Communication from Public

Name:	Travis Longcore
Date Submitted:	11/27/2020 09:09 PM
Council File No:	17-0413
Comments for Public Posting:	Please see attached for comments from California Department of Fish and Wildlife.

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
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GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

November 6, 2020

Dr. Jan Green Rebstock
City of Los Angeles
Public Works, Bureau of Engineering
Environmental Management Group
1149 S. Broadway, 6th Floor
Los Angeles, CA 90015
Jan.Green.Rebstock@lacity.org

Subject: Citywide Cat Program, Final Environmental Impact Report, SCH #2013101008, City of Los Angeles, Los Angeles County

Dear Ms. Rebstock:

The California Department of Fish and Wildlife (CDFW) has reviewed the above-referenced Final Environmental Impact Report (FEIR) for the Citywide Cat Program (Project). CDFW has also reviewed the Responses to Comments received for the draft environmental impact report (EIR).

CDFW submitted comments for the Project on October 28, 2019 and recommended measures to mitigate the Project's potential impacts on wildlife in Environmentally Sensitive Areas (ESAs); nesting birds; and sensitive vegetation communities. CDFW appreciates that the City of Los Angeles (City) reviewed and considered our comments and recommendations. Additionally, CDFW appreciates and recognizes the considerable amount of effort that has gone into the FEIR and Responses to Comments.

CDFW's Role

CDFW is California's Trustee Agency for fish and wildlife (biological) resources and holds those resources in trust by statute for all the people of the State [Fish & G. Code, §§ 711.7, subdivision (a) & 1802; Pub. Resources Code, § 21070; California Environmental Quality Act (CEQA) Guidelines, § 15386, subdivision (a)]. CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Id., § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect state fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code, including lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 *et seq*.). Likewise, to the extent implementation of the Project as proposed may result in "take", as defined by State law, of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 *et seq.*), or CESA-listed rare plant pursuant to the Native Plant Protection Act (NPPA; Fish & G. Code, §1900 *et seq.*), CDFW recommends the Project proponent obtain appropriate

authorization under the Fish and Game Code.

Project Description and Summary

Objective: The Project consists of:

1) Directly engaging in spaying and neutering, or providing funds to subsidize the spaying and neutering, of any cat in the City to prevent them from having litters of kittens, regardless of the cat's status as either owned pet, stray, or feral. This includes spay and neuter of free-roaming cats that may be returned by their caretakers or a rescue organization to where they were found, relocated to a working cat program, or adopted;
2) Changing the Los Angeles Administrative Code from "pet sterilization" to "animal sterilization" to allow feral cats or stray cats to receive funding;
3) Implementing a Trap-Neuter-Release (TNR) program;
4) Releasing spayed/neutered cats to free-roaming status, changing the permitted number of cats per-house from three to five, and requiring houses with more than three cats to keep them inside;
5) Publishing Program guidelines; and,
6) Creating a City Working Cat Program to remove cats from the streets.

Location: The Project involves implementing a TNR program that would be implemented throughout the City, comprising over 465 square-miles.

Comments and Recommendations

Comment: Potential Impacts to ESAs

Issue: Page 2-10 in the Responses to Comments states, “in the Draft EIR, guidelines for implementation of the proposed Project initially recommended a 1-mile buffer area around identified Environmentally Sensitive Areas (ESAs) in the City as places where free-roaming cats should not be released or fed.” In the FEIR, the City removed the 1-mile buffer guideline and allows cats to be released into ESAs. CDFW is concerned that the City’s revisions to *Section 2.5.2 Program Implementation Guidelines* would reduce or eliminate protection of biological resources within ESAs.

Specific impact: Trapping or feeding cats adjacent to ESAs may lure cats closer to sensitive areas and directly or indirectly impact wildlife.

Why impacts would occur: Free-roaming cats could be lured to an ESA by traps and feeding. As CDFW previously commented, cats lured to or released near ESAs could kill or injure birds and eggs; displace wildlife due to increased cat activity; and transmit diseases to wildlife. Harassment by cats during the bird-breeding season could result in the incidental loss of breeding success or otherwise lead to nest abandonment. Ground-nesting birds, such as burrowing owl, are particularly susceptible to being killed by cats.

Evidence impacts would be significant: Page 2-11 of the Response to Comments states, “the City has determined, based on the thresholds of significance established in the City of Los Angeles CEQA Thresholds Guide and other substantial evidence, that the proposed Project would not result in significant impacts on the environment […] Therefore, no mitigation is

warranted" (Program Implementation Guidelines proposed in place of mitigation measures). The City's conclusion of no significant impacts was based on the Project implementing a 1-mile buffer around ESAs. A 1-mile buffer could have reduced potential impacts because the Project would have restricted cat release and feeding within and near ESAs. With the Project's proposed changes, no buffer around ESAs would result in cats being fed, released, and trapped where there are sensitive biological resources. Without any protection for ESAs, the Project related impacts on biological resources could be significant.

Recommended potentially feasible mitigation measure(s): CDFW strongly recommends the City restore guidelines to restrict cat trapping, feeding, and release within and adjacent to ESAs. CDFW would appreciate the City's consideration of the following recommendations to exclude or limit Project-related activities from ESAs:

Recommendation #1 – Maps of ESAs: The City has prepared a map of ESAs. CDFW recommends that the City's final map of ESAs be inclusive of the following areas within the City's boundary: (1) ESAs shown in purple on page 3-54 of the FEIR revised *Figure 4.2-2a City of Los Angeles Environmentally Sensitive Areas*; (2) Sensitive biological resources areas listed on page 3-51 and 3-52 of the FEIR under *Changes to Section 4.2.2.1*; and, (3) Important Bird Areas identified by Bird Life International and Audubon Society. Additionally, CDFW's California Natural Diversity Database in Sacramento should be contacted to obtain current information on CDFW Owned and Operated Lands and Conservation Easements; State Park Refuges; State Parks; and Conservation Easements. These areas should be included in a final ESA map if not already included.

a) CDFW recommends that the City coordinate with local stakeholders and agencies to develop a final and comprehensive map of ESAs. CDFW recommends the City provide a draft map for review and commenting.

b) CDFW concurs with the City that maps of ESAs should be provided for reference in the City shelters and on the Los Angeles Animal Services (LAAS) website for downloading and printing. ESAs in certain areas such as Rancho Palos Verdes/San Pedro are difficult to visualize in one large map. Therefore, CDFW recommends the City provide maps at a smaller spatial scales and finer resolutions that could be specific to each community, district, or service area.

c) The City should also host maps and spatial data online on an open data source webservice such as the City's GeoHub. This should allow the community to determine where ESAs are located using an interactive and user-friendly web interface.

d) Maps and GIS data sources should be promoted during public education and outreach campaign for the Project.

e) CDFW recommends the City update ESA maps over the 30-year Project as needed. Land within the City could become an ESA over the Project's lifetime.

Recommendation #2 – ESA Guidelines and Buffers:

a) The City should not release, feed, or trap within any ESAs. CDFW recommends modifications to Program Implementation Guidelines pertaining to ESAs to include the underlined language; develop guidance for the language in [brackets]; and remove the

language with strikethrough:

- "No trappings of cats should occur within an ESA [unless the trapping is approved by the landowner as part of land or natural resource management activities and implemented by staff responsible for preserving natural resources within that ESA]. If a free roaming cat is trapped ~~in~~ near an ESA, ~~it is recommended that~~ the cat shall be enrolled in a WCP, based on availability, or adopted through a rescue group if possible. If these options are not available, [LAAS shall be contact for further instruction before a cat is returned to the area near the ESA]. Cats ~~should~~ shall not be released into ~~be returned to~~ the ESA under any circumstances."

- "If trapping ~~in or~~ near an ESA, traps shall avoid undisturbed areas and ~~vegetation~~ vegetated areas; traps should be placed on paved or developed areas."

b) CDFW recommends the City implement a buffer around ESAs. One buffer distance could be applied to all ESAs. Alternatively, buffers distances could be specific and modified to each ESA. Buffers should balance consistency with the Project's objectives while minimizing impacts to biological resources within ESAs. The City should not release, feed, or trap within an associated buffer area where a buffer area may be in effect. Buffers should be feasible, sensible, and enforceable. CDFW recommends coordinating with local stakeholders and agencies develop reduced ESA-specific buffers.

c) CDFW recommends the City develop guidance for individuals that could conduct trappings in ESAs possibly under specific circumstances (e.g., natural resource management). Guidance should be intended to restrict and discourage potentially unauthorized and unlawful trappings and activities in ESAs under the Project. CDFW recommends trappings in ESAs be conducted, approved, and overseen by individuals knowledgeable of sensitive biological resources within the ESA. Trappings conducted by individuals unfamiliar with sensitive biological resources within ESAs could lead to indirect impacts such as trampling of sensitive plants and disturbance of refugia, burrows, and nest sites for wildlife.

d) CDFW recommends the City develop guidance that would require coordination with LAAS before a cat trapped near an ESA is potentially released back to that location.

Recommendation #3 – Tracking: CDFW recommends the City set aside funding to develop and implement a robust tracking program for any cats potentially released near ESAs. Tracking may help document cat activity and dispersal near ESAs. This data could help the City refine Program Implementation Guidelines as they relate to ESAs over the Project's lifetime. The data may also provide value information to inform additional TNR programs in southern California and throughout the State.

