United States estimates that bird mortality alone caused by feral cats amounts to an economic value $17 billion per year (Pimentel et al. 2005).

Claim: Feral Cats Do Not Harm Native Wildlife on Continents

The Goldsteins argue that the literature that has been presented to your department has been a biased sample and that it only shows impacts of feral cats on island ecosystems. They cite a self-published document on the Internet (by O'Keefe) to bolster their conclusion that "there is no strong support for the viewpoint that cats are a serious threat to wildlife, *except for fragile populations in isolated or fragmented ecosystems.*" They then say that because New Jersey is large, it is not appropriate to compare it to a small island habitat.

The Goldsteins do not appear to know enough biology to realize that this statement should embarrass them. Any undergraduate in conservation biology, landscape ecology, biogeography, or wildlife management would know that isolated habitats surrounded by a hostile matrix are conceptualized and known as "habitat islands." Indeed, the dynamics of species on islands (MacArthur and Wilson 1967) are used to understand local extinction and colonization processes in mainland habitats (e.g., Davis and Glick 1978, Faeth and Kane 1978, Soulé et al. 1988, Walter 1998). The very basis of modern reserve design and conservation planning is that isolated habitats function in a manner similar to islands (e.g., Diamond 1975). Isolated populations are also created when habitats themselves are patchily distributed, such as sandy beaches. The conditions that make feral cats such efficient predators on islands, causing the extinction of mammals, birds, and reptiles (Nogales et al. 2004), are also found on the mainland where habitats isolated either by fragmentation from human development or accidents of geography make the populations of native wildlife within them vulnerable to local extinction (known as "extirpation").

The process of extinction in fragmented habitats has been famously documented in the canyons of San Diego, but the same mechanisms would be at work in any urban woodlot or other fragmented habitat or backyard. Crooks and Soulé (1999), writing in the prestigious journal *Nature*, showed that cat abundance in canyons was negatively correlated with native bird diversity. The presence of coyotes, however, reduced cat activity in canyons and indirectly preserved native bird diversity. Because cats are subsidized by humans and reach densities far exceeding that of any native predator, native wildlife in such fragmented systems is unable to withstand the predation pressure. This phenomenon is well known in conservation science: the Crooks and Soulé article has been cited 320 times in other scientific papers (ISI Web of Knowledge), indicating its importance and the robustness of the findings.

Decreased native species richness in the presence of feral cats was also reported by Hawkins (1998) for paired sites in a park near San Francisco. Native bird and rodent diversity was lower at the site with a feral cat colony present compared with nearby similar habitat without feral cats. Recent research continues to support the observation that feral cats harm wildlife. For example, van Heezik et al. (2010) calculated predation of cats on birds in a city in New Zealand and compared these numbers with population estimates of those bird species. They found that for six species of birds, the number killed by cats exceeded citywide population estimates or were close to those estimates. Population models for three species indicated a low probability of persistence. They attributed the continued presence of these species to immigration from surrounding areas, which is detrimental to the species as a whole. In the United Kingdom, Baker et al. (2005) similarly reached the conclusion that cats may have created a dispersal "sink" from nearby pro-

ductive areas because predation by cats was high relative to annual productivity of three bird species.

Feral cats can also harm populations of small mammals (Hawkins et al. 2004, LaFever et al. 2008), reptiles (Lettink et al. 2010), and even marine mammals (through transmission of disease, Miller et al. 2002, Conrad et al. 2005, Dabritz et al. 2007, Dubey and Jones 2008, Miller et al. 2008).

Claim: Removal of Feral Cats Causes Mesopredator Release

To argue that feral cats are in some way beneficial, the Goldsteins claim that feral cats help to keep populations of rats in check and that the removal of cats can therefore be harmful to birds. This is a phenomenon of ecosystems with very simple food webs (e.g., cat–rat–bird), almost always on islands, so its relevance is limited. Although fragmented habitats do resemble islands in many ways, the presence of humans, other predators and other prey items make the so-called "cats protecting birds" scenario on mainland habitats almost unheard of.

