DRAFT ENVIRONMENTAL IMPACT REPORT

SQUIRREL MONKEY HAVEN

Control Number: PLNP2017-00079
State Clearinghouse Number: 2018072056
Date: March 2019

COUNTY OF SACRAMENTO
OFFICE OF PLANNING AND ENVIRONMENTAL REVIEW
827 7TH STREET, ROOM 225
SACRAMENTO, CALIFORNIA 95814

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County Executive

Nav Gill, County Executive

Prepared By

County of Sacramento
Office of Planning and Environmental Review

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This Environmental Impact Report has been prepared pursuant to the California Environmental Quality Act of 1970 (Public Resources Code Division 13). An Environmental Impact Report is an informational document which, when this Office requires its preparation shall be considered by every public agency prior to its approval or disapproval of a project. The purpose of an Environmental Impact Report is to provide public agencies with detailed information about the effect that a proposed project is likely to have on the environment; to list ways in which any adverse effects of such a project might be minimized; and to suggest alternatives to such a project.

Prepared by the
COUNTY OF SACRAMENTO
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827 7TH STREET, ROOM 225
SACRAMENTO, CALIFORNIA 95814
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Office of Planning and Environmental Review
Leighann Moffitt, Director

County Executive
Navdeep S. Gill

3-27-19

TO: All Interested Parties

SUBJECT: DRAFT ENVIRONMENTAL IMPACT REPORT FOR SQUIRREL MONKEY HAVEN (CONTROL NUMBER: PLNP2017-00079)

The subject Draft Environmental Impact Report (DEIR) is attached for your review and comment. The DEIR can also be reviewed at:
https://planningdocuments.saccounty.net/ViewProjectDetails.aspx?ControlNum=PLNP2017-00079

Reviewers should focus on the sufficiency of the DEIR in discussing possible impacts upon the environment, ways in which adverse effects might be minimized, and alternatives to the proposed project. Reviewers who wish to comment on the adequacy of this DEIR are urged to submit written or emailed comments to the Sacramento County Department of Community Development by close of business on May 10, 2019 at the address below:

Tim Hawkins, Environmental Coordinator
Office of Planning and Environmental Review
827 7th Street, Room 225, Sacramento, CA 95814
or via e-mail at: CEQA@saccounty.net.

A public hearing on the Squirrel Monkey Haven project will be held by the Sacramento County Board of Supervisors Chambers, at 700 H Street in Sacramento. A notice of the date and time of the public hearing will be provided by the hearing body authorized to conduct the public hearing for the proposed project. Interested individuals may check the materials for upcoming hearings on the website of the Board of Supervisors at:

http://www.sccob.saccounty.net/Pages/BOSPublicMeetings.aspx

For questions about the project, please contact Tim Hawkins of this office at (916) 874-6141 or hawkinst@sacccounty.net.

Sincerely,

[Original Signature on File]

Tim Hawkins,
Environmental Coordinator

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EXECUTIVE SUMMARY AND MITIGATION MEASURES

This environmental impact report (EIR) evaluates the project's effects on environmental resources, both singularly and in a cumulative context, to examine alternatives to the project as proposed, and identify mitigation measures to reduce or avoid potentially significant effects. This document has been prepared in compliance with the California Environmental Quality Act (CEQA; Sections 21000-21189 of the Public Resources Code [PRC]) and the State CEQA Guidelines (Title 14, Sections 15000-15387 of the California Code of Regulations).

SUMMARY OF THE PROPOSED PROJECT

The subject of this Environmental Impact Report (EIR) is a project known as Squirrel Monkey Haven. The project site is located at 11859 North Valensin Road on the east side of Colony Road in the Southeast Area community of unincorporated Sacramento County.

The subject project is a Conditional Use Permit (UPZ) to allow for the construction of an indoor-outdoor kennel to house up to a maximum of 55 squirrel monkeys on a property with a zoning designation of A-5 (Agriculture – 5-acre minimum). The kennel includes a 2,700 square foot steel building with 18 attached outdoor habitats ranging in size from 240 to 288 square feet (~7,800 total square feet). The kennel will be surrounded by a security fence and landscape screening. The project is described in further detail in Chapter 1, "Project Description", of this EIR.

Lead and Responsible Agencies

The lead agency is the public agency with the principal responsibility for carrying out or disapproving a project. The lead agency is also responsible for scoping the analysis, preparing the EIR, and responding to comments received on the Draft EIR. Prior to making a decision to approve a project, the lead agency is required to certify that the EIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the EIR, and that the EIR reflects its independent judgment. Sacramento County is the lead agency for the evaluation of the Squirrel Monkey Haven project.

Responsible agencies are public agencies that have discretionary approval power over the project. The following agencies are anticipated to have approval authority over some aspect of the project: California Department of Fish and Wildlife, Sacramento County Department of Animal Care and Regulation, and the United States Department of Agriculture.

FEATURES OF THE DRAFT EIR

Purpose of the Draft EIR

In accordance with CEQA, public agencies must prepare an EIR to evaluate the potential consequences of development and operation of projects that could significantly affect the environment. The EIR process is specifically designed to objectively evaluate and disclose potentially significant direct, indirect, and cumulative impacts of a project; to identify alternatives that reduce or eliminate a project's significant effects; and to identify feasible measures that mitigate significant environmental effects. In addition, CEQA requires that an EIR identify those adverse impacts that remain significant after mitigation. The purpose of an EIR is not to recommend approval or denial of a project, but to provide decision-makers, public agencies, and the general public with information about the project.

Scope of the Draft EIR

Pursuant to CEQA and the State CEQA Guidelines, a lead agency shall focus the EIR's discussion on significant environmental effects and may limit discussion of other effects to brief explanations about why they are not significant (PRC Section 21002.1, State CEQA Guidelines Section 15143). Furthermore, the EIR must also discuss the manner in which significant impacts can be feasibly mitigated or avoided.

ISSUES ADDRESSED IN THIS EIR

This EIR addresses the following technical issue areas:

- Land Use
- Hydrology and Water Quality
- Public Services
- Traffic & Circulation
- Air Quality
- Noise
- Cultural Resources
- Greenhouse Gases and Climate Change
- Biological Resources

This report has identified potential project-related impacts associated with biological resources and cultural resources, which could be reduced to a less than significant level through inclusion of recommended mitigation measures.

There were no project related impacts determined to be significant and unavoidable.

Impacts associated with land use, hydrology and water quality, public services, traffic and circulation, noise, air quality, and greenhouse gases and climate change **are considered less than significant**.

Issues not discussed within this EIR

Aesthetics

The proposed kennel facility is similar in size and style to other common agricultural buildings, and will be screened from view through landscaping appropriate for the area. Impacts related to aesthetics are considered ***less than significant.***

Agricultural Resources

The subject property is not considered prime farmland, farmland of statwide importance, unique farmland, farmland of local importance, or grazing land pursuant to the California Department of Conservation's farmland map. The site is not subject to a Williamson Act contract. Impacts to agricultural resources are considered ***less than significant.***

Geology and Soils

The project site is not within an Alquist-Priolo Earthquake Fault Zone, will not result in substantial soil erosion or loss of topsoil, and is not located .on a geologic soil unit that is unstable or will become unstable as a result of the project. The project will not result in the loss of availability of an important mineral resource. Impacts related to geology and soils is considered ***less than significant.***

Hazards and Hazardous Materials

The proposed project does not involve the use, transport, or disposal of hazardous materials other than common cleaning products. However, public comments have been received asserting that the urine and fecal waste from the monkeys is bio-hazardous waste. This issue is discussed further in the ***Hydrology, Drainage, and Water Quality*** and ***Public Services (Solid Waste)*** chapters of this EIR. Impacts associated with the use of hazardous materials is considered ***less than significant.***

Summary of Impacts and Mitigation Measures

The following environmental impact and mitigation summary table (*Table ES-1: Executive Summary of Impacts and Mitigation on page ES-4*) briefly describes the project impacts and the mitigation measures recommended to eliminate or reduce the impacts. The residual impact after mitigation is also identified. Detailed discussions of each of the identified impacts and mitigation measures, including pertinent support data, can be found in the specific topic sections in the remainder of this report.

Table ES-1: Executive Summary of Impacts and Mitigation

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
LAND USE			
CONSISTENCY WITH GENERAL PLAN, SOUTHEAST AREA COMMUNITY PLAN, AND COUNTY ZONING CODE The proposed project is consistent with the policies of the Sacramento County General Plan, Southeast Area Community Plan, and upon approval of a Use Permit would be consistent with Sacramento County Zoning Code.	LS	None Required	LS
HYDROLOGY AND WATER QUALITY			
100-YEAR FLOODPLAIN The project is located within a FEMA "Zone X" area and will not place structures in a FEMA designated floodplain or flood hazard area. County Department of Water Resources placed a condition of approval upon the project, that minimum pad/floor elevations would be required pursuant to the Sacramento County Floodplain Management Ordinance.	LS	None Required	LS

[1] PS = Potentially Significant S = Significant SU = Significant and Unavoidable LS = Less Than Significant

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
Compliance with the Floodplain Management Ordinance, Sacramento County Water Agency Code, and the Sacramento County Improvement Standards will minimize any off-site impacts due to drainage from the project site.			
CREATE OR CONTRIBUTE RUNOFF WHICH WOULD EXCEED THE CAPACITY OF EXISITING OR PLANNED STORMWATER DRAINAGE SYSTEMS OR PROVIDE SUBSTANTIAL ADDITIONAL SOURCES OF POLLUTED RUNOFF Indoor housing would be sanitized weekly. This involves stripping the absorbent bedding (wood shavings) with feces and urine residues out of the cage, rinsing, applying a sanitizer, and then rinsing again. The indoor housing would have a central drain in the cement floor to collect rinse water during cleaning. The rinse water would drain into a dedicated septic system that would be designed by RC Berti Construction of Wilton with input, permitting, and inspection by Sacramento County Environmental Management Division.	LS	None Required	LS
WATER QUALITY The project involves minimal grading of less than 1 acre and less than 350 cubic yards of	LS	None Required	LS

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
material and will not need to secure a grading permit. The proposed new septic system appears to be able to meet all setback requirements.			
PUBLIC SERVICES			
EFFECTS TO WATER SUPPLY The applicant is proposing to use the existing private well on the property for the proposed facility's operations. The proposed facility plan estimates 41,000 gallons of water will be used annually (112 gallons per day) for facility needs including monkey drinking water, cleaning, and landscaping. On average, each person in a household uses about 100 gallons of water a day. Sacramento County Environmental Management Department (EMD) has reviewed the proposed project and concluded that the existing well is adequate to serve the existing home and the proposed monkey sanctuary. EMD also evaluated the location of the facility from adjacent well sites and indicated that the proposed facility met all required setbacks.	LS	None Required	LS
WASTEWATER TREATMENT The proposed septic system will be constructed to County standards and is subject	LS	None Required	LS

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
to inspection by EMD. EMD reviewed the proposed location and determined that it meets setbacks from the existing well and from those on the neighboring properties.			
EFFECTS TO SOLID WASTE FACILITIES The expected fecal output from the 51 monkeys is 0.8 pounds per day (24 pounds per month). This increase in solid waste would not fill a substantial proportion of the available permitted capacity at Keifer Landfill and would not result in the need to expand or construct new landfill facilities. According to correspondence from the Global Federation of Animal Sanctuaries and UC Davis, the State of California does not consider primate waste biohazardous and does not require it to be handled as biohazardous medical waste (refer to Appendix L and M). Waste can be handled and disposed as regular waste by typical commercial waste management contractors.	LS	None Required	LS
POLICE SERVICES The Sacramento County Sheriff's Department Subdivision and Project Review representative conducted a review and assessment of the project planning documents associated with	LS	None Required	LS

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
the project. The Sheriff's Department provided conditions relating to address numbers, alarm systems, gate permits, and to provide immediate notification in the event of a missing or escaped monkey. Those conditions have been incorporated into the project			
ANIMAL CONTROL SERVICES The proposed project will require the applicant to obtain a Wild Animal Permit from the Sacramento County Department of Animal Control and Regulation. Compliance with this permit will ensure the safe operation of the facility. Non-compliance with any permit conditions will result in revocation of the permit and closure of the facility	LS	None Required	LS
TRAFFIC & CIRCULATION			
ACCESS & PARKING There are no specific parking requirements for kennels in the County Zoning Code; however, Sacramento County Planning and Environmental Review staff reviewed the proposed project and have determined that because the amount of traffic to the site is expected to be minor, due to the nature of the proposed use, the existing driveway and paved areas adjacent to the existing home and barn	LS	None Required	LS