Recommendation #4 – Adaptive Management: CDFW recommends that the City commit to adaptive management over the next 30 years. Data and information generated by the Project (e.g., cat tracking) should be used to revise, update, and adapt Program Implementation Guidelines such that the Project maintains consistency with Project's objectives while minimizing impacts to biological resources within ESAs.

Filing Fees

Fees are payable upon filing of the Notice of Determination by the City and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required for the underlying Project approval to be operative, vested, and final (Cal. Code Regs., tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

Conclusion

We appreciate and value your time to review CDFW's comments on the FEIR. CDFW requests an opportunity to review and comment on any response that the City has to our comments and to receive notification of any forthcoming hearing date(s) for the Project [CEQA Guidelines, § 15073(e)]. If you have any questions or comments regarding CDFW's comments on the FEIR or have additional questions or comments related to the Project, please feel free to contact Ruby Kwan-Davis, Senior Environmental Scientist (Specialist) at Ruby.Kwan-Davis@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Erinn Wilson
B6E58CFE24724F5...

Erinn Wilson
Environmental Program Manager I

Ec: CDFW
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Communication from Public

Name:	Travis Longcore
Date Submitted:	11/27/2020 09:11 PM
Council File No:	17-0413
Comments for Public Posting:	Please see attached for comments from The Urban Wildlands Group.

THE URBAN WILDLANDS GROUP, INC.
P.O. BOX 24020, LOS ANGELES, CALIFORNIA 90024-0020, TEL (310) 247-9719

November 9, 2020

Dr. Jan Green Rebstock
City of Los Angeles
Public Works, Bureau of Engineering
Environmental Management Group
1149 S. Broadway, 6th Floor, Mail Stop 939
Los Angeles, CA 90015-2213

Re: City of Los Angeles Citywide Cat Program Final Environmental Impact Report

Dear Dr. Green Rebstock:

Notwithstanding the extremely short time that has been provided between the publication of the Final Environmental Impact Report (FEIR) and the first hearing (<10 days), the substantial revisions of the FEIR compared with the Draft EIR (DEIR), and the substantially revised model underlying the FEIR, we have prepared comments for consideration by the Board of Animal Services Commissioners and for the record.

To this end, we commissioned a rapid external review of the model, based on the code, which we thank you for providing quickly, on November 2, 2020. The process timeline, however, precluded a thorough investigation. Our experts, who correctly identified a number of substantial errors in the original model for the DEIR, were able to update their assessment of the most important aspects of the revised model. Their report is attached.

The population model still contains major technical and conceptual errors that preclude its use to support the conclusion drawn in the FEIR that the proposed project would reduce the total number of free-roaming cats compared with the baseline over the next 30 years. Our experts highlighted three major deficiencies:

1. The report documenting the model contains major technical errors that diverge from the published scientific paper on which it was based. The model corrected an equation that had been wrong in that underlying paper, but then introduced two new errors that would significantly affect model outcomes. Furthermore, the text describing the model does not match the code, which undermines confidence in the modeling exercise as a whole.

2. Conceptual approach to the analysis still sets the maximum stable abundance of free-roaming cats at the current estimated number of cats, which "rigged" the model so that no matter what, the model could not find that any project increased the total number of free-

roaming cats. We provided guidance previously that would have corrected this deficiency in the model approach, but that advice was ignored. Consequently, the analysis as a whole is meaningless, since no possible alternative would increase cat numbers in the long run according to the model. This choice of approach is so fundamental to the output that you do not even have to run the model to know that the free-roaming cat number will not increase. No matter what number of releases or sterilizations is done, the model literally could never show a long-term increase in free-roaming cats. The model does not represent the real world in this regard.

3. The model "disappears" a large number of cats from the system by transferring them to the owned population and then applying an elevated death rate to owned cats. This allows the model to keep free-roaming and shelter cat numbers low, but is not biologically feasible. For example, at the equilibrium state (at beginning of the model) it predicts that half of all owned cats will die within three years. The purported mechanism of these low survival rates is, believe it or not, competition between owned cats for resources, which is clearly ridiculous. If this completely nonsensical aspect of the model were removed, it is likely that both the free-roaming and shelter populations would increase dramatically. In simple terms, the model still does not accurately describe the existing system, and hides extra cats by transferring them to the owned population and assuming that owned cats have absurdly short lifespans.

In addition to these main points, please consider the entirety of the attached report by Evans, Lepczyk, and Marra.

The FEIR makes the rather self-serving claim that the increase in the limit on the number of owned cats will not result in an appreciable increase in the number of owned cats in the City. The reason this is self-serving is that an increase in owned cats would result in an increase in lost and abandoned cats that would join the free-roaming cat population that the City so desperately would like to argue will decrease under the proposed program. The FEIR argues that there is no need to account for any additional cats because there is no way to know how many people would actually get new cats, and that the de facto mitigation measures that have been included in the FEIR (microchipping and that households with more than three cats must keep all cats indoors) would reduce any impacts of additional cats in the owned population.

We must note that the City's position in the FEIR diverges significantly from the City's repeatedly asserted position on the increase in the limit for owned cats. Councilmembers argued that the increase in the cat limit was absolutely necessary to decrease euthanasia at shelters and that the increased limit would result in many more cats being adopted out to homes.

Frist, in a motion on June 6, 2010 (CF 10-0982):

> However, there is one barrier that prevents animal adoptions – the City's limit on the number of animals a person may own. Currently, under the City's Municipal Code, a City resident may only own and register up to three cats and/or dogs. For a City resident to have more than three cats and/or dogs the resident must qualify as a kennel and have a kennel permit. Clearly, this limitation is preventing stray cats and dogs from finding homes and potentially putting them at risk to be euthanized.

> Raising the number of dogs and/or cats that a City resident may have from three to five would have several benefits. First, it would provide stray animals with homes and keep them from being euthanized in City shelters. Second, it could raise revenue for the City through additional animal registration fees. Therefore, appropriate steps should be taken to raise the number of dogs and/or cats that a City resident may own from three to five.

Second, in a motion on November 8, 2013 (CF 13-1513):

> One way to beneficially lower the number of cats being euthanized in our City's shelters is to increase the number of cats that are adopted out of the shelters. The most likely people to adopt additional cats are those who already have cats in their homes. This is why it is so important for the City to raise the number of cats a resident may own from three to five. Therefore, appropriate steps must be taken to raise the number of cats that a City resident may own from three to five.

In response to this motion, the Department of Animal Services on April 16, 2015 went so far as to propose that residents be able to keep up to 20 cats, suggesting that there would be significant demand for additional cats among Los Angeles residents.[1] The Department concluded:

> Based on evidence supplied by San Diego and Santa Monica, the Department believes that a limited raising of the cat limit would not lead to increased hoarding and would allow the City to adopt out or place more cats in temporary foster care to save cats' lives due to space constraints in shelters or rescues.

The Personnel and Animal Welfare Committee then wrote on September 2, 2015 (CF 15-1315):

> There is, however, one barrier that prevents cat adoptions: the City's limit on the number of cats a person may own. Currently, LAMC Section 53.00 et seq. prohibits a resident from owning and registering more than three cats at any one time. For a City resident to have more than three cats, the resident must qualify as a kennel and have a kennel permit. Clearly, this limitation is preventing stray cats and those cats in shelters from finding homes and potentially putting them at risk of euthanization.
>
> One way to beneficially lower the number of cats being euthanized in our City's shelters is to increase the number of cats that are adopted out of the shelters. The people most likely to adopt additional cats are those who already have cats in their homes. This is why it is so important for the City to raise the number of cats a resident may own from three to five. Therefore, appropriate steps must be taken to raise the number of cats that a City resident may own from three to five. After consideration and having provided an opportunity for public comment, the Committee moved to continue this matter pending the DAS submitted a report in response.

Based on these previous statements by the City Council and the Department of Animal Services, they must believe that increasing the cat limit will substantially decrease euthanasia at City shelters. It is therefore unsupported by evidence, and in fact contradicted by evidence, for the FEIR to make the assumption that the increase in the cat limit would not increase the number of owned cats in the City. Increased ownership in response to the increased cat limit cannot be ignored in the model, even if the impacts from those cats might be minimized through the imposition of mitigation measures such as microchipping and requiring cats to be kept indoors. Rather, if there are additional cats that could have a significant adverse impact as they contribute

[1] https://clkrep.lacity.org/onlinedocs/2013/13-1513_rpt_DAS_04-17-2015.pdf

to the stray and feral cat populations then the EIR could impose mitigations that reduce those impacts. The FEIR, however, does nothing of the sort and simply dismisses the issue with a proverbial wave of the hand.

Although the FEIR answers some important questions that were raised by the original program description and the DEIR, which we appreciate, it remains deficient as an informational document. The modeling approach provides no scientific or statistically valid means to assess the outcome of the program. The EIR must be recirculated as a draft document for comment once the newly introduced errors and methodological deficiencies in the model are corrected.