The published research on the influence of domestic cat predation on rats shows that cat predation has little influence on rat population size, although it can skew the population size structure toward larger rats (Glass et al. 2009). This is not a fact that is new to science; a similar result was found almost 60 years earlier (Jackson 1951) and the ineffectiveness of cats as ratters has been documented several times since (Childs 1986) and before (Anonymous 1914, Forbush 1916). These early records document that although rats may not be as visible to human observers in the presence of cats, their number is not diminished because any predation by cats on juvenile rats is more than compensated by the reproduction of adults, which are essentially not killed at all by cats. Furthermore, cats scavenge the same food as rats (e.g., unsecured rubbish) and both species are limited by the food source and shelter rather than predator–prey interactions (Jackson 1951, Childs 1986). "Managed" cat colonies, because they are accompanied by provision of food, often in excess of the amount consumed by cats, would actually increase local rat populations.

In those island circumstances where feral cats do indeed suppress rat populations, the recommendation by scientists studying these systems is to control both species to achieve biodiversity conservation, not to keep one predator to control the other.

Claim: Feral Cats Hunt Less When They Are Fed

The Goldsteins argue that feeding feral cats reduces rates of predation and incorrectly cite Dickman (2009) to support this conclusion. Dickman (2009) did not investigate whether feeding influenced the diet of cats, contrary to the Goldsteins' claim. Dickman reported diets of cats in different habitat types in Australia, showing that the proportion of native species in the diet depended on availability. In addition, studies of the diets of outdoor cats are insufficient to measure predation on wildlife. Cats do not eat all the prey that they hunt, so measurement of diet of a cat with access to the outdoors does not assess rates of predation. Even though human-provided food may make up a large part of a cat's diet, if the cat is outside it will have had the opportunity to hunt and kill prey anyway (Biben 1979). The urge to hunt and hunger have been decoupled in

domestic cats (Adamec 1976, Holling and Buckingham 1976). The predatory stimulus is indeed stronger than hunger, such that a cat eating a preferred food will break away to hunt and kill prey when available (Adamec 1976). Furthermore, in a study where cats on a farm were provided food intermittently, predation rates did not vary between times when they were fed and when they were not fed (Davis 1957).

Claim: Feral Cats Are No More Diseased than Owned Cats

The Goldsteins reference three papers showing similar infection rates for various diseases for feral and owned cats. They incorrectly compare rates of infection for feral cats with rates including free-roaming pet cats, as does Luria et al. (2004), instead of comparing with indoor-only cats. They selectively avoid reporting those TNR programs where far greater proportions of cats were euthanized for health reasons (11%; Levy et al. 2003) than found in the study by Wallace and Levy (0.4%; 2006). Furthermore, Wallace and Levy reveal that only 2 of 7 TNR programs ever tested for FeLV, and only 1 of 7 tested for FIV, two conditions for which Levy et al. (2003) euthanized cats. It is therefore very misleading to cite the 0.4% rate as if it refers to disease rates because almost none of the cats handled were even tested for several important diseases. Just-published research from California puts the infection rate of FIV at 17.9% and FeLV at 15.7% (n=134) for feral cats on Catalina Island (Guttilla and Stapp 2010), which is much higher than the 0.4% rate the Goldsteins promote.

The Goldsteins similarly downplay the risk of feral cats as rabies vectors. This is irresponsible and dangerous. Just last month, the *Orlando Sentinel* reported two instances of rabid feral cats attacking humans (Lelis 2010). The first was a cat that was hit by a car, which then bit the driver and passenger who stopped to give aid. The second involved a rabid feral cat that entered a home and attacked the owner. These events underscore the risk of feral cats as vectors for rabies. In 2009, there were seven cases of rabid feral cats attacking people on the East Coast. Although cats are a small proportion of the number of animals recorded as rabid, they are disproportionately responsible for human exposure to the virus, probably because people are far more likely to approach a cat than to approach wildlife. This has been shown in an analysis of human exposure to rabies in New York State, 1993–2002. During this period, even though cats made up only 2.7% of the rabid terrestrial animals recorded, they accounted for one-third of human exposures totaling more than 4,200 events (Eidson and Bingman 2010). So even small numbers of rabid cats, especially those that are taught to approach humans for food such as in a "managed" colony, pose a significant public health risk for rabies if not all are vaccinated and administered updates. Post-exposure treatment for rabies is expensive and painful. In 2008, 15 rabid cats were reported in New Jersey (Blanton et al. 2009). If the same ratio of rabid animals to human exposure events as found in New York were to apply, this would translate to 225 human exposures, which would have to be followed by costly treatment (Moore et al. 2000).