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
are adequate to serve the proposed facility. The Building Department will require that an ADA compliant parking space be designated along with an accessible path of travel from the parking area to the kennel be provided. The Building Department requirements will be included as part of the project conditions if the project is approved. Land Division and Site Improvement Review (LDSIR) staff reviewed the project and had no comments. DOT Staff reviewed the project and provided advisory conditions if additional driveway or gates were proposed in the future.			
TRAFFIC GENERATION the project will generate 10 daily trips. In addition, one additional truck trip per week will be generated to accommodate the waste disposal for the facility.	LS	None Required	LS
AIR QUALITY			
RESULT IN SHORT-TERM, CONSTRUCTION-GENERATED EMISSIONS OF ROG, NO_X, PM_{10}, AND $PM_{2.5}$ THAT EXCEED SMAQMD-RECOMMENDED THRESHOLDS	LS	None Required	LS

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
Construction-generated emissions of NO_X would not exceed the SMAQMD threshold of significance. Because construction-generated emissions of PM_{10} and $PM_{2.5}$ would not exceed the applicable adopted mass emissions thresholds adopted by SMAQMD, construction-generated emissions of PM_{10} and $PM_{2.5}$ would not contribute to a localized exceedance of the CAAQS and NAAQS for of PM_{10} and $PM_{2.5}$ or contribute to the nonattainment status of the SVAB with respect to the CAAQS for PM_{10} and the NAAQS for $PM_{2.5}$.			
RESULT IN LONG-TERM, OPERATIONAL EMISSIONS OF ROG, NO_X, PM_{10} AND $PM_{2.5}$ THAT EXCEED SMAQMD-RECOMMENDED THRESHOLDS The operational emissions would not exceed SMAQMD-adopted daily or annual mass emission thresholds for ROG (precursor to ozone), NOX, and PM10 and PM2.5. Therefore, operational emissions of criteria air pollutants and precursors would not contribute considerably to the nonattainment status of the SVAB with respect to the CAAQS and NAAQS for ozone, the CAAQS for PM10, or the NAAQS for PM2.5. Moreover, operational emissions of PM10 and PM2.5 would not contribute to localized concentrations of PM10	LS	None Required	LS

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
and/or PM2.5 that would exceed or contribute to an exceedance of the CAAQS or NAAQS.			
RESULT IN LONG-TERM, OPERATIONAL MOBILE-SOURCE CO CONCENTRATIONS THAT EXCEED AIR QUALITY STANDARDS DUE TO INCREASED TRAFFIC Ten daily trips would not result in, or substantially contribute to, concentrations that exceed the 1-hour or 8-hour CAAQS and NAAQS for CO.	LS	None Required	LS
EXPOSE SENSITIVE RECEPTORS TO TACS Project-related construction would not expose nearby sensitive receptors to an incremental increase in cancer risk that exceeds 10 in 1 million or a hazard index greater than 1.0, the project would not introduce new stationary sources of TACs, and the project would not be developed in a location where future residents would be exposed to relatively high concentrations of TACs from offsite emission sources.	LS	None Required	LS
EXPOSE SENSITIVE RECEPTORS TO ODORS The proposed squirrel monkey sanctuary with	LS	None Required	LS

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
51 monkeys will produce significantly less waste than a single adult horse and about the same amount of urine as two adult humans and as much feces as three adult humans (at maximum capacity the change in waste output is negligible). The applicant has developed an odor control program to ensure that odors are minimized and will not result in a public nuisance.			
NOISE			
RESULT IN SUBSTANTIAL CONSTRUCTION-GENERATED NOISE Noise-generating construction activity would occur between 7:00 a.m. and 7:00 p.m., Monday through Friday. The Sacramento County Code (Section 6.68.090) exempts construction-related noise, provided that construction activity does not occur between 8:00 p.m. and 6:00 a.m. on weekdays. Additionally, no pile driving or blasting would occur during construction. Therefore, construction would not result in the exposure of persons to, or generation of, noise levels in excess of applicable standards.	LS	None Required	LS
RESULT IN CONSTRUCTION-GENERATED GROUND VIBRATION AT NEARBY	LS	None Required	LS

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
SENSITIVE LAND USE The maximum ground vibration level generated by a large dozer is 0.089 in/sec PPV and 87 Vdb at 25 feet. The use of a large dozer would not exceed the Caltrans recommended level of 0.2 in/sec PPV with respect to structural damage, as the noted vibration level at 25 feet is substantially below 0.2 in/sec PPV. Further, multiple dozers are generally not used in close proximity for safety reasons. No structures are located within 25 feet of the project site boundary; therefore, the exposure at the closest buildings from a large dozer would be less than the Caltrans recommended level of 0.2 in/sec PPV. With respect to human disturbance, the use of a large dozer would exceed the Federal Transportation Agency's maximum acceptable level of 80 VdB within 40 feet of dozing activity. The existing structure nearest to where construction would occur is beyond 40 feet from the project site boundary. Thus, construction activities performed by dozers would not occur within 40 feet of existing structures and therefore, vibration levels would not exceed the Federal Transportation Agency's maximum acceptable level for human annoyance of 80 VdB; therefore, construction			

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
that would occur on project site would not result in the exposure of any sensitive receptors or structure to excessive vibration levels.			
SUBSTANTIAL INCREASE (TEMPORARY, PERIODIC, OR PERMANENT) IN AMBIENT NOISE LEVELS The worst-case squirrel monkey sound exposure levels are predicted to be well below the recommended interior Sound Exposure Level (SEL) standard of 55 dB. No further consideration of noise mitigation measures would be warranted for the project relative to the recommended interior SEL standard of 55 dB. The low density rural character of the community generally provides a suitable environmental setting in which kennels would be compatible. According to the project applicant, the kennel will be closed-up at night between 8 p.m. and 7 a.m. weekdays and 8 p.m. and 9 a.m. weekends and holidays; therefore limiting the potential for nighttime noise disturbance.	LS	None Required	LS

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
CULTURAL RESOURCES			
ADVERSELY AFFECT IMPORTANT CULTURAL OR ARCHAEOLOGICAL RESOURCES The cultural resources inventory and evaluation did not identify any archaeological or tribal resources on the project site or within a quarter-mile of the project area (Dougherty 2017). The NCIC records search did not yield any resources, studies, or reports within a quarter-mile of the project area. The NAHC did not identify any sacred sites that could be affected by the project. Although no NRHP- or CRHR-listed or eligible resources, unique archaeological resources, tribal cultural resources, or traditional cultural properties have been documented in the project site, the project is located in a region where significant prehistoric and historic-era cultural resources have been recorded and there remains a potential that undocumented cultural resources could be unearthed or otherwise discovered during ground-disturbing and construction activities.	PS	**Mitigation Measure CR-1:** If cultural resources are discovered during project-related construction activities, all ground disturbances within a minimum of 50 feet of the find shall be halted and the Planning and Environmental Review Division of the Community Development Department shall be immediately notified at (916) 874-7499. Work shall remain suspended until a County-identified, qualified professional archaeologist can evaluate the discovery. The archaeologist shall examine the resources, assess their significance, and recommend appropriate procedures to the lead agency to either further investigate or mitigate adverse impacts. If the find is determined to be a significant historical resource and the archaeological resource cannot be avoided, then applicable mitigation measures for significant resources shall be completed (e.g., preservation in place, data recovery program pursuant to PRC Section 21083.2[i]). The project applicant shall be required to implement any mitigation deemed necessary for the protection of such cultural resources. During evaluation or mitigated treatment, ground disturbance and construction work	LS

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
		could continue on other parts of the project site.	
DISTURB HUMAN REMAINS, INCLUDING THOSE INTERRED OUTSIDE OF FORMAL CEMETERIES There is no known evidence of potential for human burials on the project site. In the event human remains are discovered, the contractor would be required to comply with existing regulations. Pursuant to Section 7050.5 of the California Health and Safety Code, in case of the discovery of human remains, all work would stop and the County coroner would be immediately notified. If the remains are determined to be Native American, guidelines of the NAHC would be adhered to in the treatment and disposition of the remains, consistent with PRC Section 5097.98 and Sacramento County General Plan Policy CO-155.	PS	See Mitigation Measure CR-1 above	LS
ADVERSELY AFFECT A UNIQUE PALEONTOLOGICAL RESOURCE OR SITE, OR A UNIQUE GEOLOGIC FEATURE According to the State CEQA Guidelines, a project is considered to have a significant impact on paleontological resources if it would	PS	See Mitigation Measure CR-1 above	LS

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
directly or indirectly result in the destruction of a unique paleontological resource. No known paleontological resources or sites occur at the project location; therefore, Sacramento County General Plan Policy CO-161 (which requires appropriate mitigation to reduce potential impacts where development could adversely affect paleontological resources) would not apply.			
GREENHOUSE GASES & CLIMATE CHANGE			
GENERATION OF GREENHOUSE GAS EMISSIONS Based on the unique characteristics of the proposed monkey sanctuary; PER staff consulted with SMAQMD staff regarding the appropriate land use classification and variables to use in the model. In addition, the defaults in CalEEMod were changed to reflect the emission anticipated for operation in 2019, and carbon intensity forecasts for the Sacramento Municipal Utility District (SMUD) based on SMUD's 2009 reporting year. The estimated GHG emissions for both facility construction and annual operation are significantly below SMAQMD's thresholds of	LS	None Required	LS

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
1,100 annual metric tons.			
BIOLOGICAL RESOURCES			
DISTURBANCE OF MIGRATORY BIRDS NESTS Implementation of the project could adversely affect common migratory birds through disturbance during the breeding season. Loss of active nests of common species would be inconsistent with the MBTA; however, the list of migratory birds includes many common species not otherwise protected under federal, state, or local laws. Loss of active nests of common species during project construction would not substantially reduce the abundance of any species, nor cause the abundance of any species to decline below self-sustaining levels. As such, potential adverse effects on common migratory birds would not alone constitute a significant impact as defined by the significance criteria established for this EIR.	PS	**Mitigation Measure BR-1:** If construction activity (which includes clearing, grubbing, or grading) is to commence within 50 feet of nesting habitat between February 1 and August 31, a survey for active migratory bird nests shall be conducted no more than 14 day prior to construction by a qualified biologist. If active nest(s) are found in the survey area, a non-disturbance buffer, the size of which has been determined by a qualified biologist, shall be established and maintained around the nest to prevent nest failure. All construction activities shall be avoided within this buffer area until a qualified biologist determines that nestlings have fledged, or until September 1.	LS
DISTURBANCE OF NESTING BIRDS OF PREY Although there are no CNDDB records of these species on the project site or within 5 miles of	PS	**Mitigation Measure BR-2:** If construction activity (which includes clearing, grubbing, or grading) is to commence within 500 feet of suitable nesting habitat between March 1 and September 15, a survey for raptor nests shall	LS

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
the project site, suitable habitat for nesting birds of prey is present. If construction will occur during the nesting season of March 1 to September 15, preconstruction surveys will be required to ensure that construction activities do not agitate nesting birds of prey, potentially resulting in nest abandonment or other harm to nesting success (Mitigation Measure BR-1). If nests are found, the developer is required to contact CDFW to determine what measures need to be implemented in order to ensure that nesting raptors remain undisturbed. The measures selected will depend on many variables, including the distance of activities from the nest, the types of activities, and whether the landform between the nest and activities provides any kind of natural screening. If no active nests are found during the focused survey, no further mitigation will be required.		be conducted by a qualified biologist. The survey shall cover all potential tree and ground nesting habitat on-site and off-site up to a distance of 500 feet from the project boundary. The survey shall occur within 30 days of the date that construction will encroach within 500 feet of suitable habitat. The biologist shall supply a brief written report (including date, time of survey, survey method, name of surveyor and survey results) to the Environmental Coordinator prior to ground disturbing activity. If no active nests are found during the survey, no further mitigation will be required. If any active nests are found, the Environmental Coordinator and CDFW shall be contacted to determine appropriate avoidance/protective measures. The avoidance/protective measures shall be implemented prior to the commencement of construction within 500 feet of an identified nest.	
DISTURBANCE OF SWAINSON'S HAWK NESTS Swainson's hawk is listed as threatened under CESA and has the potential to nest on the project site. Trees located around the project site provide potential habitat for Swainson's hawk. Reconnaissance surveys of the site did	PS	**Mitigation Measure BR-3:** If construction, grading, or project-related improvements are to commence between March 1 and September 15, a focused survey for Swainson's hawk nests on the site and within 1/2 mile of the site shall be conducted by a qualified biologist no later than 30 days prior to the start of construction work (including	LS