Sincerely,

Travis Longcore, Ph.D., CSE, GISP
Science Director

cc: Board of Animal Services Commissioners

Cat Population Modeling to Inform Environmental Impact Analysis

A Review of Methods and Results Presented in the City of Los Angeles Citywide Cat Program Final Environmental Impact Report

Brian S. Evans
Smithsonian Conservation Biology Institute

Christopher A. Lepczyk
Professor of Wildlife Biology and Conservation, Auburn University

Peter P. Marra
Laudato Si' Professor in Biology and the Environment, Georgetown University

November 9, 2020

Dr. Brian S. Evans has been a researcher at the Migratory Bird Center at the Smithsonian Conservation Biology Institute since 2007, specializing in environment-bird interactions with a focus on the landscape ecology of Greater Washington, D.C. His research integrates field work, citizen science, ecological time-series data, and analytic techniques. He received a Ph.D. in quantitative ecology from the University of North Carolina in 2015. He has been using R, the programming language used to develop the population model in the DEIR, for over a decade and has been teaching classes and workshops in R and data management since 2012 for the University of North Carolina, George Mason University and the Smithsonian Institution.

Dr. Christopher A. Lepczyk is an ecologist and conservation biologist in the School of Forestry and Wildlife Sciences at Auburn University, in Alabama. He teaches wildlife ecology, conservation, and management, and landscape ecology and is the Associate Editor at the journal *PLoS ONE* who handled the publication of the population model for cats that is the basis for the population model in the DEIR. He is also an Associate Editor for the journals *Landscape and Urban Planning, Biological Invasions*, and *Ecosphere*. His research focuses on invasive and endangered species, urban ecology, wildlife ecology, and landscape ecology.

Dr. Peter P. Marra is the Director of the Georgetown Environment Initiative, *Laudato Si'* Professor in Biology and the Environment, and Professor in the McCourt School of Public Policy at Georgetown University. He holds a Ph.D. from Dartmouth College and has authored over 225 papers published in journals such as *Science*, *Nature* and *Conservation Biology*. He is a senior scientist emeritus and the former director of the Smithsonian Migratory Bird Center. His research in avian conservation science has three broad themes, including the ecology of migratory birds, urban ecosystem ecology, and disease ecology.

Affiliations and biographies are presented to establish credentials and identification of the authors as experts and do not represent review or action by their employers.

1 Executive Summary

The report reviews the technical and scientific merit of the population model that provides the basis for the impact analysis in the Final Environmental Impact Report (FEIR) for the City of Los Angeles Citywide Cat Program. Based on our review of the original model presented in the Draft Environmental Impact Report (DEIR) and the new model presented in the FEIR, and our review and inspection of the underlying code for both models, we can make the following observations. These observations are in plain English for the benefit of decisionmakers and attorneys who will need to review and consider them.

1. The text describing the FEIR model contains major errors that do not match the published paper on which the model is built. The text also does not appear to match the code used to implement the model. These inconsistencies severely undermine the credibility of the model.
2. The model is "rigged" so that it could never show an increase in free-roaming cats, no matter what project was proposed. We previously provided guidance in comments on the DEIR on how to fix this problem, but it was ignored.
3. The model "disappears" cats by transferring them from shelters and free-roaming status to the owned population and then assuming owned cats die at high rates (half of all owned cats throughout the City die at <3 years old in the model).

Based on these observations, and other evidence reported below, we conclude that the model provides no scientific or statistical basis to conclude that the proposed project will reduce the number of free-roaming cats in the City of Los Angeles.

2 Introduction

At the request of The Urban Wildlands Group, we previously reviewed the population modeling approach used in the Draft Environmental Impact Report for the City of Los Angeles Citywide Cat Program. In this updated report, we assess the new model that was presented in the Final Environmental Impact Report.

This review is focused solely on the population model presented in Updated Appendix J of the FEIR. The purpose of the review is to assess the accuracy and suitability of the model to predict the future number of free-roaming cats resulting from the adoption of the Citywide Cat Program.

The new model presented in the FEIR is substantially different from the model presented in the DEIR and a full analysis was not possible in the <14 days between its release and when it is to be considered by the Animal Services Commission.

As a matter of approach, the model continues to present a single output as if it were the truth, when in fact models of this sort that have such large uncertainty around the input values must present a range of possible outcomes. The new model introduces a wholly unrealistic new approach to force the owned cat population to remain stable in the model which in essence amounts to killing off excess cats in the owned subpopulation so that they do not have to be

shown as being released as free-roaming cats. Because the model keeps the owned population from growing uncontrollably by "killing off" the additional cats (in the model), it cannot be seen as a realistic depiction of the population dynamics and certainly cannot be relied upon to reach a conclusion of whether there will be fewer free-roaming cats during or at the end of the project period. We elaborate on this assessment and illustrate other substantial flaws in the sections that follow.

3 Appropriateness of Modeling Technique

Based on our extensive experience in conservation decisionmaking, the revised model in the FEIR still does not meet basic scientific standards for a mathematical population model to support natural resource impacts assessment. Although the City's consultants attempted to resolve the more glaring errors in the mechanics of the model, they did not address key conceptual errors.

3.1 Use of Carrying Capacity Model Precludes More Free-roaming Cats Under Any Scenario

The model assumes that the population of free-roaming cats is at the carrying capacity of the environment and cannot rise above that level without triggering a die-off of cats to bring it back to that level. In population ecology, carrying capacity describes the number of individuals that can be supported in a given environment – as populations grow towards carrying capacity, their growth rate is reduced by resource limitations that constrain vital rates (e.g., birth and death rates; Begon et al. 2006). The FEIR cites to the papers by Lohr et al. (2013) and Gibson et al. (2002) as support for keeping carrying capacity level. The Gibson et al. (2002) paper contains no data to support application of the carrying capacity concept other than a generalized assertion without supporting evidence. Lohr et al. (2013) make the general statement that cats are frequently at carrying capacity as well, but, notably, they do not then set the carrying capacity at the current population when building a population model. The authors of the City's model ignored the approach taken by Lohr et al (2013):

> Because populations of feral cats are frequently at carrying capacity (Gibson et al. 2002), we set the carrying capacity for the super colony at 25,000 individuals, which is greater than the initial abundance of colony cats. Because colony cats receive supplemental food and veterinary care, the true carrying capacity for colony cats cannot be estimated without measuring the maximum level of food and veterinary care caretakers are prepared to supply (Schmidt et al. 2009).

Give that carrying capacity is a function of resource availability, the City's application of carrying capacity in this model is misapplied if colonies of free-roaming cats are supplementally fed. Providing provisional food reduces starvation pressure, increases survival rates, and thus will increase the equilibrium size of the population (Oro et al. 2013). The City has claimed, without evidence, that the program would not increase feeding. But claiming it will not increase feeding, while encouraging trapping and returning, flies in the face of logic. The appropriate approach, especially given the program description and intent on the part of the City for free-roaming care to be well cared for, is to set the carrying capacity well above the current

estimated population. Since the City is following Lohr et al. (2013) for its guidance on this issue, carrying capacity should be set 50% higher than the estimated population.

It is also important to distinguish between the situations described in the Lohr et al. and Gibson et al. papers, which reference specific, localized cat colonies, and the model, which describes the whole geographic extent of the City of Los Angeles. They are two entirely different situations. It is highly unlikely that free-roaming cats are resource limited across the entire City, even without additional feeding arising from the program.

Decisionmakers and regulators should understand that if the carrying capacity is set at the current estimated population of free-roaming cats, then the entire analysis has been set up such that it is impossible for the model to show an increase in free-roaming cats over the long run. The assumption the model uses means that releasing cats from shelters back to free-roaming status that otherwise would not be released *could never* result in a long-term increase in free-roaming cats because the additional cats would push the population over carrying capacity and the death rate of outdoor cats would increase until their numbers went back to carrying capacity. So long as free-roaming cat numbers are assumed to be limited, then the proposed project could never be shown to have an adverse impact by increasing numbers. The outcome of the EIR is pre-ordained by making this incorrect assumption. The model is, in plain language, "rigged" so that the only possible outcomes are a stable population or a decline.

Consequently, the model as it is currently formulated would not show an increase in free-roaming cats even if the spay-neuter rate were reduced. The model simply assumes that if additional cats are added to the free-roaming population, their death rate goes up and the total number returns to carrying capacity.

3.2 Use of Carrying Capacity to Constrain Owned Cat Population Implies High Death Rate for Owned Cats

The new model introduces carrying capacity to the owned cat population (J.4.5, page 21). At its most basic, this means that the model assumes that when new cats are transitioned into the owned population, either through adopting stray cats or adopting from a shelter, that the survival rate across all owned cats decreases. The model sends a certain number of cats to the owned population each year, based on assumed adoption rates. The model does not limit the number sent to the owned population based on the estimated number of homes available. This would be the correct approach. Rather, it sends the set proportion to the owned population and then assumes that if they exceed that year's estimate of the cat population carrying capacity the death rate of all owned cats goes up so that the owned cat population goes back toward carrying capacity.

The approach to modeling owned cat numbers misuses the very concept of a carrying capacity and has no basis in biological reality. Cats in the owned population are not competing for resources and those resources are not finite as assumed by the model. A person adopting an additional cat in one part of the city does not result in owned cats in other parts of the city

having less to eat. Yet, this is exactly what the model says will happen. It is, quite frankly, not credible.