It also bears noting that something has gone awry in the control of rabies in cats compared with dogs. Since 1958, the number of cases of rabies in dogs nationwide has declined dramatically, from 1,600 in 1958 to 75 in 2008 (Blanton et al. 2009). In contrast, the number of cases in cats nationwide declined from 1958 to the mid 1970s, spiked in the late 1970s, rose slowly in the 1980s, and then spiked and stayed high (around 300 cases per year) since the early 1990s. It may only be coincidence, but it was the early 1990s when feral cat advocacy groups like Alley Cat

Allies began pushing for widespread acceptance of feral cats and fighting against controlling their populations through euthanasia. So as the number of cases of rabies in dogs continues to decline, cats are now a far greater risk for human exposure to rabies (Blanton et al. 2009). Feral cat advocates are fond of pointing out that humans rarely contract rabies, but this fact ignores that many people are exposed to rabies and must undergo costly and painful treatment to avoid certain death from it.

Toxoplasmosis is also a more serious disease than the Goldsteins would have the reader believe, claiming that human infections are "asymptomatic" or "flu-like." To the contrary, as a parasite, the *Toxoplasma* protozoan has significant human health effects, including personality changes (Lafferty 2006), a probable association with Parkinson's disease (Miman et al. 2010), increased risk of schizophrenia in offspring when mothers are infected (Brown et al. 2005), other risks to the fetus (Stray-Pedersen 1993), potential risk of increased suicide attempts (Yagmur et al. 2010), and an association with psychosis (Zhu 2009). The full implications of toxoplasmosis on human health are only starting to be understood, and the adverse and fatal effects on wildlife, which can contract toxoplasmosis, are known (Work et al. 2000, Work et al. 2002).

Toxoplasma gondii oocysts are shed by the hundreds of millions when cats are first infected and these oocysts can persist in the soil for up to 18 months (Frenkel 2000). The laws that allow TNR generally take away the right of homeowners and land managers to keep cats from straying onto their properties, so this and other risks, as well as threats to wildlife, are increased by formal TNR programs. The most recent review articles on *Toxoplasma* reach the conclusion that in developed nations transmission via oocysts poses a greater risk than consumption of undercooked meat (Tenter et al. 2000, Dabritz and Conrad 2010). The largest modern outbreak of toxoplasmosis was in Canada in 1995 as a result of contamination of a municipal water supply by oocysts (Bowie et al. 1997). Dabritz and Conrad (2010) caution cat owners to keep their cats inside and dispose of all feces in a sanitary manner, and warn of transmission of *T. gondii* to humans from soil, water, and uncooked vegetables that carry oocysts from the soil (as one would find from gardening where infected cats have access). They specifically point to the resistance of feral cat advocates to euthanasia as increasing the number of feral cats in the United States, which increases the environmental burden of *Toxoplasma* oocysts and increases risk of exposure to humans.

Claim: Studies in New Jersey Are Necessary to Make Policy

The Goldsteins use a common tactic of deniers of an environmental harm, claiming that studies were not done in their state (county, city, country, etc.) and therefore not enough is known to draw any conclusions. They claim that the impact of feral cats on prey populations in New Jersey has not been addressed, and that a study closest to New Jersey (from New York; Kays and DeWan 2004) shows a low impact on native mammals. This analysis is wrong on two counts. First, it denies the existence of universal ecological principles and, second, it takes Kays and DeWan's (2004) results out of context. The suburban nature preserve studied by Kays and DeWan (2004) was sufficiently large to include predators such as coyote and fisher. It is therefore understandable that owned cats would not venture far into the preserve; this same phenomenon was documented by Crooks and Soulé (1999) in San Diego. So the extrapolation from the New York study is not proper for all areas of New Jersey and the ecological principle of hyperpreda-

tion by subsidized outdoor cats illustrated by the San Diego study will apply to fragmented habitats in New Jersey.

Ground nesting birds are vulnerable to predation by cats (Leck 1979, Dickman 2009). In New Jersey, two ground nesting species of concern are Piping Plover and Northern Bobwhite. The general principle of ground nesting birds being vulnerable to cat predation has been illustrated elsewhere. For example, California Quail was extirpated in the presence of a feral cat colony in northern California (Hawkins 1998). Similarly, in the San Diego studies, California Quail was among those bird species extirpated in smaller canyons, which the authors attributed to feral and domestic cat presence (Soulé et al. 1988, Crooks and Soulé 1999). Even though in-state studies are not necessary to deduce the threat from feral cats, Lohr (2009) has documented predation by feral cats on Northern Bobwhite in New Jersey, and this threat has been formally recognized (New Jersey Division of Fish and Wildlife 2009). Furthermore, the threat of cats to Northern Bobwhite has been long recognized throughout the eastern United States (Nice 1910, Forbush 1916, Stoddard 1931).