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
not detect the species or its nests and there are no records of these species nesting on the site; however, CNDDB records indicate that 19 sightings of Swainson's hawk have been sighted within 5 miles of the project site. Preconstruction surveys will be required to ensure that construction activities do not agitate nesting hawks, potentially resulting in nest abandonment or other harm to nesting success (Mitigation Measure BR-2).		clearing and grubbing). If active nests are found, CDFW shall be contacted to determine appropriate protective measures, and these measures shall be implemented prior to the start of any ground-disturbing activities. If no active nests are found during the focused survey, no further mitigation will be required.	
DISTURBANCE OF TRICOLORED BLACKBIRD NESTS Tricolored blackbird are listed as a CDFW Species of Special Concern. The ponded area of the property contains suitable habitat for the species and noise generated by construction activity could potentially agitate nesting tricolored blackbirds, potentially resulting in nest abandonment. Focused surveys for the species did not detect tricolored blackbirds or any special-status bird species. The biological report, dated September 17, 2018, found that while the pond contained the appropriate wetland vegetation, its small size (0.07 acres) would make it highly unlikely to support a tricolored blackbird breeding colony. CNDDB records indicate that there are 27,	PS	**Mitigation Measure BR-4:** If construction activity (which includes clearing, grubbing, or grading) is to commence within 300 feet of suitable nesting habitat between March 1 and July 31, a survey for nesting tricolored blackbirds shall be conducted by a qualified biologist. The survey shall cover all potential nesting habitat on-site and off-site up to a distance of 300 feet from the project boundary. The survey shall occur within 30 days of the date that construction will encroach within 300 feet of suitable habitat. The biologist shall supply a brief written report (including date, time of survey, survey method, name of surveyor and survey results) to the Environmental Coordinator prior to ground disturbing activity. If no tricolored blackbird were found during the pre-construction survey, no further mitigation	LS

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
recorded occurrences within 5 miles of the project site. Ten of the records were concentrated along Twin Cities Road, approximately 1.5 to 3 miles to the southeast at habitats locations containing much larger continuous freshwater emergent wetlands than what is present at the site, making these larger bodies of water more preferable for the species. Further, a colony of red-winged blackbirds (*Agelaius phoeniceus)* was observed within the site's pond habitat on the May 1 reconnaissance survey. The birds were observed displaying mating behaviors including singing, wing displays, and general territoriality. The presence of the more aggressive and territorial red-winged blackbirds in a pond of this size suggests that colonization and nesting by tricolored blackbirds is highly unlikely; however, mitigation is included to reduce potential impacts to nesting tricolored blackbirds (Mitigation Measure BR-3).		would be required. If an active tricolored blackbird colony is found on-site or within 300 feet of the project site the project proponent shall do the following: 1. Consult with CDFW to determine if project activity will impact the tricolored blackbird colony(s). Implement all protective measures recommended by CDFW. Provide the Environmental Coordinator with written evidence of the consultation or a contact name and number from CDFW.	
LOSS OF SPECIAL-STATUS VERNAL POOL INVERTEBRATES Vernal pool fairy shrimp (*Branchinecta lynchi*) and vernal pool tadpole shrimp (*Lepidurus packardi*) are both federally protected species. Biological surveys for the species were	LS	None Required	LS

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
conducted after members of the public voiced concern that the pond could potentially support vernal pool invertebrates and that the project could impact them. The biological report, dated May 7, 2018, found the pond does not provide suitable habitat for either species. The amount of perennial freshwater emergent vegetation present in the pond implies that the pond is likely perennially-inundated, thus providing poor habitat for vernal pool invertebrates. Additionally, the presence of aquatic predators (American bullfrogs and the stocking of the pond with mosquito fish) make it highly unlikely the pond could support vernal pool invertebrates.			
LOSS OF CALIFORNIA TIGER SALAMANDER AND ITS HABITAT California tiger salamander (*Ambystoma californiense*) are listed as a federally endangered species. The nearest documented occurrence is 4.4 miles northeast of the project site. Biological surveys for the species were conducted after members of the public and a biologist hired by a neighbor to the project site voiced concern that the pond and surrounding upland area was suitable habitat for the	LS	None Required	LS

Impacts	Level of Significance Before Mitigation [1]	Mitigation Measure	Level of Significance After Mitigation
species. The biological report by Bargus Environmental, dated May 7, 2018, concluded that the study area does not provide suitable habitat for the species. Reconnaissance surveys noted that American bullfrogs were prevalent throughout the pond, which makes it highly unlikely that a viable California tiger salamander population could successfully breed in the pond, since the bullfrog is a predator to the larvae of the species. Moreover, the lack of rodent burrows in the surrounding upland habitat means that summer and fall sheltering habitat is minimal.			

Mitigation Monitoring and Reporting Program

It shall be the responsibility of the project applicant/owner to comply with the Mitigation Monitoring and Reporting Program (MMRP) for this project and to reimburse the County for all expenses incurred in the implementation of the MMRP, including any necessary enforcement actions. The MMRP fee for this project is $2,200. This fee includes administrative costs of $900.00, which must be paid to the Office of Planning and Environmental Review prior to recordation of the MMRP and prior to recordation of any final parcel or subdivision map. The remaining balance will be due prior to review of any plans by the Environmental Coordinator or issuance of any building, grading, work authorization, occupancy or other project-related permits.

Terminology Used in this EIR

This Draft EIR uses the following terminology to describe environmental effects of the project.

Significance Criteria. A set of criteria used by the lead agency to determine at what level, or “threshold,” an impact would be considered significant. Significance criteria used in this EIR include those that are set forth in the CEQA Guidelines, or can be discerned from the CEQA Guidelines; criteria based on factual or scientific information; criteria based on regulatory standards of local, state, and federal agencies; and criteria based on goals and policies identified in the Sacramento County General Plan.

Less-than-Significant Impact. A project impact is considered less than significant when it does not reach the standard of significance and would therefore cause no substantial change in the environment. No mitigation is required for less-than-significant impacts.

Potentially Significant Impact. A potentially significant impact is a substantial, or potentially substantial, adverse change in the environment. Physical conditions which exist within the area will be directly or indirectly affected by the proposed project. Impacts may also be short-term or long-term. A project impact is considered significant if it reaches the threshold of significance identified in the EIR. Mitigation measures may reduce a potentially significant impact to less than significant.

Significant Unavoidable Impact. A project impact is considered significant and unavoidable if it is significant and cannot be avoided or mitigated to a less-than-significant level once the project is implemented.

Cumulative Significant Impact. A cumulative impact can result when a change in the environment results from the incremental impact of a project when added to other related past, present or reasonably foreseeable future projects. Significant cumulative impacts may result from individually minor but collectively significant projects.

Mitigation. Mitigation measures are revisions to the project that would minimize, avoid, or reduce a significant effect on the environment. CEQA Guidelines §15370 identifies 5 types of mitigation:

a) Avoiding the impact altogether by not taking a certain action or parts of an action.

b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.

d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

e) Compensating for the impact by replacing or providing substitute resources or environments.

1 PROJECT DESCRIPTION

INTRODUCTION

The subject project is a Conditional Use Permit (UPZ) to allow for the construction of an indoor-outdoor kennel to house up to a maximum of 55 squirrel monkeys on a property with a zoning designation of A-5 (Agriculture – 5-acre minimum). The kennel includes a 2,700 square foot steel building with 18 attached outdoor habitats ranging in size from 240 to 288 square feet (~7,800 total square feet). The kennel will be surrounded by a security fence and landscape screening.

PROJECT SETTING

The project site is located at 11859 North Valensin Road on the east side of Colony Road in the Southeast Area community of unincorporated Sacramento County (Plate PD-1 & Plate PD-2).

Assessor Parcel Number: 138-0090-069

ENVIRONMENTAL SETTING

The five-acre project site is developed with a single-family residence, a 40' W x 30' L x 14' H accessory structure, and a 3-stall horse shelter with paddock that will remain on the western end of the property and would be separate from the monkey housing. The existing shop would be used as a central facility to carry out all aspects of monkey care and the horse shelter would be used to store facility maintenance equipment. The proposed kennel/monkey sanctuary will be located in the center of the parcel. This area is currently a fenced, agricultural pasture of approximately two acres. The pasture has an even grade and is kept mowed. Vegetation consists of annual grass, star thistle, and similar annual plants that prefer disturbed soil areas.

The project area appears to contain only Galt clay soils. Galt clay soils are dense, dark clay soils developed in basin areas originally subject to flooding. The nearest perennial water courses are Badger Creek, located approximately 0.80 miles north and Laguna Creek located about 0.75 miles to the southeast.

LAND USE DESIGNATION AND ZONING

According to the Sacramento County General Plan the site has an Agricultural Residential land use designation. The Southeast Area Community Plan designates the property as Agricultural Residential (AR-5). The property is zoned A-5.

Plate PD-1: Vicinity Map

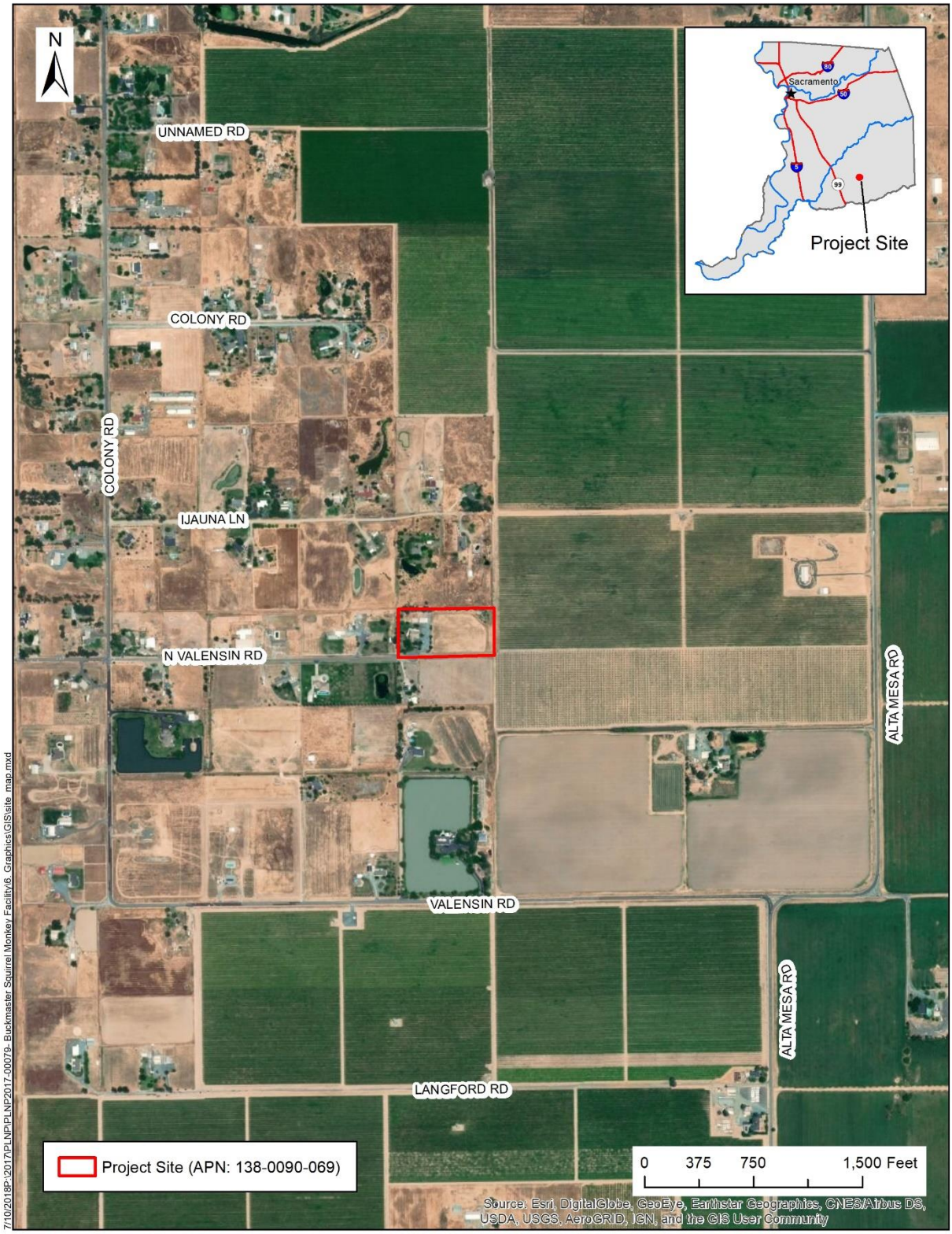


Plate PD-2: Project Site – Zoomed Extent

All adjacent parcels, with the exception of the east bounding parcel, have similar land use and zoning designations as the subject parcel; these properties are developed with single-family residences and accessory structures. The parcel to the east is zoned Agricultural – 20 Acres (AG-20), has a General Agricultural 20 acres (GA-20) land use designation, and is in agricultural production.