To put it succinctly, to keep the owned population from growing out of control, the model kills off excess owned cats. This is easily demonstrated with the model output. The model states that adult owned cats exhibit a density-independent annual survival rate of 91.4% (S_0, Table J-2), and have density-dependent exponent (x) of -0.4685815 (page 21). The annual survival of owned cats at equilibrium (year 0 of the model) can be calculated by applying Equation 4 (page 17)[1], to yield 57.4%. Put another way, in year 0 of the model, the model is assuming that every owned cat in the City has a 57.4% chance of dying. If this were the case, then the probability that an owned cat would survive for 5 years would be only about 6% (**Figure 1**).

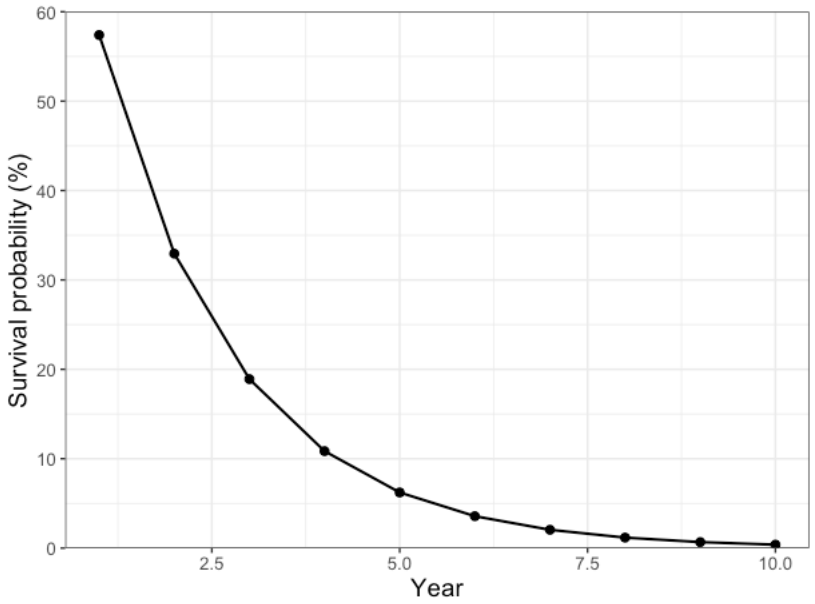


Figure 1. Survival probability of an owned cat based on the death rate of at year 0 of the model.

Because the population of owned cats is assumed to be at equilibrium at year 0 (p. 20), survival is biased unrealistically low, which reduces the size of the owned population and allows for a greater rate of transition from other subpopulations (Equation 5, p. 26). Essentially, the City is "disappearing" additional cats by sending them to the owned population and then assuming they die quickly there.

It is telling that, in the current report, the City directly contradicts their use of a carrying capacity in their model. In fact, they are correct in their stated reasoning that the owned cat subpopulation should be treated as density independent (J.4.4, page 17):

[1] Equation 4 is $s(n) = s_0 \cdot exp(x\frac{n}{n_{eq}})$.

> Following Flockhart (Flockhart and Coe, 2018), "Survival of owned cats was considered density- independent as we reasoned that owned cats neither compete nor are limited by resource availability such as food." The model also does not include an equilibrium abundance for shelter cats because nearly every cat impounded by LAAS is either adopted or dies within 1 year of its intake date, according to records from LAAS (see Section J.6.2, Model Parameters Informed by LAAS Data for the Shelter Subpopulation).

An appropriate modeling approach would have been to limit the number of cats that can transition into the owned population and assume that the excess remained either as strays or in shelters. But the model does not do this; it sends these cats to the owned population where it assumes that the death rate goes up for all owned cats and pushes the population numbers back down. Because this is not realistic, the model cannot account for where all the cats that are adopted out of the shelters and the stray cat populations will go. The model therefore does not accurately describe the dynamics of these populations and therefore its main conclusion, that the free-roaming cat population will decrease, is not reliable and, in fact, that the model results are meaningless so long as they use an artificially high death rate for owned cats to kill off cats they transfer out of the stray and shelter populations.

3.3 Change in Cat Limit Is Not Reasonably Addressed

The cat population model was not adjusted to account for the increase in owned cats that would result from increasing the cat limit per household from 3 to 5. The rationale for this decision is not based on solid evidence. The model itself assumes that many more cats transition to the owned population under the project scenario than are currently adopted, but it erroneously deals with them by assuming that owned cat survival declines precipitously. The purpose of increasing the owned cat limit stated in the EIR is to reduce euthanasia by providing more homes for adoptable cats. If this is the case, it makes no logical sense to assume that the result of the policy is that the owned population does not increase at all, as done in the FEIR. If it will not increase the number of owned cats, then it does not need to be included as a program element. If it will increase the number of owned cats, then it needs to be included in the model.

The arguments presented against including an increase in the possible maximum number of owned cats are spurious. Cats move from the owned population to the stray population through loss and abandonment and to the shelter population through relinquishment. None of these rates would be influenced appreciably by the unenforceable recommendation that additional cats be kept indoors or be microchipped. Abandonment and relinquishment have no relationship to indoor/outdoor status, and loss is more likely for an indoor-only cat that escapes than it is for an indoor/outdoor cat.

Like many other elements in the model, the appropriate approach would be to incorporate a reasonable range of values to describe the degree to which the owned cat population would increase under the new limits and report that range of values. Accurately accounting for this element of the would only be possible once the fallacious assumption of carrying capacity for

the owned population is corrected but putting a limit on the number of cats that can be transferred into the owned population.

3.4 Lack of Random Component

The model is still deterministic, meaning that it assumes that all the dozens of inputs to the model will stay the same and do not vary randomly. Multiple model runs with random variation in the input variables is necessary for decisionmakers to have any confidence in the model results, even without allowing for there having been any error in assumptions about those inputs. As it stands, the City cannot make any statement about the range of outcomes that can be predicted to occur under the project vs no project scenarios with any statistical confidence.

3.5 Sensitivity Analysis

In the revised model report, the authors provide some assessment of the sensitivity of the model to variation in the assumptions used to create the model. The results are not evaluated or discussed in the report and the range of variation assessed is too small. The revision includes a table showing the effect on the model of a 5% variation in each model parameter. However, as the authors themselves admit, the actual variation in certainty about the parameters is much higher. For example, the revised model already admits a 50% error in the equilibrium abundance of free-roaming cats, based on variation in estimates of the number of free-roaming cats in other urban contexts. They then note the high variation in those estimates, and conclude, "This extreme variation and the lack of data specific to Los Angeles itself introduce significant uncertainty into the absolute estimates of population size under the two scenarios." Most of the other parameters are similarly based on studies with a substantial degree of variation, far more than 5%.

From a quantitative perspective, the city inappropriately summarizes previous study findings to define parameters for their models. Given that the parameter estimates gathered from other studies may represent vastly different environmental contexts, at a bare minimum each parameter estimate should be evaluated in turn rather than calculating the average value across studies. The modelers would then be able to evaluate the efficacy of their proposed project by comparing modeling outcomes across all potential parameter values (e.g., x% of outcomes showed a decrease in the free-roaming cat population). Optimally, incorporating the error about each study's parameter estimates would also be incorporated into the model design as otherwise modeling outcomes mask underlying error distributions.

4 Model Evaluation

The City provided the R code for the new model presented in the FEIR. We again reviewed the provided code and model output, as written, and compared the results with those that were presented in the DEIR. We discovered that the text of the model did not match the code, and neither matched the only peer-reviewed paper on which the model is based (Flockhart and Coe 2018).

4.1 EIR Text Contains Several Technical Mistakes and Omissions

The text of Updated Appendix J contains several mistakes that undermine confidence in the model. There are several instances in which the written model described in Appendix J and code diverge and the additional instances in which the described model diverges from the reference material. In the previous version we found many technical mistakes that were fixed, but without explanation in the current version]. These may be considered typos, but their inclusion in the text is highly misleading.

Crucially, errors in the Updated Appendix J are fundamental to the very construction of the applied model because they determine population growth rates and the transition rates between subpopulations. If the formulas that make up the model are incorrect, the model results cannot be relied upon to make accurate prediction. For example, Equation 10 on page 33, which determines the growth rate of subpopulations, contains two errors that deviate from the model of Flockhart and Coe, upon which it is based.

$$\mathbf{B}_i = \mathbf{S}_i \times \mathbf{D}_i = \begin{bmatrix} \sqrt{s_J} f_J (1 - p_J) & \sqrt{s_A} f_A (1 - p_{AJ}) & 0 & 0 \\ s_J (1 - p_{JA}) & s_A (1 - p_A) & 0 & 0 \\ \sqrt{s_J} f_J p_J & \sqrt{s_A} f_A p_{AJ} & 0 & 0 \\ s_J p_{JA} & s_A p_A & s_{Jn} & s_{An} \end{bmatrix}.$$

For the two component formulas in yellow, there are two major errors that would lead to vastly different population outcomes. If the authors are following the model of Flockhart and Coe (2018, Equation 7 and Figure 1A), then formula $S_J(1 - P_A)$ should be $S_J(1 - P_J)$ and formula $S_J P_A$ should be $S_J P_j$. This is because, in a given time step, the formulas describe whether the offspring of an intact juvenile will be spayed or neutered before becoming adult. The authors do not explain why they modified Flockhart and Coe's equation in this model. Given that the City is directly applying Flockhart and Coe's model to the current application, deviation from this peer-reviewed model requires explanation.