Claim: Cat Predation Is Compensatory

Where cats cause documented extinctions and extirpations, cat predation is additive (e.g., Hawkins 1998, Crooks and Soulé 1999, Nogales et al. 2004). Researchers are interested in knowing if some cat predation is compensatory (that is, killing animals that would die anyway) (Beckerman et al. 2007, Baker et al. 2008, van Heezik et al. 2010). The purported evidence of compensatory predation is a study showing that cat-killed birds have larger spleens (indicating that they are less healthy) than birds killed by other sources (e.g., windows) (Møller and Erritzøe 2000). Other researchers found that birds killed by cats had less fat reserves and lower muscle mass than those killed in collisions (Baker et al. 2008), but warned against assuming that this corresponded with lower fitness of these individuals. In neither instance is it possible to conclude that individuals killed by cats would have died otherwise. Furthermore, even if cat predation is to some degree compensatory for a prey species, cats compete with native predators for prey, which itself is an ecological impact (George 1974). It is undisputed that "managed" feral cats are inappropriately "subsidized," while they directly compete with native avian, mammalian, and other predators.

For those studies estimating cat predation and bird population sizes, additive mortality is indicated because total annual mortality reaches or approaches the bird population size (Baker et al. 2008, van Heezik et al. 2010). But the actual killing of birds may not be the most important mechanism by which cats affect bird populations. Mathematical models indicate that the mere presence of cats, which reach densities far exceeding any similarly sized native predator, can cause behavioral changes in birds that reduce fecundity and may cause significant effects on urban bird populations (Beckerman et al. 2007).

Claim: Feral Cats Are Not an Important Conservation Priority

The Goldsteins' letter lists many threats to wildlife in New Jersey as a way of suggesting that control of feral cats should not be a priority. This is a common theme promoted by nearly all those wishing to downplay the impacts of feral cats (e.g., Robertson 2008). Conservation scien-

tists of course recognize the many threats to native wildlife and indeed work on addressing them. But feral cats are an important threat to the environment and raise concerns of scientists around the world (e.g., van Heezik 2010), both because of direct and indirect predation effects and the role feral cats play as disease vectors. Wildlife managers, conservation biologists, and the agencies that are responsible for protection of the environment are in fact capable of addressing more than one threat at a time.

Conclusion

At a professional level, we are concerned about the apparent disregard the Goldsteins have for our disciplines, our training, and our work. The Goldsteins are similar to other feral cat advocates who have in recent months and years attempted to "debunk" the science demonstrating the adverse impacts of feral cats. These advocates, apparently motivated by a desire to prevent euthanasia of feral cats, are popping up with self-published analyses purporting to interpret the scientific literature and criticizing those perceived to be anti-cat. Because anyone with a word processor can produce documents that look professional and post them to the Internet, we caution decisionmakers against believing materials on conservation science and wildlife management topics that are not produced by qualified individuals.

Our signatures appear in alphabetical order and represent a range of North American scientists with extensive knowledge in wildlife conservation, disease, and management. Questions regarding this letter can be directed to Laura Bies, Director of Government Affairs, The Wildlife Society, at (301) 897-9770 or laura@wildlife.org.

Respectfully,

Col. Paul Barrows, D.V.M., Ph.D., Dipl. ACVPM, Certified Wildlife Biologist
Chief of U.S. Army Veterinary Corps (Ret.)