The project site is zoned A-5 (Agriculture – 5-acre minimum parcel size) which is an Interim Agricultural Holding Zone. The Interim Agricultural Holding Zones were applied to rural areas of the County that historically were used for agricultural purposes but had the potential to undergo a transition to urban development in the future. Pursuant to the Zoning Ordinance Title IV (Interim Zones), each of the Interim Agricultural Holding Zones has a correlation to a standard base zoning district in the current Zoning Ordinance which is used to establish allowable uses and development standards. The A-5 interim zone district is treated in the same manner as properties that are designated as AR-5 (Agricultural Residential) on the County Zoning Map and Zoning Ordinance. According to Section 3.2.5 of Sacramento County Zoning Code; Table 3.1 of the Zoning Ordinance, kennels; catteries; and, small animal boarding and training facilities in the AR-5 land use zones are permitted subject to the issuance of a conditional use permit by the Zoning Administrator.

Section 3.2.4.A states:

> If a use is not listed in Table 3.1, 3.2, or 3.3, included in a use definition, or shown as a permitted or conditionally permitted use in any zoning district, the use is prohibited, unless the Planning Director determines that either:
>
> 1. The use is substantially similar in characteristics, intensity, and compatibility to a use or uses within the zoning district, applicable to the property; or
>
> 2. The use would be appropriate in the zoning district, applicable to the property as a permitted or conditional use.

Section 3.2.4.B states:

> In those cases where the Planning Director makes a determination that the use meets either Sections 3.2.1 or 3.2.2, the use shall conform to all the regulations, conditions of approval, and use standards applicable to the similar described use(s). If the use would be appropriate in the zoning district as a conditional use, a Conditional Use Permit shall be heard by the designated body for the similar use.

The Planning Director determined that the proposed monkey sanctuary was substantially similar to a kennel pursuant to the findings in Section 3.2.4.A of the Zoning Code, which is allowed in an A-5 zoning district subject to the issuance of a Conditional Use Permit by the Zoning Administrator. Staff was then directed to prepare an environmental document.

The Initial Study did not identify any potentially significant impacts and a Negative Declaration was released for public review on February 13, 2018. The project was approved by the Zoning Administrator on March 21, 2018 and on April 2, 2018, neighbors in proximity to the project site, filed an appeal challenging the Negative Declaration on the grounds a “fair argument” could be made that the project may have significant impacts. The appelant was specifically concerned with land use/zoning code consistencies and biological resources impacts. On June 19, 2018, the County Board of Supervisors approved staff’s recommendation that an EIR be prepared to address these topical areas.

Project Proponents

Owner/Applicant: Paul & Christine Buckmaster

Project Objectives

CEQA requires that an EIR include a statement of objectives for the project, and that the objectives include the underlying purpose of the project. These objectives help the lead agency determine the alternatives to evaluate in the EIR (see CEQA Guidelines Section 15124[a]). The following project objectives have been identified by the applicant:

- To operate a squirrel monkey sanctuary for an existing colony of squirrel monkeys retired from behavioral research.
- To allow new squirrel monkeys that are retired from research to join the colony, up to a maximum of 55 total squirrel monkeys, in order to provide an alternative to euthanization.
- To construct a “Kennel, Cattery, Small Animal Boarding and Training” facility that is adequately sized to provide shelter and care for a colony of 55 squirrel monkey and meets specifications sufficient to obtain accreditation from the Global Federation of Animal Sanctuaries.
- To operate the facility onsite at the project applicants’ residence, who will be the lead caretakers for the squirrel monkeys, to reduce vehicle miles traveled and to ensure the primary caretakers are in close proximity to the facility.

Proposed Project

The proposed project would require a Conditional Use Permit (UPZ) to allow for the construction of the kennel. The proposed facility would permanently house up to 55 squirrel monkeys (initial intake would be 51 monkeys recently retired from research).

The proposed project (reference Plate PD-3 through PD-8) includes the following features:

- One steel agricultural building built to Sacramento County code that measures 30' W x 90' L x 12'H would provide indoor shelter for the monkeys. The building would have a cement floor with a central drain attached to a dedicated septic system. Caging that is professionally designed and constructed to fulfill regulations for the welfare of this species would be installed on the cement floor (See Appendix A: site plan, floor plan, and photo examples of similar facilities).

- In addition to the one building for shelter, there would be outdoor naturalistic habitats planted with trees and shrubs. There would be 18 habitats, 9 measuring 12' W x 20' L x 10' H and six measuring 12' W x 24' L x 10' H. These dimensions fulfill mandated minimum space requirements for this species. Access from the indoor shelter to the habitats is via industry standard aerial runway-tunnels.

- Site preparation is minimal. The housing would be built on a level pasture and no existing trees or shrubs would be removed. Extensive grading will not be required; pasture grasses would be removed by scraping, four to six inches of gravel applied, and a cement pad for the building foundation. The habitat enclosures will sit on level ground. Steel-posts at the corners would be anchored into the ground with cement. A heavy wire mesh guard at the bottom would surround each enclosure and be covered with soil. The enclosures would be mulched and planted.

- An eight-foot tall security fence will be installed around the perimeter of the kennel building and outdoor habitats. Trees and shrubs will be densely planted around the outer perimeter of the fence to provide additional screening of the kennel enclosure.

- New septic system – The indoor housing would have a central drain in the cement floor to collect rinse water during cleaning. The rinse water would drain into a dedicated septic system that would be designed by RC Berti Construction of Wilton with input, permitting, and inspection by Sacramento County Environmental Management Division.
- ADA accessible parking space and access path from existing parking area to the kennel facility

In addition to the residents of the home the facility will employ up to two additional employees. The proposed facility has a nonprofit status as a 501(c)(3) organization and will seek accreditation/membership from the Global Federation of Animal Sanctuaries (GFAS) and the North American Primate Sanctuary Alliance. Accredited sanctuaries that are not permitted as zoos are prohibited from being open to the general public. Therefore, visitors to the site will be minimal and only by appointment (inspections, animal care providers, and facility sponsors/donors).

SUMMARY OF OPERATING PROCEDURES OF SQUIRREL MONKEY HAVEN

The project proponents have prepared the following summary of operating procedures:

Governance: Squirrel Monkey Haven (SMH) is a tax-exempt 501 (c) (3) organization. Christine Buckmaster is Founder-CEO; Paul Buckmaster DVM is Senior Veterinarian.

Operations: SMH must fulfill regulations set forth by California Department of Fish and Wildlife and the United States Department of Agriculture Animal Welfare Act as well as accreditation standards of the Global Federation of Animal Sanctuaries. These agencies would inspect SMH regularly (CFDW and USDA annually; GFAS tri-annually).

Health: SMH monkeys were born in California and are healthy. None are a health risk to people or other animals. Veterinarians provide health care to all of SMH monkeys. Monkeys are monitored daily for wellness. Law requires Veterinarians to report any animal (dog, cat, horse, rabbit, chicken, monkey, etc.) diseases that could be a risk to human health. None of the SMH monkeys have ever had a disease that was a risk to humans or other animals. A certificate of health from a licensed Veterinarian is required before monkeys can be released from research or transferred between zoos or sanctuaries.

Design: The property is at the end of N. Valensin. The site for the monkey housing is set back from the property boundary and has some existing trees and bushes for visual barrier. Indoor shelter for the monkeys would be a neutral colored steel Ag. building typical for the area. Habitats are wire mesh mandated by regulations. Indoor cages connect to outdoor habitats by aerial runway-tunnels. Habitat interiors have monkey-safe plantings. Habitat perimeters would have more water conserving landscaping for aesthetics. Plants would be maintained by water-conserving drip irrigation

Emergency Preparedness: Escape would be a greater hazard to monkeys' welfare than it would be for humans or other-animals. Significant preventative efforts and protocols are in place to prevent them including double-door entries with locks (see Exhibit D); however, as required by regulatory agencies, in the unlikely event of an escape there is a protocol. See *Emergency Prevention and Action Plan*.

Odor & Waste Removal: Regulations require daily cleaning and weekly sanitation of monkey housing to prevent odor and maintain a healthy environment for monkeys and staff.

- Absorbent bedding (e.g. wood shavings) would be used indoors on the cement floor of each cage to trap and deodorize feces and urine. Soiled bedding would be removed daily and all bedding would be removed weekly and refreshed after cages are sanitized.

- Indoor caging, floors, and walls would be cleaned and deodorized weekly with a sanitizing solution (e.g. Rescue).
- Outdoor habitats would be mulched and soiled areas cleaned and refreshed twice weekly.
- Aisles in the building would be swept and mopped daily with 1:32 bleach solution to keep area clean and prevent odors.
- Soiled bedding/mulch and animal waste would be put in heavy-duty plastic bags and disposed of in a commercial waste bin that has a heavy securable cover to prevent animal entry and odor escape. The bin will be stored next to the monkey housing area and will be picked up weekly by Cal-Waste Recover of Galt. Cal-waste has confirmed that they will schedule weekly pick-up to coordinate with building cleaning days such that waste will be picked-up within 24 hours of cleaning days. No special handling of the waste is required.
- All effluent from the facility would be directed to the dedicated septic system for the facility.

Noise: We do not expect the monkeys to be a noise nuisance in this active agricultural zone but preventative strategies have been investigated and would include 1) On-site analysis by an acoustical engineer to prescribe noise control mitigations 2) The indoor shelter for the monkeys would be insulated to provide acoustical attenuation and 3) Monkeys access to outdoor enclosures would be restricted to 7 AM -8PM weekdays and 9AM-8PM on weekends.

Water Use: The property is serviced by a private well that is not shared with any other property. An estimated 41,000 gallons of water would be used annually for all water needs including; monkey drinking water; cleaning; and water conserving landscaping maintenance.

Well Contamination: The well servicing the property is more than 200 ft. from the monkey housing. Neighboring wells are far more than 300 ft. from the monkey housing. Per Sacramento County Code, a septic system could be placed 100 ft. from a drinking water well. Given monkey housing is a far greater distance from wells, and waste is carefully handled, it is unlikely to contaminate wells.

Traffic: The residence would be home to the Buckmaster family (4). One or two staff members would drive to SMH daily (full-time 5-daysjweek). Guest visits to SM H would be by appointment and restricted to 2 passenger cars per day, on 5 days of the week (five weekdays, or four weekdays and one weekend day). Parking is available on property. No street parking would be necessary. North Valensin is a private road with a binding agreement by neighbors to share the cost of maintaining it.

Emergency Prevention and Action Plan

The applicants have prepared and Emergency Prevention and Action Plan, for the facility. This plan details procedures for preventing and dealing with:

- Monkey Escape;
- Human Medical Emergencies;
- Environmental Emergencies (e.g. Fire and Security Breach);

MONKEY ESCAPE

- **PREVENTION**

  - **ENCLOSURE SECURITY**

    o All monkey housing (indoor and outdoor cages) have double entries that are kept locked at all times.
    o Only SENIOR STAFF hold keys to monkey housing areas and access housing areas for shifting, cleaning, maintenance, or to aid monkey(s).
    o Monkeys are shifted from, and locked out of, housing areas before accessing them.
    o Slides, doors, and gates securing monkeys in housing areas are kept closed and locked at all times.
    NOTE: ALL DOORS, SLIDES, AND GATES ARE KEPT CLOSED AND SECURED WHILE STAFF IS WORKING IN A HOUSING AREA THAT MONKEYS ARE LOCKED OUT OF.
    o Indoor /outdoor enclosures that are not housing monkeys are kept locked at all times.
    o Personnel maintain verbal contact when servicing monkey housing.
    o When possible, enclosures are serviced from the outside to avoid unnecessary enclosure entry.
    o Routine standard operating procedures are used when servicing enclosures to prevent human error.

- **ENCLOSURE STRUCTURAL INTEGRITY**

    o Indoor and outdoor enclosures, runways, service doors, gates, gate latches, hinges, and sliding doors are manually and visually double-checked for function by SENIOR STAFF at opening in the AM and closing in the PM daily, during each visit to the housing area, and after each use to ensure proper functioning.