Equation 12 describes the transition of cats between subpopulations. The transition probabilities listed in Equation 12 were wrong in the DEIR model and contain additional errors in the FEIR model.

$$\mathbf{M}_k = \begin{bmatrix} 1 - p_{F\to S} - p_{F\to H} & p_{S\to F} & 0 & 0 \\ 0 & 1 - p_{S\to F} - p_{S\to H} - p_{S\to O} & p_{H\to S} & p_{O\to S} \\ p_{F\to H} & p_{S\to H} & 1 - p_{H\to F} - p_{H\to S} - p_{H\to O} & p_{O\to H} \\ 0 & p_{S\to O} & p_{H\to O} & 1 - p_{O\to S} - p_{O-H} \end{bmatrix} \quad \text{Equation 12}$$

The columns and rows represent each subpopulation and the values represent transition probabilities between them. Columns are the proportions from the subpopulation and rows to the subpopulation. In order, each column/row represents feral, stray, shelter and owned. These transitions should match the arrows between boxes in Figure J-2.

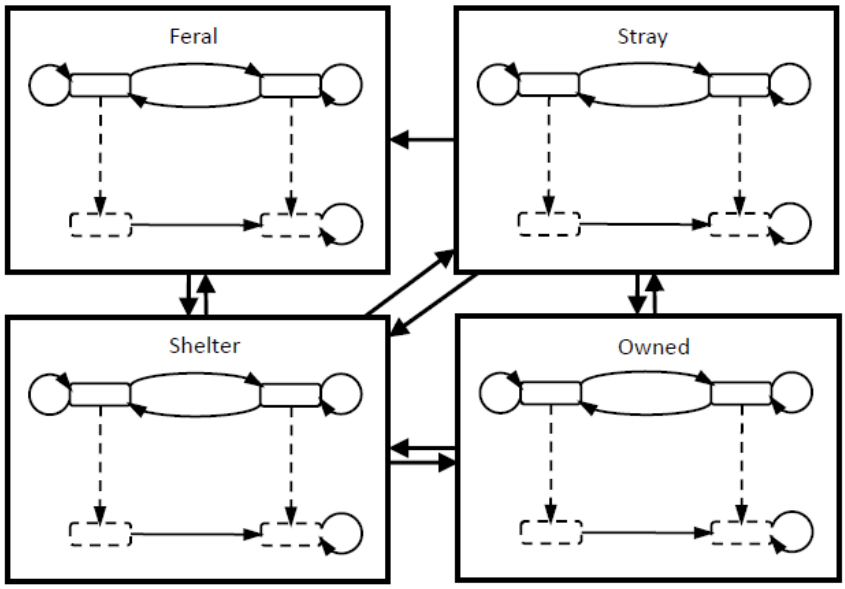


Figure J-2. Schematic of Subpopulation Interactions between the Four Subpopulations in the Model

Comparing Equation 12 with Figure J-2, one can see that they do not match. Figure J-2 does not show a transition from feral to stray, whereas their Equation 12 does (indicated in red):

$$\mathbf{M}_k = \begin{bmatrix} 1 - p_{F\to S} - p_{F\to H} & p_{S\to F} & 0 & 0 \\ 0 & 1 - p_{S\to F} - p_{S\to H} - p_{S\to O} & p_{H\to S} & p_{O\to S} \\ p_{F\to H} & p_{S\to H} & 1 - p_{H\to F} - p_{H\to S} - p_{H\to O} & p_{O\to H} \\ 0 & p_{S\to O} & p_{H\to O} & 1 - p_{O\to S} - p_{O-H} \end{bmatrix}$$ Equation 12

The cell in red shows the proportion of the feral subpopulation that remains feral. It includes the transition from feral to shelter ($P_{F\to H}$) and feral to stray ($P_{F\to S}$). While that does not match Figure J-2, there is a larger problem here. If the transition from feral to feral is defined as $1 - P_{F\to S} - P_{F\to H}$ then the value in column 1, row two should be $P_{F\to S}$. In other words, according to Equation 12, cats are being subtracted each step from the feral population to go into the stray population but not actually being added to the stray population.

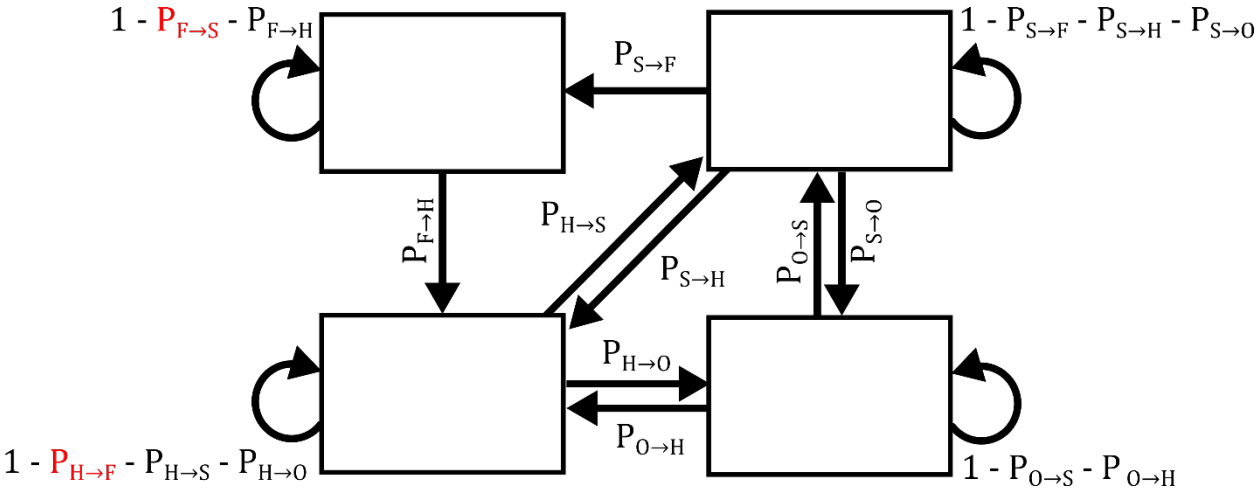
Likewise, J-2 shows that there is a chance of a cat transitioning from the shelter to feral subpopulations but Equation 12 says that this transition proportion is 0 (red box):

$$\mathbf{M}_k = \begin{bmatrix} 1 - p_{F\to S} - p_{F\to H} & p_{S\to F} & 0 & 0 \\ 0 & 1 - p_{S\to F} - p_{S\to H} - p_{S\to O} & p_{H\to S} & p_{O\to S} \\ p_{F\to H} & p_{S\to H} & 1 - p_{H\to F} - p_{H\to S} - p_{H\to O} & p_{O\to H} \\ 0 & p_{S\to O} & p_{H\to O} & 1 - p_{O\to S} - p_{O-H} \end{bmatrix}$$ Equation 12

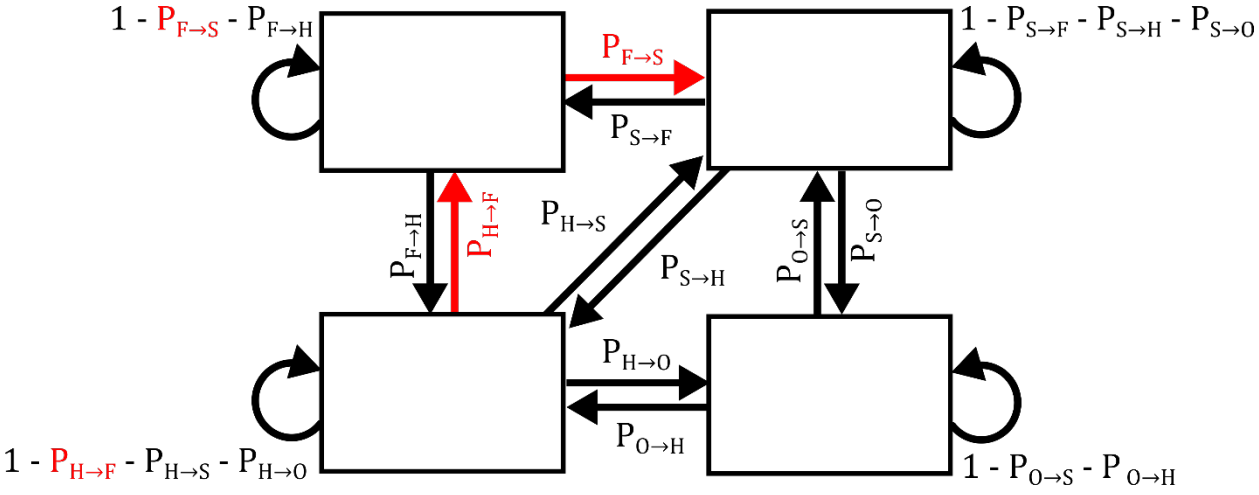
Equation 12 does show cats transitioning out from the shelter to the feral population but does not show those cats being added to the feral population:

$$\mathbf{M}_k = \begin{bmatrix} 1 - p_{F\to S} - p_{F\to H} & p_{S\to F} & 0 & 0 \\ 0 & 1 - p_{S\to F} - p_{S\to H} - p_{S\to O} & p_{H\to S} & p_{O\to S} \\ p_{F\to H} & p_{S\to H} & 1 - p_{H\to F} - p_{H\to S} - p_{H\to O} & p_{O\to H} \\ 0 & p_{S\to O} & p_{H\to O} & 1 - p_{O\to S} - p_{O\to H} \end{bmatrix} \quad \text{Equation 12}$$