Paul Beier, Ph.D.
Professor of Conservation Biology and Wildlife Ecology
School of Forestry
Northern Arizona University

David M. Bird, Ph.D.
Avian Science and Conservation Centre
McGill University

Carol Chambers, Ph.D.
Professor of Wildlife Ecology
School of Forestry
Northern Arizona University

Todd Campbell, Ph.D.
Associate Professor of Biology
University of Tampa

Robert J. Cooper, Ph.D.
Professor, Warnell School of Forestry and Natural Resources
University of Georgia

Michael J. Conroy, Ph.D.
Senior Research Scientist and Emeritus Assistant Unit Leader
Warnell School of Forestry and Natural Resources
University of Georgia

Nico Dauphiné, Ph.D.
Project Manager
Zoological Society of London

Robert DeCandido, Ph.D.
New York, New York

John W. Fitzpatrick, Ph.D.
Director, Cornell Laboratory of Ornithology
Cornell University

Richard Gerhold, D.V.M., M.S.
University of Georgia

Michael Hutchins, Ph.D.
Executive Director/CEO
The Wildlife Society

Jane E. Huffman, Ph.D., M.P.H.
Professor of Biological Sciences
Director, Northeast Wildlife DNA Laboratory
East Stroudsburg University

David A. Jessup, D.V.M., M.P.V.M., Dipl. ACZM
Senior Wildlife Veterinarian
California Department of Fish and Game

Paul R. Krausman, Ph.D.
Boone and Crockett Professor of Wildlife Conservation
Wildlife Biology Program
University of Montana

Christopher A. Lepczyk, Ph.D.
Assistant Professor
Department of Natural Resources and Environmental Management
University of Hawaii at Manoa

Travis Longcore, Ph.D.
Research Associate Professor
Department of Geography
University of Southern California

Terry Master, Ph.D.
Professor of Biology
East Stroudsburg University

Darren A. Miller, Ph.D., Certified Wildlife Biologist
Weyerhaeuser NR Company

Joseph C. Mitchell, Ph.D.
Certified Senior Ecologist, Ecological Society of America
Mitchell Ecological Research Service, LLC
Gainesville, Florida

Reed F. Noss, Ph.D.
Davis-Shine Professor of Conservation Biology
University of Central Florida

Melissa Reynolds-Hogland, Ph.D.
Executive Director
Bear Trust International

Gary J. San Julian, Ph.D.
Professor of Wildlife Resources
The Pennsylvania State University

Greg Shriver, Ph.D.
Assistant Professor of Wildlife Ecology
Department of Entomology & Wildlife Ecology
University of Delaware

Wayne D. Spencer, Ph.D.
Senior Conservation Biologist
Conservation Biology Institute

Stanley A. Temple, Ph.D.
Beers–Bascom Professor Emeritus in Conservation
Department of Forest and Wildlife Ecology
Gaylord Nelson Institute for Environmental Studies
University of Wisconsin–Madison

Merlin D. Tuttle, Ph.D.
Founder/President Emeritus
Bat Conservation International

George Wallace, Ph.D.
Vice President
American Bird Conservancy

Howard P. Whidden, Ph.D.
Associate Professor of Biology
East Stroudsburg University

Christopher Williams, Ph.D.
Assistant Professor of Wildlife Ecology
Department of Entomology & Wildlife Ecology
University of Delaware

Leonard J. Wolgast, Ph.D.
Professor Emeritus
Department of Ecology, Evolution and Natural Resources
Rutgers University

Literature Cited

Adamec, R. E. 1976. The interaction of hunger and preying in the domestic cat (*Felis catus*): an adaptive hierarchy? Behavioral Biology **18**:263–272.

Anonymous. 1914. Ship rats and plague. Public Health Reports **29**:927–928.

Baker, P. J., A. J. Bentley, R. J. Ansell, and S. Harris. 2005. Impact of predation by domestic cats *Felis catus* in an urban area. Mammal Review **35**:302–312.

Baker, P. J., S. E. Molony, E. Stone, I. C. Cuthill, and S. Harris. 2008. Cats about town: is predation by free-ranging pet cats *Felis catus* likely to affect urban bird populations? Ibis **150**:86–99.

Beckerman, A. P., M. Boots, and K. J. Gaston. 2007. Urban bird declines and the fear of cats. Animal Conservation **10**:320–325.

Bergman, D. L., M. D. Chandler, and A. Locklear. 2000. The economic impact of invasive species to Wildlife Services' cooperators. Pages 169–178 *in* L. Clark, J. Hone, J. A. Shivik, R. A. Watkins, K. C. Vercauteren, and J. K. Yoder, editors. Human conflicts with wildlife: economic considerations. Proceedings of the Third NWRC Special Symposium. National Wildlife Research Center, Fort Collins, Colorado.

Biben, M. 1979. Predation and predatory play behaviour of domestic cats. Animal Behaviour **27**:81–94.