- **ESCAPE ACTION PLAN**

  - **• Perform these ESSENTIAL ACTIONS during an escape:**

    o maintain visual contact with escapee(s) at all times.
    o Alert all other personnel for assistance .

- o .Assess how escape occurred and secure breach to prevent additional escapes while maintaining an open securable area that the escapee(s) can to return too and be locked into.
- o Begin recapture protocol.
- o During an escape event the preferred outcome is that the monkey(s) voluntarily return to the enclosure without human contact.
- o **DARTING WITH SEDATIVE IS NOT STANDARD SOP WITH THIS SMALL SPECIES.**

➢ **RECAPTURE PROTOCOL**

Non-contact method for voluntary return (preferred):

*Squirrel monkeys do not like to be away from their social group and may return quickly

- o Neutral technique (when movement causes retreat from group)
  - • Watch and wait silently for voluntary return.
- o Positive reinforcement technique (PR) (when movement creates interest)
  - • Coax back to enclosure with high value treats.
- o Negative reinforcement technique (NR) (when PR is working but need extra encouragement)
  - • Guide toward and pressure into cage using gloves as visual NR.

NOTE: A combination of the above can be used. Judgment during an episode must guide specific actions. Generally follow this order: neutral --> positive reinforcement --> negative reinforcement.

Contact method (specific procedure described during personnel training sessions):

- o Manual
- o Net

NOTE: Detailed SOPs for various escape-recapture scenarios are provided during training sessions with personnel and during emergency drills.

➢ **PERFORM THESE ACTIONS AFTER THE MONKEY(S) ARE RECAPTURED**

- o Observe for injury.
- o Report incident to Attending Veterinarian and make arrangements for treatment as needed.

- **ESCAPE INCIDENT RECORDING, REPORTING, AND INVESTGATION**
  - o Record details of the escape and recapture in the INCIDENT LOG BOOK.
  - o Circumstances enabling an escape are investigated and remedies are put in place immediately.
  - o Report of escape is made to appropriate authorities as required.
  - o Organization-wide meeting is held to discuss the incident to refresh prevention methods.

HUMAN MEDICAL EMERGENCY

- CALL **911** IMMEDIATELY
- Alert other personnel for assistance.
- Perform first aid as appropriate until First Responders arrive.

Note: SMH personnel receive first aid training with annual refresher.

ENVIRONMENTAL EMERGENCY

FIRE

- **ACTION PLAN**
  - CALL **911** IMMEDIATELY
  - Alert other personnel for assistance.
  - Without endangering personal safety, apply fire extinguisher and/or water to reduce fire spread until First Responders arrive.
  - SENIOR STAFF REMAIN PRESENT TO AID FIRST RESPONDERS BY PROVIDING INFORMATION ABOUT THE FACILITY AND TO KEEP MONKEYS SECURED.

- **• PREVENTION**
  - Monkey housing and operations buildings are steel.
  - SMH personnel receive annual fire prevention training from the local Fire Authorities.
  - Fire extinguishers (inspected annually) are posted at all buildings.
  - Fire prevention includes management of natural landscape hazards, e.g., grasses.

FACILITY SECURITY

- **ACTION PLAN**
  - Call911 Immediately
  - Alert other personnel

- Tell intruders to leave the premises- do not approach intruders
- Maintain visual
- Retreat to safety of locked area personal threat is present

- **PREVENTION**

  - Personnel are on site 24/7/365 to monitor facility security.
  - Alarm and video security systems (ADT) are in place.
  - Personnel accompany any guests, contractors, vendors, etc., when

EMERGENCY SUCCESSION PLAN

SMH has prepared an Emergency Succession Plan if the organization is faced with the unlikely event of an untimely vacancy. The plan includes the following:

Succession Plan in Event of a Temporary, Unplanned Absence: Short-Term
The Board of Directors is authorized to implement the terms of this emergency plan in the event of the unplanned absence of the Executive Director. A temporary absence is one of less than three months in which it is expected that the Executive Director will return to his/her position once the events precipitating the absence are resolved.

At the time that this plan was approved, the position of Acting Executive Director would be:

Paul Buckmaster DVM
SMH Attending Veterinarian

Should the standing appointee to the position of Acting Executive Director be unable to serve, the first and second back-up appointees for the position of Acting Executive Director will be:

(1) C. Dell
Business Owner

(2) J. HAHDY
SMH Sanctuary Manager

The Board may consider the option of splitting executive duties among the designated appointees.

Authority and Compensation of the Acting Executive Director
The person appointed as Acting Executive Director shall have the full authority for decision-making and independent action as the regular Executive Director. The Acting Executive Director may be offered a temporary salary increase to the entry-level salary of the executive director position. Note: P. Buckmaster and C. Dell would not be compensated; J. Hardy would be compensated

Board Oversight
The board shall be responsible for monitoring the work of the Acting Executive Director and will be sensitive to the special support needs of the Acting Executive Director in this temporary leadership role.

Communications plan
As soon as possible after the Acting Executive Director has begun covering the unplanned absence, Board members and the Acting Executive Director shall communicate the temporary leadership structure to the following key external accreditation of SQUIRREL MONKEY HAVEN.

1) Young, Craig & Co., LLP
2) GFAS
3) NAPSA

Completion of Short-Term Emergency Succession Period
The decision about when the absent Executive Director returns to lead SQUIRREL MONKEY HAVEN should be determined by the Executive Director and the Board. They will decide upon a mutually agreed schedule and start date. A reduced schedule for a set period of time can be allowed, by approval of the Board, with the intention of working their way back up to a full-time commitment.

Succession Plan in Event of a Temporary, Unplanned Absence: Long-Term
A long-term absence is one that is expected to last more than three months. The procedures and conditions to be followed should be the same as for a short-term absence with one addition:
The Board of Directors will give immediate consideration, in consultation with the Acting Executive Director, to **temporarily** filling the management position left vacant by the Acting Executive Director. This is in recognition of the fact that for a term of more than three months, it may not be reasonable to expect the Acting Executive Director to carry the duties of both positions. The position description of a temporary manager would focus on covering the priority areas in which the Acting Executive Director needs assistance.

Completion of Long-Term Emergency Succession Period
The decision about when the absent Executive Director returns to lead SQUIRREL MONKEY HAVEN should be determined by the Executive Director and the Board. They will decide upon a mutually agreed upon schedule and start date. A reduced schedule for a set period of time can be allowed, by approval of the *Board,* with the intention of working the way up to a full-time commitment

Succession Plan in Event of a Permanent Change in Executive Director
A permanent change is one in which it is firmly determined that the Executive Director will not be returning to the position. The procedures and conditions should be the same as for the a long-term temporary absence with one addition:

The Board will consider the need for outside consulting assistance depending on the circumstances of the transition and the board's capacity to plan and manage the transition and search. The Board will also determine the need for an Interim Executive Director, and plan for the recruitment and selection of an Interim Executive Director and/or permanent Executive Director.

As Executive Director Christine Buckmaster does not receive compensation. Life insurance policy in the amount of $100,000 is in place to fund the salary for two years (current market rate for similar positions) of a new Executive Director in the event of Christine Buckmaster's death.

Temporary, unplanned absence of critical staff
Other paid staff with direct and daily responsibility for monkey care will be evaluated every 6 months of employment to determine readiness to move into leadership positions should the need arise. In the event of a sudden, unplanned absence of the Executive Director, the Board and the appointed Acting Executive Director (if present) will determine candidates to fill positions that have a direct and daily responsibility for monkey care: Sanctuary Manager, Monkey Caregiver, Veterinary staff.

This Emergency Succession Plan will be reviewed and updated annually.

Zoonotic Disease Program

The SMH Zoonotic Disease Program consists of the following:

1) Comprehensive veterinary care minimizes risk of zoonotic disease through preventative measures and early detection and reporting.

    - The health and wellbeing of each monkey is assessed daily during rounds. If a monkey is found ill a clinical assessment is performed immediately. SMH Veterinarians formulate and implement a diagnostic plan.
        - If a condition is treatable, a treatment plan is implemented.
        - If a condition is terminal, euthanasia is performed at an appropriate stage.
        - Deceased monkeys are submitted to an independent pathology lab to confirm cause of death.
        - In the unlikely event of a diagnosis of a reportable zoonotic disease, as listed by the California Department of Public Health or California Department of Food and Agriculture, SMH Veterinarians contact these agencies to formulate a plan of action.
    - SMH Veterinarians give all monkeys annual health exams that include standard screenings (tuberculin tests) and vaccinations (tetanus and rabies).

- o SMH Veterinarians consult regularly with other local primate veterinary experts at universities and zoos to remain informed of significant disease incidences or changes in vaccination recommendations.

2) Veterinarians and staff use universal precautions when administering medical care to the monkeys that involve exposure to bodily fluids such as blood.
- o Disposable gloves are used when touching monkeys during and exam.
- o Surfaces and equipment are kept sanitized before and after each use.
- o Disposal of medical waste: needles and syringes are placed into a sharps container, other waste is disposed in general trash or in biohazard bags when Veterinarians deem appropriate.

3) Veterinarians and staff use standard precautions when in the monkey housing area.
- o Dedicated shoes are worn in monkey housing areas.
- o Hand sanitizing stations and disposable gloves are in the monkey housing area- hands must be sanitized before entering and leaving the monkey housing area, disposable gloves must be worn in the monkey housing area and removed before exiting.

4) Environmental cleaning and sanitation of monkey housing and care equipment further reduces risk of zoonoses.
- o All care staging areas, e.g., food prep area , is kept sanitized after each use. Food is stored in refrigeration or in pest proof containers.
- o Monkey indoor housing is swept and moped daily, and power-washed and sanitized weekly with bleach solution and other standard animal shelter sanitation solutions, e.g. Rescue. Outdoor habitats are cleaned and sanitized weekly.
- o A licensed pest control contractor provides preventative pest control services regularly.

5) Staff receives zoonotic disease awareness and prevention training annually.
- o Staff is required to have tuberculin screening annually and current vaccinations (tetanus, MMR, influenza).

Intended Uses of the EIR

The EIR will be used by the Sacramento County Board of Supervisors in evaluating the proposed project and rendering a decision to approve or deny the proposed project. In addition, the EIR will be used as an informational document by the public and by other responsible agencies including, but not limited to: California Department of Fish and Wildlife, and U.S. Fish and Wildlife Service.

Table PD-1 below includes information required by Section 15124 of the CEQA Guidelines and summarizes the following intended uses of the EIR:

- A list of agencies that are expected to use the EIR in their decision making.
- A list of permits and other approvals required to implement the project.
- A list of related environmental review and consultation requirements required by federal, state, or local laws, regulations, or polices.