Similar to the error in the transition from the feral to shelter subpopulations, as written this formula would remove cats transitioning from the shelter to feral subpopulations ($1 - P_{H\to F} - P_{H\to F} - P_{H\to O}$) without adding them to the feral subpopulation ($P_{H\to F}$). Diagrammatically, the transition matrix for Equation 12 looks like this (errors in red):

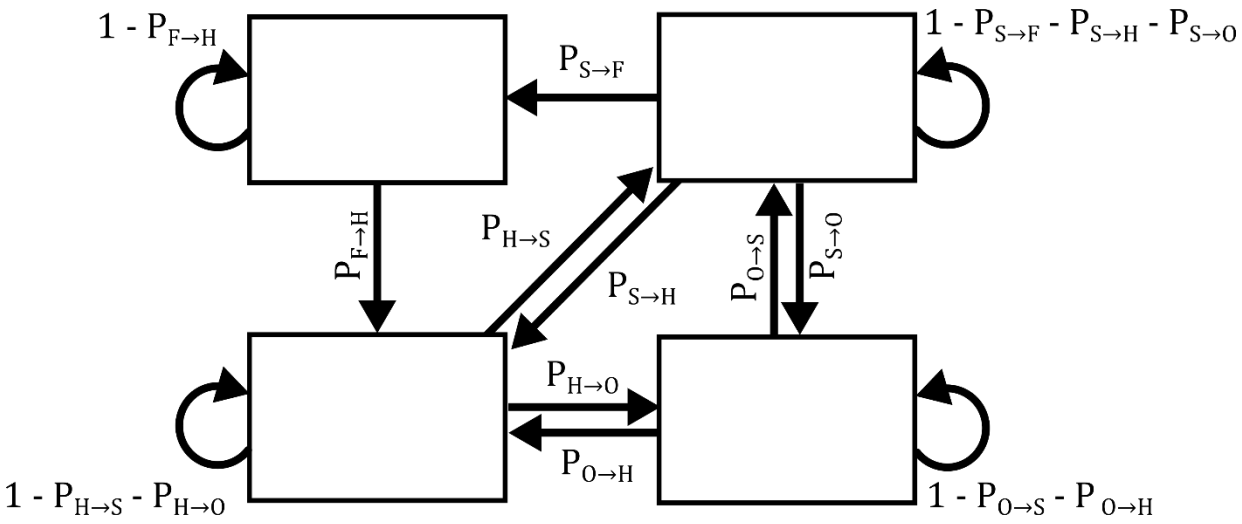


Because $P_{F\to S}$ is reducing the size of the feral population in $1 - P_{F\to S} - P_{F\to H}$ and because $P_{H\to F}$ is reducing the size of the shelter population in $1 - P_{H\to F} - P_{H\to S} - P_{H\to O}$, this would be correctly written as (corrections in red):



In short, according to Equation 12, cats are being subtracted from the feral population without being added anywhere else. If the statistical model is consistent with authors' reporting in the Updated Appendix J, cats are being removed from the population due to a mathematical error.

Conversely, if the intent of the model is to assume that $P_{F\to S}$ and $P_{H\to F}$ is 0, the proper diagram would be as follows (but this does not match Equation 12 or Figure J-2):



Note: Footnote 15 in the Updated Appendix J is in error, and almost certainly is a typographic error. It refers to the transition from stray to feral, but is attached to text that refers to the transition from feral to stray.

Finally, the model transitions more shelter cats to the feral subpopulation than what is suggested by the text. The text indicates that cats coming from the shelter go back into the stray and feral populations in proportion to the intakes from these two populations (pages 29 and 30) and estimates the proportion of feral intakes as a function of cats held back from the adoption floor (5.6%). However, the code indicates that **all** juvenile cats in the shelter subpopulation (that originated in both the stray and feral subpopulations) that are not adopted go into the feral subpopulation. Given the deviation between the code and text, and especially in light of the fact that kittens make up a large proportion of intakes (61% LAAS data, proportion of known age intakes), further the description and clarification of the author's methods is necessary.

4.2 Model Outputs Are Not Reasonable

The model is constructed by defining the transition probabilities between subpopulations (feral, stray, shelter, and owned cats) and the demography (e.g., fecundity and survival) within each subpopulation.

The model does not behave in ways that suggest it is a reasonable approximation for reality. The owned subpopulation of cats is predicted to decline over the 30-year project period, from the initiation population of ~660,000 down to less than 650,000, even as the cat limit for owned cats will have been increased (**Figure 2**).

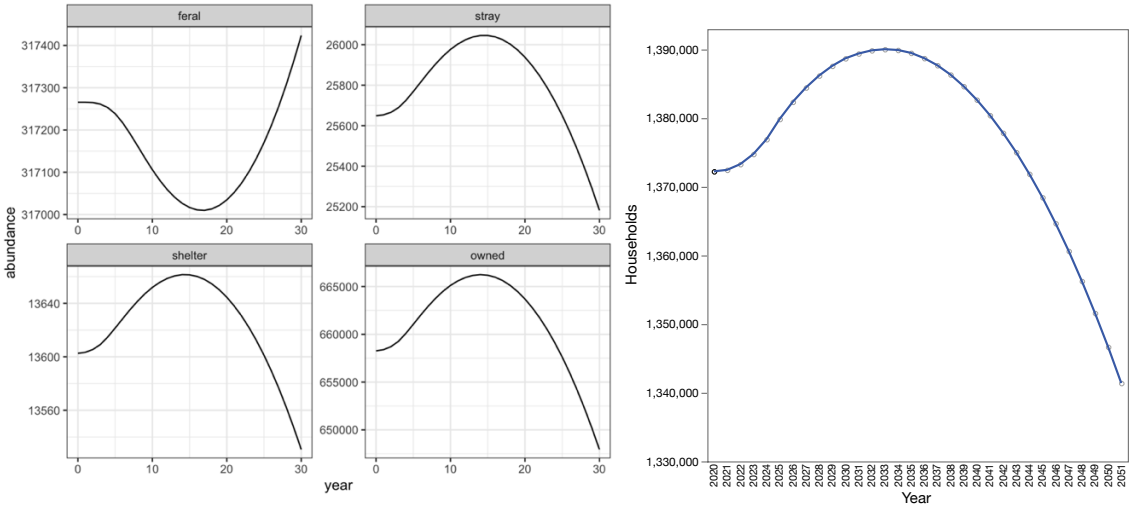


Figure 2. Left: Subpopulation sizes of feral, free-roaming, shelter, and owned cats across the 30-year horizon of the project, as predicted using the unaltered code of the authors of the FEIR. Right: Projection of number of households in City of Los Angeles during project period. The model tracks the population trajectory exactly for stray, shelter, and owned populations because of unreasonable assumptions in the model.

This behavior of the model is likely attributable to a predicted decline in the number of households in Los Angeles County over the next 30 years, but it contradicts those at the City of Los Angeles expecting that an increase in the cat limit will result in more adoptions of cats. The behavior of the free-roaming cat numbers in the project scenario do not make much sense either. The model predicts that the free-roaming cat numbers will decline by 40,000 in just five years, and then only decline slightly over the next 25 years (**Figure 3**).

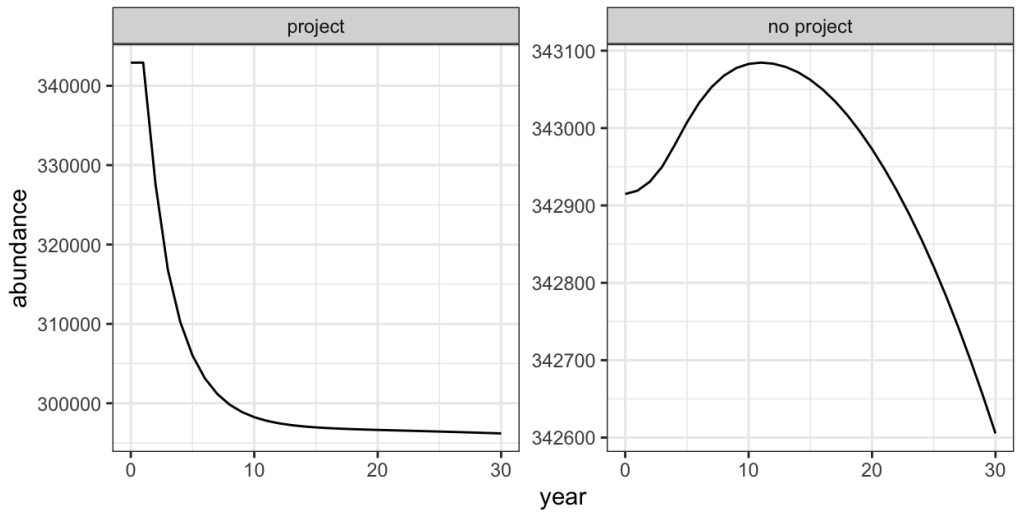


Figure 3. Behavior of free-roaming cat population under project and no project scenarios. The decline in free-roaming cats over the next 30 years in the no project scenario results from a projected decline in the number of households in Los Angeles over that period, which then is used to project a lower carrying capacity for free-roaming cats.