Blanton, J. D., K. Robertson, D. Palmer, and C. E. Rupprecht. 2009. Rabies surveillance in the United States during 2008. Journal of the American Veterinary Medical Association **235**:676–689.

Bowie, W. R., A. S. King, D. H. Werker, J. L. Isaac-Renton, A. Bell, S. B. Eng, and S. A. Marion. 1997. Outbreak of toxoplasmosis associated with municipal drinking water. Lancet **350**:173–177.

Brown, A. S., C. A. Schaefer, C. P. Quesenberry, Jr., L. Liu, V. P. Babulas, and E. S. Susser. 2005. Maternal exposure to toxoplasmosis and risk of schizophrenia in adult offspring. American Journal of Psychiatry **162**:767–773.

Childs, J. E. 1986. Size-dependent predation on rats (*Rattus norvegicus*) by house cats (*Felis catus*) in an urban setting. Journal of Mammalogy **67**:196–199.

Clout, M. N. 2002. Biodiversity loss caused by invasive alien vertebrates. Zeitschrift für Jagdwissenschaft **48**:S51–S58.

Crooks, K. R. and M. E. Soulé. 1999. Mesopredator release and avifaunal extinctions in a fragmented system. Nature **400**:563–566.

Dabritz, H. A. and P. A. Conrad. 2010. Cats and *Toxoplasma*: implications for public health. Zoonoses and Public Health **57**:34–52.

Davis, D. E. 1957. The use of food as a buffer in a predator-prey system. Journal of Mammalogy **38**:466–472.

Diamond, J. M. 1975. The island dilemma: lessons of modern biogeographic studies for the design of natural reserves. Biological Conservation **7**:129–146.

Dickman, C. R. 2009. House cats as predators in the Australian environment: impacts and management. Human–Wildlife Conflicts **3**:41–48.

Eidson, M. and A. K. Bingman. 2010. Terrestrial rabies and human postexposure prophylaxis, New York, USA. Emerging Infectious Diseases **16**:527–529.

Forbush, E. H. 1916. The domestic cat: bird killer, mouser, and destroyer of wild life, means of utilizing and controlling it. Economic Biology – Bulletin No. 2. State Board of Agriculture, Commonwealth of Massachusetts, Boston.

Frenkel, J. K. 2000. Biology of *Toxoplasma gondii*. Pages 9–25 *in* P. Ambroise-Thomas and E. Petersen, editors. Congenital toxoplasmosis: scientific background, clinical management and control. Springer-Verlag, Paris.

George, W. G. 1974. Domestic cats as predators and factors in winter shortages of raptor prey. Wilson Bulletin **86**:384–396.

Glass, G. E., L. C. Gardner-Santana, R. D. Holt, J. Chen, T. M. Shields, M. Roy, S. Schachterle, and S. L. Klein. 2009. Trophic garnishes: cat–rat interactions in an urban environment. PLoS ONE 4:e5794.

Guttilla, D. A. and P. Stapp. 2010. Effects of sterilization on movements of feral cats at a wildland–urban interface. Journal of Mammalogy **91**:482–489.

Hawkins, C. C. 1998. Impact of a subsidized exotic predator on native biota: effect of house cats (*Felis catus*) on California birds and rodents. Ph.D. Dissertation. Texas A&M University, College Station.

Hawkins, C. C., W. E. Grant, and M. T. Longnecker. 2004. Effect of house cats, being fed in parks, on California birds and rodents. Pages 164–170 *in* Proceedings 4th International Urban Wildlife Symposium.

Holling, C. S. and S. Buckingham. 1976. A behavioral model of predator–prey functional responses. Behavioral Science **21**:183–195.

Jackson, W. B. 1951. Food habits of Baltimore, Maryland, cats in relation to rat populations. Journal of Mammalogy **32**:458–461.

Kays, R. W. and A. A. DeWan. 2004. Ecological impact of inside/outside house cats around a suburban nature preserve. Animal Conservation 7:273–283.

LaFever, D. H., P. M. Schmidt, N. D. Perry, C. A. Faulhaber, R. R. Lopez, N. J. Silvy, and E. A. Forys. 2008. Use of a population viability analysis to evaluate human-induced impacts and mitigation for the endangered Lower Keys marsh rabbit. Human–Wildlife Conflicts **2**:260–269.