Table PD-1: Subsequent Permits, Approvals, Review, and Consultation Requirements

Agency	Approval
Sacramento County Board of Supervisors	Final Environmental Impact Report Certification
Sacramento County Board of Supervisors	Use Permit
Sacramento County Environmental Management Department	On-site Wastewater Disposal Permit
California Department of Fish and Wildlife	Consultation if nesting bird species found; Wild Animal Permit
Sacramento County Animal Control and Regulation	Wild Animal Permit
U.S. Department of Agriculture	Inspections pursuant to Animal Welfare Act
Global Federation of Animal Sanctuaries	Optional accreditation

Plate PD-3: Proposed Site Design

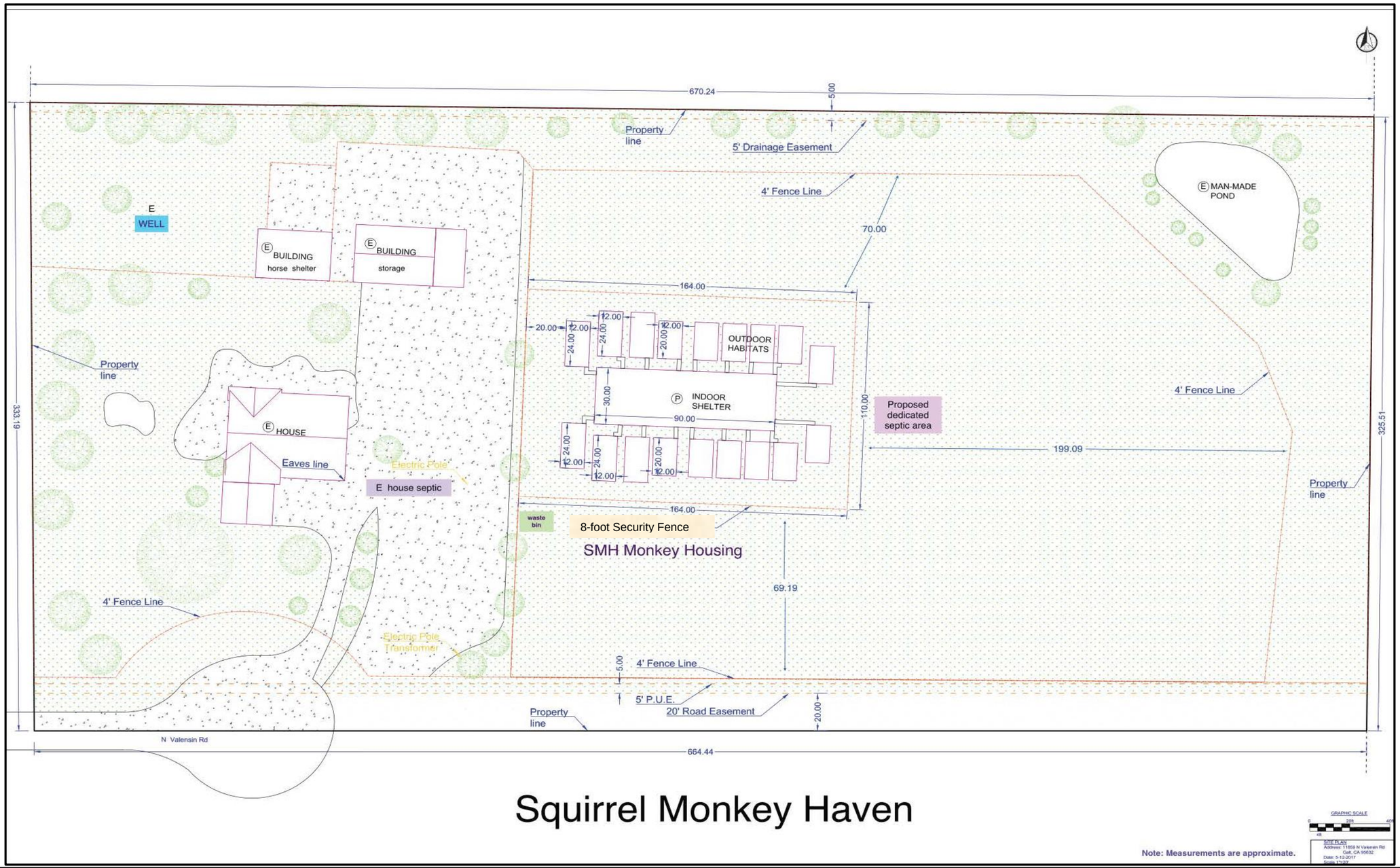


Plate PD-4: Landscape Plan

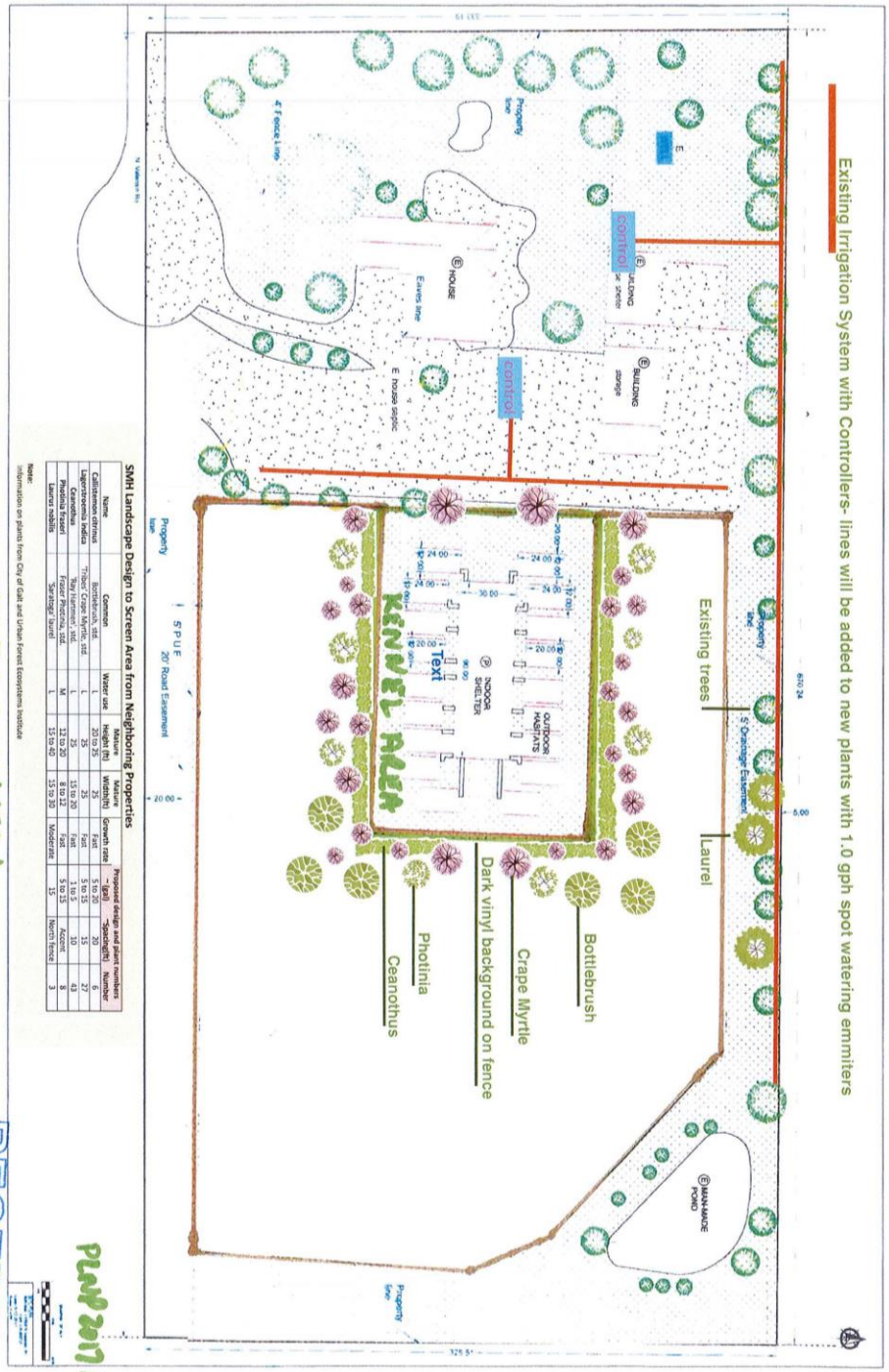


Plate PD-5: Facility Layout

PLNP 2017 - 00079

EXHIBIT 3 Squirrel Monkey Haven Indoor Shelter and Habitat Conceptual Floorplan
30' W x 90' L x 12' H steel Agriculture building with 1% sloped cement floor to center drain.
Materials and space mandated by regulations.
Interior caging 1" x 1" mesh wire on aluminum tubing frame.
Habitats 1" x 1" heavy cauge wire mesh with steel tube frame and bottom perimeter guards.

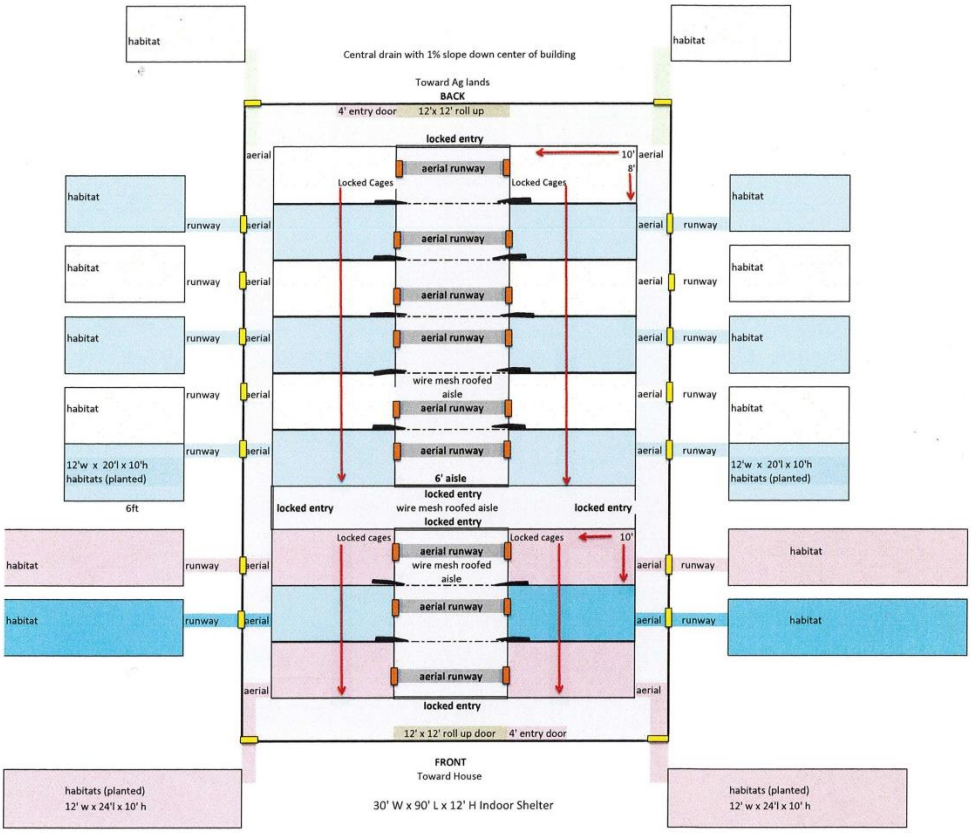
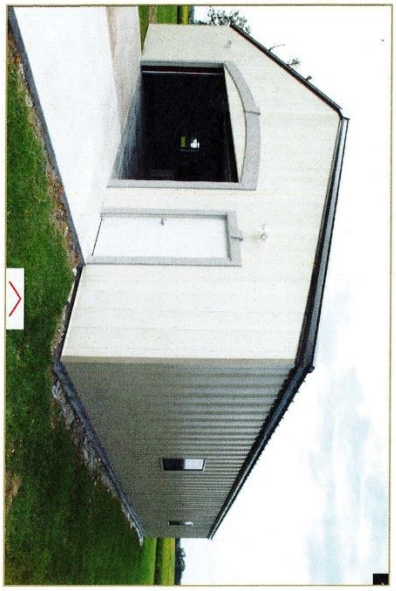
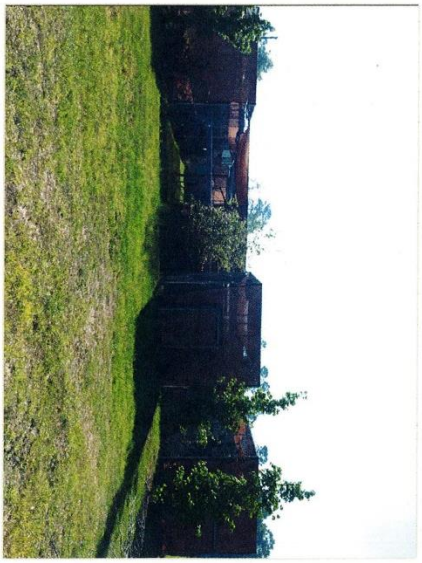


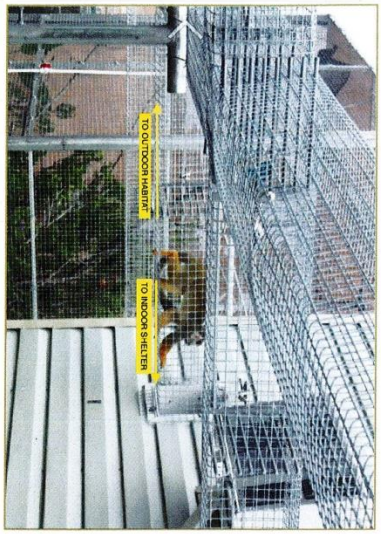
Plate PD-6: Example of Indoor and Habitat Design Components



Ag Building Indoor Shelter



Closest neighbor view (building in center)



Aerial Runway-tunnels

Habitats

Double Locked Entry

Plate PD-7: View 1 of proposed Facility

Plate PD-8: View 2 of Proposed Facility

2 ALTERNATIVES

INTRODUCTION

This chapter describes a range of reasonable alternatives to the proposed project. An evaluation comparing impacts of the alternatives to the impacts of the proposed project is included. This chapter concludes with the chosen “environmentally superior alternative.”