5 Discussion

The revisions to the model do not increase its scientific or statistical reliability. To be useful to assess environmental impacts or to inform decisionmaking in natural resources, mathematical models need to have a few fundamental characteristics.

First, they must be biologically realistic, and if they are not realistic, a well-reasoned explanation for simplification must be provided. This model is not biologically realistic in that it limits the number of owned cats by assuming that they simply die faster when there are more of them. This attribute alone disqualifies the model from further usefulness for the current situation because it allows cats to disappear from the model in a way that does not happen in reality and the whole point of the modeling exercise is to figure out the fate of cats in the City of Los Angeles.

Second, a model must perform reasonably. Two results show this is not the case with the FEIR model.

The trends for owned, shelter, and stray cats are so tightly tied to the projected number of households that they appear to have little to do with the functioning of the model. This results from the unreasonable assumptions that have been made about carrying capacity for both the free-roaming and owned populations.

Then, the model projects that the cumulative rate of sterilization for free-roaming cats will be around 11% (**Figure 4**).

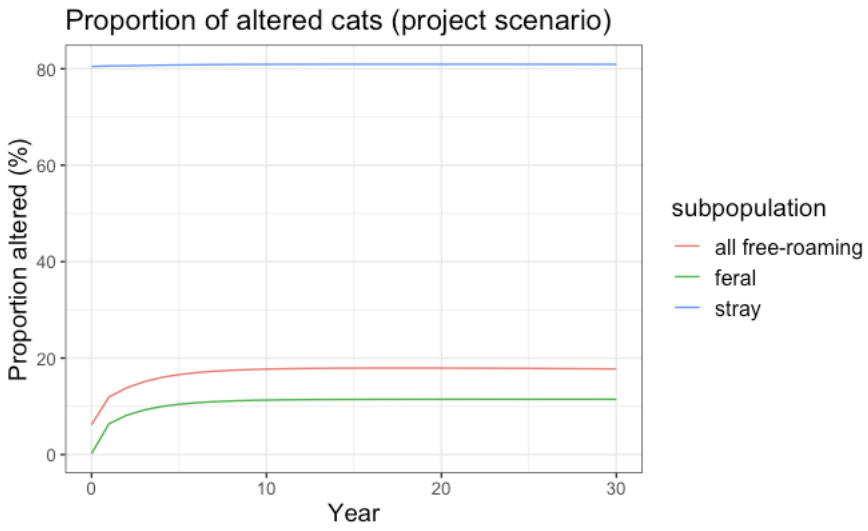


Figure 4. Proportion of free-roaming cat assumed to be altered under project scenario. Extracted from the author's unaltered code.

The model projects that 10% of feral cats will be sterilized in 5 years and the next 25 years will only increase that proportion by 1.5 percentage points. For stray and feral cats the cumulative sterilization proportion would be 17.8% after 30 years. These rates are extraordinarily high relative to other long-term TNR programs that have only achieved <5% sterilization rates (Foley et al. 2005). Furthermore, the proportion of free-roaming cats that would need to be sterilized to show population declines according to that study would be 71–94% (Foley et al. 2005). Other mathematical models indicate that far greater levels of sterilization would be needed than the level predicted by the City (Andersen et al. 2004, Foley et al. 2005, Schmidt et al. 2009). The discrepancy between the City's output and other studies must be considered. Unlike in politics, it is not sufficient from a scientific perspective to simply claim one's result is correct, but rather contradictory results must be reconciled and claims that contradict previous findings require greater scrutiny. Here, the City does not attempt to explain how its cumulative sterilization rate results in a population decline, while other studies indicate treatment levels of over 50% are necessary to achieve the same thing. We suspect it is because the model shunts excess cats into the owned population where they are killed by the model rather than 11.5% being a sufficient sterilization rate to reduce population growth of feral cats.

Third, the model needs to provide some estimates of confidence or statistical certainty. The current results presented by the City relies both on the model being technically correct (it isn't) but also on each one of the constituent assumptions being correctly estimated. We suggested ways in which the uncertainty could be incorporated into model development, but the City has chosen to ignore those recommendations. As a result, the City cannot make any claim about the level of certainty of its estimates. The City's approach simply does not meet basic scientific standards.

We are forced to conclude that *there can be no scientific or statistical confidence that the outcomes of this model will reflect the biological outcomes of this management plan*.

We are unconvinced by the City's rationalization about the quality of the model:

> The results described in this modeling appendix are subject to limitations that apply to any model. Models are tools used to approximate and estimate real-world conditions that are otherwise impossible to calculate or determine. All models must to some degree simplify reality in order to facilitate practical estimations. Furthermore, models require accurate input values in order to calculate or estimate accurate predictions. Wherever possible, best available, peer-reviewed, empirical data were used to develop model parameter values. Unfortunately, the only study area– specific empirical data available at the time of conducting these analyses were the LAAS Chameleon data for cats admitted at LAAS Centers.

Notwithstanding their efforts, the model does not follow accepted scientific practices and is inconsistent with other well-established results, such as the percent of cats needed to be sterilized to reduce population growth. That number is well-known to most people now, because it is roughly the same as the proportion of a population that must be immune to a disease for the disease to stop spreading. Just as "herd immunity" will not come for COVID-19 without immeasurable death and suffering to reach 60%+ people having had the disease, the City cannot blithely claim that a 11% total cumulative sterilization level for free-roaming cats will result in a decreasing population, unless it provides extraordinarily compelling evidence. It has not.

One of us (BSE), early in his career, worked evaluating environmental white papers produced by industry-backed groups. The papers that he evaluated were usually written to downplay anthropogenic climate change or gloss over an industry's contributions to air or water pollution. All had one key similarity – they were not science but rather selected facts, provided references to scientific literature, and constructed compelling arguments that gave the appearance of science. Because these works can be so convincing, especially if they support a person's interests and values, we believe that they represent the darkest corner of anti-science denialism (see Loss et al. 2018). This type of denialism is exemplified in the following passage in the model description (Appendix J.12, page 30):

> Because of the limited availability of empirical data, the scientific literature on domestic cat population dynamics was comprehensively reviewed (see Appendix I, Systematic Literature Review Methods) and supplemented with expert input. Despite the best attempts taken to identify and select the most accurate and representative parameter values, it is possible that the parameter values may differ from those present in the City. Furthermore, as Flockhart and Coe write, "Many of these vital rates (survival, reproduction, and sterilization) require intensive field data collection efforts, are difficult to measure... estimating vital rates such as survival and reproduction in the field are labor intensive, require long study periods, and only focus on one small section of the population... On the other hand, estimation of per capita transition rates [between subpopulations] was also limited, despite many studies presenting raw counts of cat intakes and outcomes... because we do not

> know the size of the focal cat population." Therefore, even if more empirical data were available for Los Angeles specifically, they would likely be subject to these same limitations.

The authors use a passage from Flockhart and Coe (2018) to support a direct management application of their model and suggest that further collection of empirical data is unnecessary to implement their suggested management strategy. It is crucially important to recognize that the intended use of this modeling effort is quite different than the peer-reviewed work of Flockhart and Coe (2018), upon which it is based:

> … the model presented here stands as a framework for municipal areas to integrate multiple data collection schemes into a single holistic population model. In its current form the model is not ready for immediate use. Rather, the model provides insight to stakeholders of the diversity of data necessary to build such a model and guidance to which data are the highest priority for developing a refined stochastic population model to inform management strategies of cats in a specific urban area.

To paraphrase Flockhart and Coe, their model was specifically intended to direct stakeholders on which empirical data they need to collect to inform stochastic population models. Flockhart and Coe then state that it is stochastic models, which incorporate uncertainty, that are necessary to "inform management strateg[y]." By removing the context from the Flockhart and Coe article, the authors of the Updated Appendix J reach a conclusion that directly contradicts the recommendations of that peer-reviewed work.

While the City's current modeling effort has used science in its implementation, it has misapplied and mischaracterized the science upon which it is based (e.g., the application of carrying capacity to owned cats). Indeed, the authors' have even altered the peer-reviewed models that were used in this analysis without providing an explanation of why they chose to do so (e.g., the free-roaming carrying capacity of Lohr et al. 2013 and the formulas used by Flockhart and Coe 2018). Though the authors' arguments and output may be voluminous and compelling to those wishing to reach a certain conclusion, they are not science nor do they adequately represent current scientific understanding.

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Communication from Public

Name:	Travis Longcore
Date Submitted:	11/27/2020 09:12 PM
Council File No:	17-0413
Comments for Public Posting:	Please see attached for comments from the Law Office of Babak Naficy on behalf of The Urban Wildlands Group.

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November 9, 2020

Via email only

Board of Animal Services Commissioners,
c/o Dr. Jan Green Rebstock
City of Los Angeles
Public Works, Bureau of Engineering
Environmental Management Group
1149 S. Broadway, 6th Floor
Los Angeles, CA 90015
Jan.Green.Rebstock@lacity.org

RE: Citywide Cat Program, Final Environmental Impact Report, SCH #2013101008, City of Los Angeles, Los Angeles County

Dear Dr. Green Rebstock and Honorable Commissioners:

I submit these comments on behalf of the Endangered Habitats League, Los Angeles Audubon Society, Palos Verdes/South Bay Audubon Society, Santa Monica Bay Audubon Society, and American Bird Conservancy (UWG, et al.) in response to the release of the Final Environmental Impact Report (FEIR) for the proposal by the City of Los Angles to adopt a "Citywide Cat Program" ("Cat Program" or "program"). As set for more fully below, the FEIR must be recirculated before the City can lawfully consider final certification because it contains significant new information and major revisions to the Project and mitigation measures.