Lafferty, K. D. 2006. Can the common brain parasite, *Toxoplasma gondii*, influence human culture? Proceedings of the Royal Society of London, Series B: Biological Sciences **273**:2749–2755.

Leck, C. F. 1979. Avian extinctions in an isolated tropical wet-forest preserve, Ecuador. Auk **96**:343–352.

Lelis, L. 2010. Rabies warning issued in Volusia after rabid cats attacks. Orlando Sentinel.

Lettink, M., G. Norbury, A. Cree, P. J. Seddon, R. P. Duncan, and C. J. Schwarz. 2010. Removal of introduced predators, but not artificial refuge supplementation, increases skink survival in coastal duneland. Biological Conservation **143**:72–77.

Levy, J. K., D. W. Gale, and L. A. Gale. 2003. Evaluation of the effect of a long-term trap-neuter-return and adoption program on a free-roaming cat population. Journal of the American Veterinary Medical Association **222**:42–46.

Lohr, M. T. 2009. Northern Bobwhite winter ecology in southern New Jersey. M.S. Thesis. University of Delaware, Newark.

MacArthur, R. H. and E. O. Wilson. 1967. The theory of island biogeography. Princeton University Press, Princeton, New Jersey.

Miman, O., O. Y. Kusbeci, O. C. Aktepe, and Z. Cetinkaya. 2010. The probable relation between *Toxoplasma gondii* and Parkinson's disease. Neuroscience Letters **475**:129–131.

Møller, A. P. and J. Erritzøe. 2000. Predation against birds with low immunocompetence. Oecologia **122**:500–504.

Moore, D. A., W. M. Sischo, A. Hunter, and T. Miles. 2000. Animal bite epidemiology and surveillance for rabies postexposure prophylaxis. Journal of the American Veterinary Medical Association **217**:190–194.

New Jersey Division of Fish and Wildlife. 2009. New Jersey Northern Bobwhite Action Plan.

Nice, M. M. 1910. Food of the Bobwhite. Journal of Economic Entomology 3:295–313.

Nogales, M., A. Martín, B. R. Tershy, C. J. Donlan, D. Veitch, N. Puerta, B. Wood, and J. Alonso. 2004. A review of feral cat eradication on islands. Conservation Biology **18**:310–319.

Pimentel, D., R. Zuniga, and D. Morrison. 2005. Update on the environmental and economic costs associated with alien-invasive species in the United States. Ecological Economics **52**:273–288.

Robertson, S. A. 2008. A review of feral cat control. Journal of Feline Medicine and Surgery **10**:366–375.

Stoddard, H. L. 1931. The bobwhite quail: its habits, preservation and increase. Charles Scribner and Sons, New York.

Stray-Pedersen, B. 1993. Toxoplasmosis in pregnancy. Baillière's Clinical Obstetrics and Gynaecology **7**:107–137.

Tenter, A. M., A. R. Heckeroth, and L. M. Weiss. 2000. *Toxoplasma gondii*: from animals to humans. International Journal for Parasitology **30**:1217–1258.

van Heezik, Y. 2010. Pussyfooting around the issue of cat predation in urban areas. Oryx **44**:153–154.

van Heezik, Y., A. Smyth, A. Adams, and J. Gordon. 2010. Do domestic cats impose an unsustainable harvest on urban bird populations? Biological Conservation **143**:121–130.

Wallace, J. L. and J. K. Levy. 2006. Population characteristics of feral cats admitted to seven trap-neuter-return programs in the United States. Journal of Feline Medicine and Surgery **8**:279–284.

Work, T. M., J. G. Massey, D. S. Lindsay, and J. P. Dubey. 2002. Toxoplasmosis in three species of native and introduced Hawaiian birds. Journal of Parasitology **88**:1040–1042.

Work, T. M., J. G. Massey, B. A. Rideout, C. H. Gardiner, D. B. Ledig, O. C. H. Kwok, and J. P. Dubey. 2000. Fatal toxoplasmosis in free-ranging endangered 'Alala from Hawaii. Journal of Wildlife Diseases **36**:205–212.

Yagmur, F., S. Yazar, H. O. Temel, and M. Cavusoglu. 2010. May *Toxoplasma gondii* increase suicide attempt–preliminary results in Turkish subjects? Forensic Science International **in press**.

Zhu, S. 2009. Psychosis may be associated with toxoplasmosis. Medical Hypotheses **73**:799–801.