RANGE OF ALTERNATIVES

The State CEQA Guidelines require analysis of a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the project’s basic objectives and avoid or substantially lessen any of the significant effects of the project (Section 15126.6[a]). The range of potentially feasible alternatives required in an EIR is governed by a “rule of reason” that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The State CEQA Guidelines further require that the alternatives be compared to the project’s environmental impacts and that the “no project” alternative is considered (Section 15126.6[d] [e]).

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project’s significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Only feasible alternatives need be considered. “Feasibility” of alternatives is described in the State CEQA Guidelines (Section 15364) as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” The ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency’s decision-making body (see PRC Section 21081[a] [3]).

PROJECT OBJECTIVES

Pursuant to Section 15126.6 of the CEQA Guidelines, an alternative must “attain most of the basic objectives of the project.” The stated objectives are as follows:

1. To operate a squirrel monkey sanctuary for an existing colony of squirrel monkeys retired from research.

2. To allow new squirrel monkeys that are retired from research to join the colony, up to a maximum of 55 total squirrel monkeys, in order to provide an alternative to euthanization.

3. To construct a “Kennel, Cattery, Small Animal Boarding and Training” facility that is adequately sized to provide shelter and care for a colony of 55 squirrel monkey and meets specifications sufficient to obtain accreditation from the Global Federation of Animal Sanctuaries.

4. To operate the facility onsite at the project applicants’ residence, who will be the lead caretakers for the squirrel monkeys, to reduce vehicle miles traveled and to ensure the primary caretakers are in close proximity to the facility.

Dismissed Alternative

Alternative Sites

Under this alternative, the proposed facility would be built with similar specifications and would house the same number of monkeys, but would be located at an alternative location within unincorporated Sacramento County.

The applicants were considering another five-acre property in an AR-5 zoning district in the Cosumnes community of unincorporated Sacramento County; however, the site was no longer available by the time the project was taken to the Consumes Community Planning Advisory Council hearing. While there are several other zoning districts that would allow the use, all of them would also require a use permit. Screening criteria for this alternative would depend largely upon the availability of a parcel for purchase that met the parcel size and zoning parameters needed for development.

This alternative was dismissed from further evaluation since many of these variables are out of the applicants’ control. Since no significant impacts were identified with the project proposal and the applicant already owns a parcel that would allow the use with approval of a use permit there is no need to evaluate an alternative site as the environmental impacts would likely be similar to the project as proposed. State CEQA Guidelines Section 15126.6 (f)(3) states that an EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative.

Description of Alternatives

Alternative 1: No Project

State CEQA Guidelines Section 15126.6 (e)(1) requires that the no project alternative be described and analyzed “to allow decision makers to compare the impacts of approving the project with the impacts of not approving the project.” The no project analysis is required to discuss “the existing conditions at the time the notice of preparation is published…as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.”

Under the No Project Alternative, the project would not be built on the site and the site would remain in its current state. No physical environmental changes to the site would occur; however, this would not preclude future development proposals.

Alternative 2: Less Monkeys

This alternative would allow only 25 moneys; to be housed in the facility. This would result in a 50.5% reduction in the number of monkeys (51 monkeys) currently proposed by the applicant. With less monkeys, a smaller facility would be required to house them.

Alternative 3: No New Monkeys

This alternative assumes that the sanctuary facility would be located on the same site and built to the same specifications; however, the facility would only be able to house the proposed 51 monkeys and would not be able to take in new monkeys.

Impacts And Analysis

The following discussion evaluates the three project alternatives identified above. It is important to note that there were no significant impacts identified with the proposed project. Table ALT-1 summarizes which project objectives are met by the identified alternatives. Table ALT-2 summarizes the effect of the alternatives relative to the project.

Table ALT-1: Objectives Achieved by Project Alternatives

Project Objectives	Objective Met?		
	Alternative 1	Alternative 2	Alternative 3
To operate a squirrel monkey sanctuary for an existing colony of squirrel monkeys retired from research.	No	Yes	Yes
To allow new squirrel monkeys that are retired from research to join the colony, up to a maximum of 55 total squirrel monkeys, in order to provide an alternative to euthanization.	No	No	No
To construct a “Kennel, Cattery, Small Animal Boarding and Training” facility that is adequately sized to provide shelter and care for a colony of 55 squirrel monkey and meets specifications sufficient to obtain accreditation from the Global Federation of Animal Sanctuaries.	No	No	Yes
To operate the facility onsite at the project applicants’ residence, who will be the lead caretakers for the squirrel monkeys, to reduce vehicle miles traveled and to ensure the primary caretakers are in close proximity to the facility	No	Yes	Yes

Table ALT-2: Comparison of the Environmental Impacts of the Alternatives in Relation to the Proposed Project

Environmental Topic	Proposed Project	Alternative 1	Alternative 2	Alternative 3
Land Use	LTS	Similar	Similar	Similar
Hydrology, Drainage, and Water Quality	LTS	Similar	Similar	Similar
Public Services	LTS	Similar	Similar	Similar
Traffic and Circulation	LTS	Less	Similar	Similar
Air Quality	LTS	Similar	Similar	Similar
Noise	LTS	Similar	Similar	Similar
Cultural Resources	LTS	Similar	Similar	Similar
Greenhouse Gases and Climate Change	LTS	Similar	Similar	Similar
Biological Resources	LTSM	Similar	Similar	Similar

LTS = Less Than Significant Impact, LTSM = LTS with Mitigation

Alternative 1: No Project

The No Project Alternative could result in two different scenarios. It could result in no additional development on the site, or the site could develop with uses already permitted by right by the Sacramento County Zoning Code. With the implementation of the no build scenario, the proposed development would not occur and there would be no physical changes to the project site. This alternative would not affect demand for utilities, service systems, or energy use because no new uses would be developed, and there would be no effects relative to cultural resources, traffic, air quality, hydrology, greenhouse gases and climate change, noise, or biological resources because no construction would occur. Overall, the no build scenario would result in less environmental impacts than the proposed project.

The No Project Alternative does not rule out future developmental proposals, however. The AR-5 zoning district allows by right such things as hog farms, stables, and corrals (commercial or private). The residents could begin a small farming operation involving plowing, higher water usage, and use of light to heavy equipment on the site. The Sacramento County Zoning Code does not limit the number of livestock or farm animals the owner could have on premise, nor the types of crops that could be grown; therefore, it could be argued that if one of these uses were proposed, the No Project Alternative has the potential for similar or greater impacts than the proposed project.

Alternative 2: Less Monkeys

This alternative would allow only 25 monkeys to be housed in the facility. This would result in a 50.5% reduction in the number of monkeys (51 monkeys) currently proposed by the applicant. This alternative would likely result in a small reduction in water usage and monkey waste output; however, the project's impacts on public services were already identified as less than significant so it is not significantly lessening a significant impact.

With less monkeys, a smaller facility would be required to house them. The potential impacts of the proposed project center around the construction of the monkey housing not the operation of the facility. Potential construction impacts, (i.e. disturbance of nesting birds and potential cultural resource discovery) would remain the same whether a larger facility accommodating 55 monkeys or a smaller facility that houses only 25 monkeys were to be built.

All the other environmental topic areas are expected to be similar to the project, since the only change to the project description would be the number of monkeys allowed. Overall, the effects of this alternative would be similar to the proposed project; however, it would only meet two of the four project objectives.

Alternative 3: No New Monkeys

This alternative assumes that the sanctuary facility would be located on the same site and built to the same specifications; however, the facility would only be able to house the proposed 51 monkeys and would not be able to take in new monkeys. This alternative would likely result in a small reduction in water usage and monkey waste output over time as monkeys passed away; however, the project's impacts on public services were already identified as less than significant. Once the last monkey passed away, the facility would no longer be in operation. This alternative essentially would limit the timeframe that the facility would be in operation.

All the other environmental topic areas are expected to be similar to the project, since the only change to the project description would be the number of monkeys allowed. Overall, the effects of this alternative would be similar to the proposed project; but would only meet three of the four project objectives.

Environmentally Superior Alternative

The No Project Alternative would result in less environmental impacts than the proposed project should the applicants choose to pursue a no build scenario. However, other uses, allowed by right, could have similar or greater impacts than the proposed project. This alternative would not meet any of the project's objectives

Based on the information and the comparison of environmental impacts in Table ALT-2, both Alternative 2 and Alternative 3 would have similar impacts to the proposed project. Both alternatives would still construct a kennel facility and would necessitate the same mitigation measures as the proposed project. Neither alternative would meet all the objectives of the proposed project.

Potential impacts of the project center around the construction activities associated with the monkey housing. Only the No Project, no build scenario would avoid these potential impacts completely, and would be considered the environmentally superior alternative. However, the CEQA Guidelines state that when the No Project Alternative is the

environmentally superior alternative, the EIR must also identify the environmentally superior of the other alternatives (section 15126(e)(2)).

The proposed project and both Alternative 2 and Alternative 3 would build the kennel facility. Potential impacts of the proposed project and these alternatives are related to the construction activities associated erecting the kennel structure. Impacts from the proposed project and the two build alternatives would, therefore, be similar in nature and neither would be environmentally superior to the other.

3 LAND USE

INTRODUCTION

The purpose of this chapter is to examine the project's proposed land use and provide an analysis of its compatibility with the existing and planned land uses in the area. This chapter describes the land use context for the project site and its surroundings, including existing land use, land use designations, and zoning. In addition, this chapter includes a summary of applicable land use policies and describes the project's compatibility with these policies.

SETTING

According to the Sacramento County General Plan, the site has an Agricultural Residential land use designation (reference Plate LU-1). The Southeast Area Community Plan designates the property as having an Agricultural-Residential (AR-5) land use designation (reference Plate LU-2). The property is zoned A-5 (Agriculture – 5-acre minimum parcel size; reference Plate LU-3).

All adjacent parcels, with the exception of the east bounding parcel, have similar land use and zoning designations as the subject parcel; these properties are developed with single-family residences and accessory structures. The parcel to the east is zoned Agricultural – 20 Acres (AG-20), has a General Agricultural 20 acres (AG-20) land use designation, and is in agricultural production.