The FEIR explains that in response to substantive agency and public comments, the EIR has been revised and the Project itself has been substantially modified. Despite these modifications, which will be listed and discussed below, the FEIR claims recirculation is not warranted because "project revisions do not result in a new significant impact, a substantial increase in the severity of an impact requiring mitigation measures, or a considerably different feasible alternative and mitigation measure, and would not otherwise meet the recirculation requirements under CEQA Guidelines Section 15088.5…" Contrary to the City's assertion, the Project and EIR

modifications are substantial and therefore require recirculation because the public and resource agencies have not had a meaningful and adequate chance to analyze and comment on these modifications. In other words, recirculation is required because the FEIR contains significant new information and is changed so substantially that without recirculation, the public would be deprived of a meaningful opportunity to comment on the Project's potentially significant impacts, feasible mitigation measures and alternatives that could significantly reduce the severity and significance of the Project's potentially significant environmental impacts. See, Residents Against Specific Plan 380 v. Cty. of Riverside (2017) 9 Cal. App. 5th 941, 964.

CEQA mandates concerning EIR recirculation prior to final certification.

According to Public Resources §21092.1, "[w]hen significant new information is added to an environmental impact report after notice has been . . . , but prior to certification, the public agency shall give notice again … , and consult again pursuant to Sections 21104 and 21153 before certifying the environmental impact report."

New information is "significant" if "the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect." Laurel Heights Improvement Assn. v. Regents of Univ. of California (1993) 6 Cal. 4th 1112, 1129. "New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. CEQA Guidelines §15088.5(a).

Examples of "significant new information" requiring recirculation include:

> (1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
>
> (2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
>
> (3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it.
>
> (4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (Mountain Lion Coalition v. Fish & Game Com.(1989) 214 Cal.App.3d 1043).

Ibid.

> "Recirculation is not mandated under section 21092.1 when the new information merely clarifies or amplifies the previously circulated draft EIR, but is required when it reveals, for example, a new substantial impact or a substantially increased impact on the environment." (Vineyard, supra, 40 Cal.4th at p. 447, 53 Cal.Rptr.3d 821, 150 P.3d 709.)

Residents Against Specific Plan 380 v. Cty. of Riverside (2017) 9 Cal. App. 5th 941, 964

Where the public never had a meaningful opportunity to comment on significant information because the information was omitted in the EIR, recirculation is warranted. Spring Valley Lake Assn. v. City of Victorville (2016) 248 Cal. App. 4th 91, 107–09 (recirculation was required because "…. the public never had a meaningful opportunity to comment on the information because the City omitted the information from the draft EIR.") Likewise, recirculation is warranted where the FEIR includes revisions to the EIR are broad and complex. Id.

Applying these principles to the case at bar, it is abundantly clear that the FEIR must be recirculated because the FEIR contains major revisions to key components of the Project. These revisions concern complex and technical issues that broadly affect both the Project's potentially significant impacts and mitigation measures and alternatives that can substantially reduce or mitigate these impacts.

The EIR must be recirculated because the Project itself and the EIR have been substantially revised

At its core, the FEIR's conclusions regarding the Project's potential environmental impacts are almost exclusively based on a numerical population model that purports to show that the implementation of the Project would gradually result in a reduction of the number of free-roaming cats in the City of Los Angeles over the next 30 years. The FEIR relies on the model to conclude that their mitigation measures are **NOT** needed because the project will have no significant impacts on the environment. This model, however, is not the same model that DEIR relied upon; the model has been dramatically changed since the DEIR to correct conceptual and mathematical errors in the model and to update many assumptions that were unreasonable. The FEIR contains outputs of a new model that although the City claims show the same result as the first model, the public must evaluate *de novo*. All model results and predictions constitute significant "new information" because all conclusions about potential Project impacts, and the corresponding assertions about the absence of any need for mitigation measures and effectiveness of mitigation is derived exclusively from this new information. The model itself is sufficiently and meaningfully different from the model presented in the DEIR such that it is itself new information, and indeed constitutes the only information on which the conclusions in the FEIR is based.

Multi-state dynamic population models do not behave in ways that allows to predict their outcome without running the actual model. Accordingly, the public cannot simply review the changed parameters, new terms, and *ad hoc* corrections that the City provided and be able to assess the adequacy of the new model. Rather, and especially given that the first model was replete with errors that the public had to identify, the public would be denied the ability to comment on the significance of any impacts or potential mitigation measures if time is not allowed for a technical review of the new model through the process of recirculation. This review and any relevant comments, moreover, must be made in the context of a recirculated EIR to ensure the City is required to respond to public comments and revise the Project as necessary. Otherwise, any public comment would be reduced to irrelevance if the City is not required to respond and formally revise the EIR accordingly.

The new model, moreover, introduces new terms to the model, adjusts many parameters, describes new processes, and presents a new assumed population of free-roaming cats that is 50% higher, increasing from 226,970 to 341,661. This array of corrections and updates is evidence that the DEIR was so fundamentally inadequate that it precluded meaningful public review, also triggering the need for recirculation.

The FEIR makes clear that all the conclusions are based on the population model, and do not depend on any of the program elements that are not incorporated into the population model (section 2.4.1.11). The DEIR relied on the program guidelines to mitigate impacts as detailed in my comment letter on the DEIR. Because the FEIR has renamed these mitigation measures as mere "guidelines" and has removed any pretense that the guidelines would reliably reduce Project impacts, the EIR must be recirculated so that the public has the opportunity to comment on substantial environmental impacts that would occur in the absence of compliance with the program guidelines. For example, the FEIR presents the fiction that feeding is an independent activity from trapping and returning cats. Guidance on feeding was part of the DEIR and was relied upon in the DEIR as a mitigating feature; the FEIR contains no such guidance and consequently the public is entitled to comment on additional impacts that would result from the project in the absence of guidance on feeding being part of the City's Project.

Moreover, as the California Department of Fish and Wildlife (CDFW) points out in its comments, ""in the Draft EIR, guidelines for implementation of the proposed Project initially recommended a 1-mile buffer area around identified Environmentally Sensitive Areas (ESAs) in the City as places where free-roaming cats should not be released or fed." In the FEIR, the City removed the 1-mile buffer guideline and allows cats to be released into ESAs." CDFW explained that it is concerned that this revision to the guidelines could cause a significant environmental impact by reducing or eliminating protection of biological resources within ESAs. This revision therefore is capable of causing a new or more significant environmental impact, thereby triggering the need for recirculation.

In addition, the following revisions require recirculation:

The FEIR

- Deletes all reference to ecological conservation measures.
- Adds an apparent new mitigation measure when trapping in ESAs to avoid trapping in vegetated areas.
- Removes ban on feeding cats in environmentally sensitive areas and buffers, and around vulnerable populations.
- Adds guidance restricting trapping near vulnerable populations (another apparent mitigation measure).
- Removes limitation on feeding times.
- Removes guidance to keep feeding areas free of fecal matter.
- Adds guidance that trapping areas be cleaned.
- Removes guidance for ongoing flea treatment and updates to vaccinations.
- Adds definition of "nuisance cat" which will impact the type of cats that can be removed without possibility of return (the definition does not include or consider impacts on wildlife).
- Bars shelters from releasing nuisance cats to TNR groups for return, which is an apparent mitigation measure.
- Adds a public education program as a component of project description.
- Recommends that cats trapped from ESAs be enrolled in Working Cats program (presumably a mitigation measure).
- Adds being found near water bodies impaired for nutrients/bacteria to the definition of "nuisance cats" (presumably to mitigate impacts on water quality).
- Removes reliance on ecological conservation measures from all analyses of project impacts.
- Updates list of environmentally sensitive areas (while removing protections from them).
- Adds federal and state antidegradation policies to water quality analysis.
- Claims that impacts from cats released after capture constitute "existing" impacts, which is akin to arguing that any stray cat that comes into a shelter could be released without causing an impact because it used to be stray.
- Presents an entirely new population model for cats with major changes in how it is set up.
    - Increases estimate of free-roaming cats currently in City by 50%
    - Adds estimates of number of cats lost and abandoned each year.
    - Changes estimates of survival for stray and feral cats as both adults and juveniles.
    - Changes owned sterilization rate to reflect differences by demographics.
    - Changes the way proportion of sterilized stray and feral cats is calculated.
    - Introduces "carrying capacity" for owned cats, which is a major change in model function and hides cats through an artificially elevated owned cat mortality rate,

essentially killing cats transferred to the owned population from the stray and shelter populations.

- Ties carrying capacity calculation for free-roaming cats and owned cats directly to number of households.

These changes, both individually and collectively are not minor and substantially affect the FEIR's analysis and conclusions concerning project impacts because they introduce new features, and the results of this many changes in a mathematical model is not predictable. Accordingly, these changes cannot be characterized as minor adjustments.

Based on the foregoing, I urge the Board of Commissioners to recommend the City Council recirculate the FEIR.

Regards

Babak Naficy,

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Counsel for Urban Wildlands Group, Inc., et al.