Plate LU-1: General Plan 2030 Land Use Designations

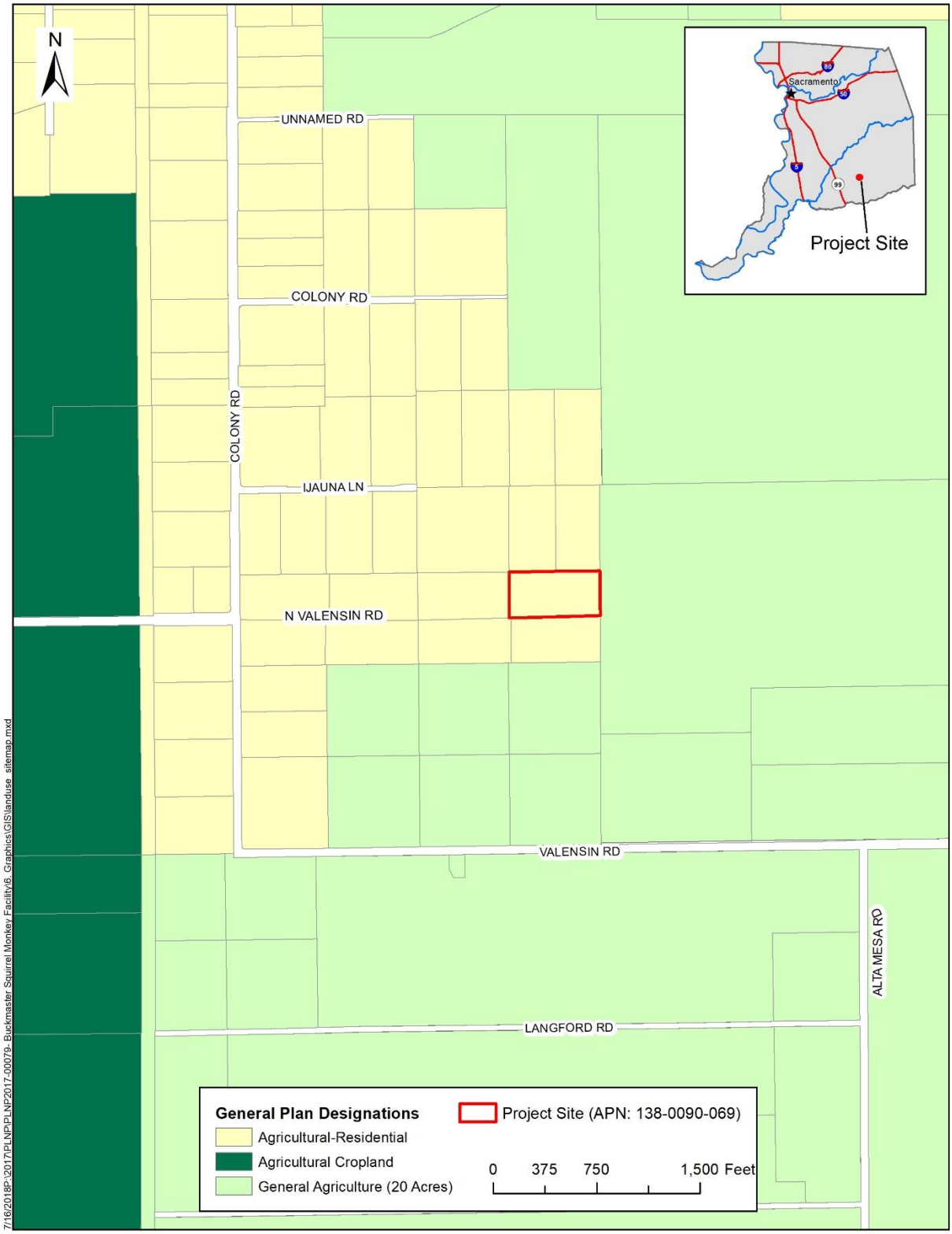


Plate LU-2: Southeast Area Community Plan Land Use Designations

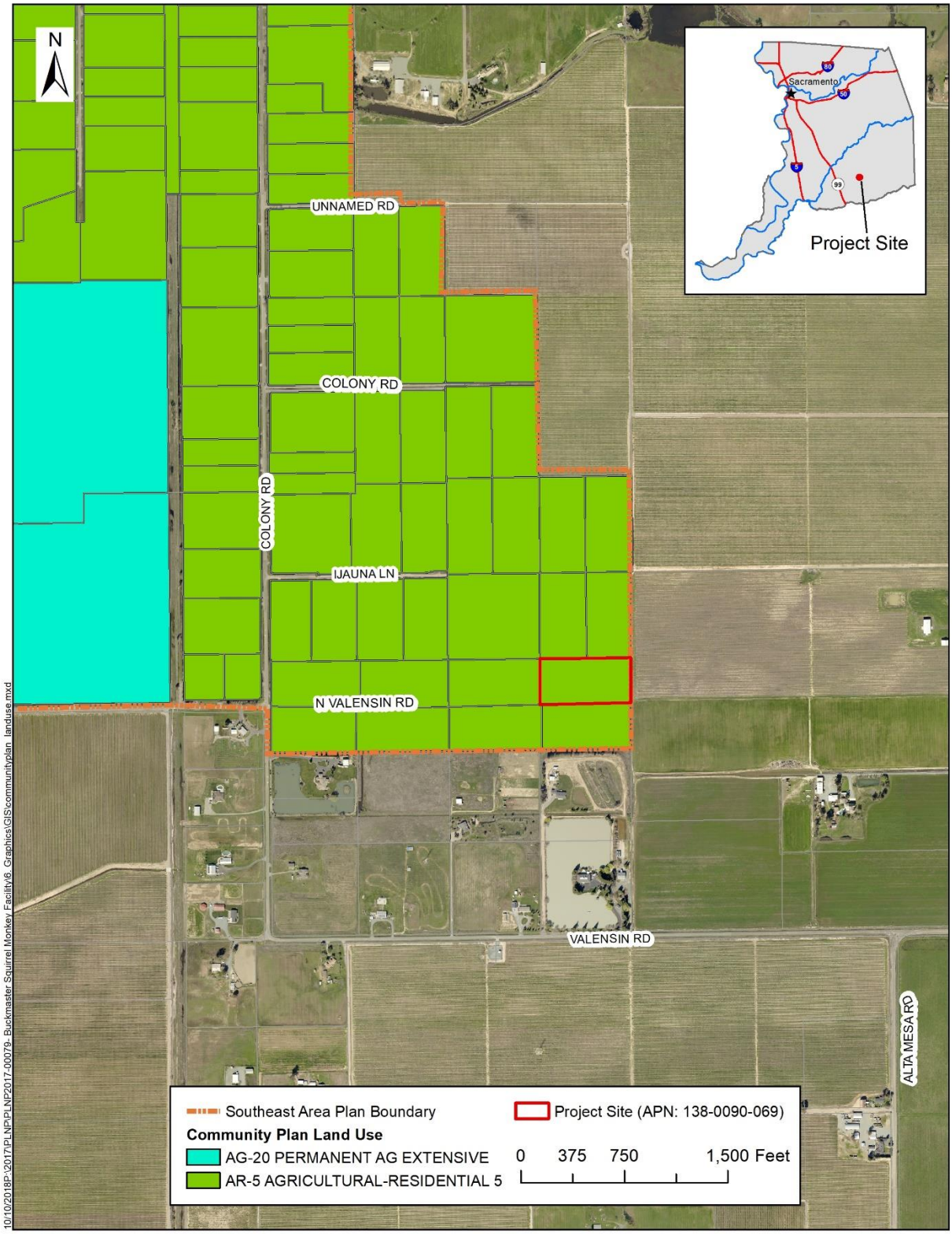
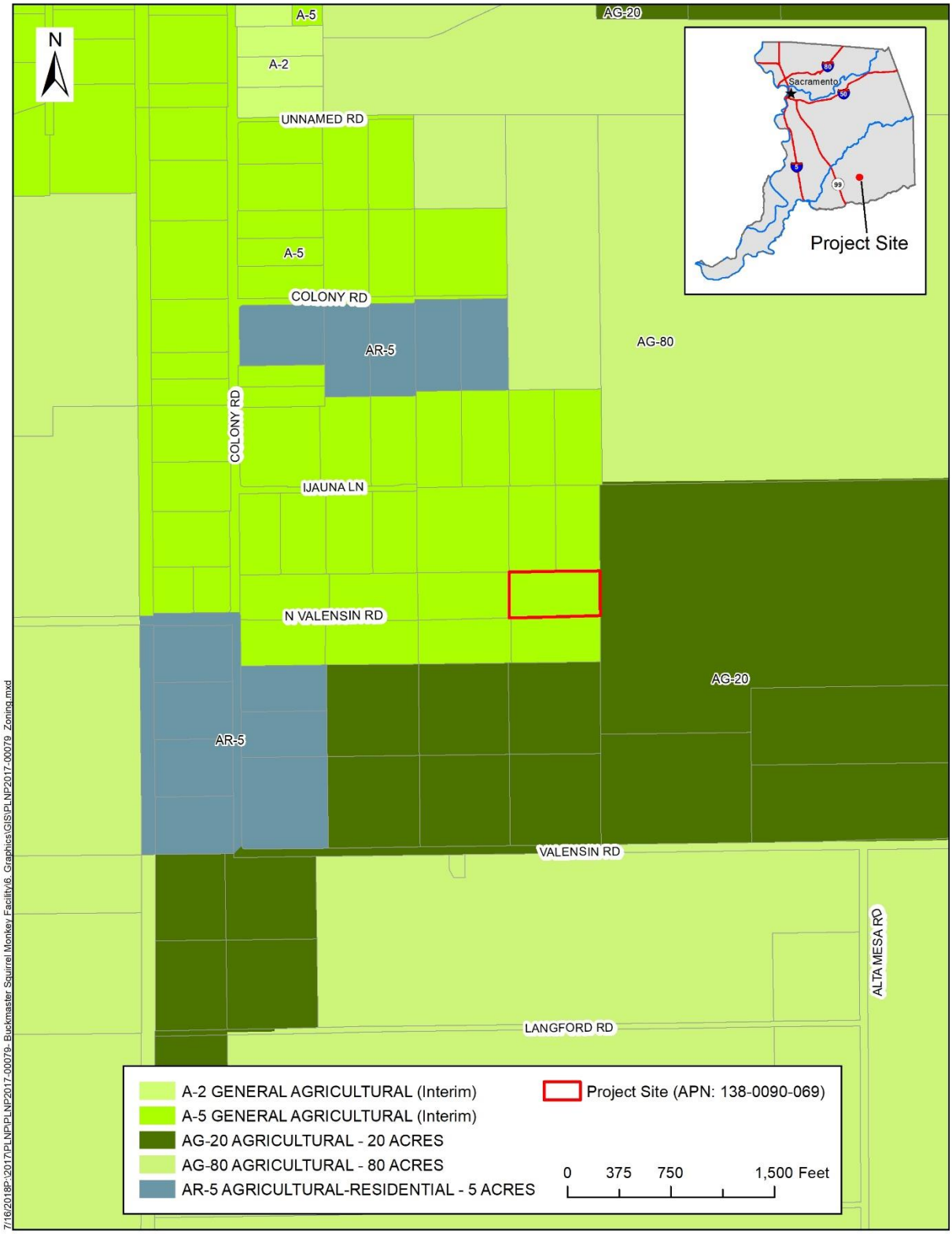


Plate LU-3: Zoning Designations



Regulatory Setting

Sacramento County General Plan

The project site is designated as Agricultural-Residential in the Sacramento County General Plan, which allows for one- to ten-acre minimum lots, resulting in a development density of 2.5 to 0.25 persons per acre. The Agricultural-Residential designation allows rural residential uses such as animal husbandry, small-scale agriculture, and other limited agricultural opportunities. The subject property is outside the county Urban Service Boundary (USB) and therefore public infrastructure for water and sewage is not available.

Southeast Area Community Plan

Sacramento County is divided into distinct community areas for planning purposes. These community planning areas encompass socially and economically similar areas with an established sense of community identity. The subject project site is located in the Southeast Area Community Plan and has an AR-5 (Agricultural-Residential 5-acres) land use designation.

Zoning Code

The current version of the Sacramento County Zoning Code was adopted by the Board of Supervisors in September 2015 and is used to encourage the most appropriate use of land; to conserve, protect and stabilize the value of property; to provide adequate open space for light and air; to prevent undue concentration of population; to lessen congestion on the streets; to facilitate adequate provisions for community utilities such as transportation, water, sewer, schools, parks and other publicly owned facilities; and to promote public health, safety and general welfare.

The project site is zoned A-5. A-5 zoning is an Interim Agricultural Holding Zone. The Interim Agricultural Holding Zones were applied to rural areas of the County that historically were used for agricultural purposes but had the potential to undergo a transition to urban development in the future. Pursuant to the Zoning Ordinance Title IV (Interim Zones), each of the Interim Agricultural Holding Zones has a correlation to a standard base zoning district in the current Zoning Ordinance which is used to establish allowable uses and development standards. The A-5 interim zone district is treated in the same manner as properties that are designated as AR-5 (Agricultural Residential) on the County Zoning Map and Zoning Ordinance. According to Section 3.2.5 of Sacramento County Zoning Code; Table 3.1 of the Zoning Ordinance, kennels; catteries; and, small animal boarding and training facilities in the AR-5 land use zones are permitted subject to the issuance of a conditional use permit by the Zoning Administrator.

Zoning Code Section, 3.2.4.A states:

> If a use is not listed in Table 3.1, 3.2, or 3.3, included in a use definition, or shown as a permitted or conditionally permitted use in any zoning district, the use is prohibited, unless the Planning Director determines that either:
>
> 1. The use is substantially similar in characteristics, intensity, and compatibility to a use or uses within the zoning district, applicable to the property; or
> 2. The use would be appropriate in the zoning district, applicable to the property as a permitted or conditional use.

Zoning Code, Section 3.2.4.B states:

> In those cases where the Planning Director makes a determination that the use meets either Sections 3.2.1 or 3.2.2, the use shall conform to all the regulations, conditions of approval, and use standards applicable to the similar described use(s). If the use would be appropriate in the zoning district as a conditional use, a Conditional Use Permit shall be heard by the designated body for the similar use.

The Planning Director determined pursuant to the findings in Section 3.2.4.A of the Zoning Code that the proposed monkey sanctuary was substantially similar to a kennel, which is allowed in an A-5 zoning district subject with the issuance of a Conditional Use Permit by the Zoning Administrator.

Significance Criteria

Based on Appendix G of the State CEQA Guidelines, the project would result in a significant impact to land use if it would:

- physically disrupt or divide an established community;
- conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Impacts And Analysis

The analysis in this section is based on a review of the Sacramento County General Plan of 2005-2030 (2030 General Plan), the Southeast Area Community Plan, and the Sacramento County Zoning Code. The project's consistency with applicable planning documents is used as the basis for determining the effects of the project on existing and planned land uses.

Impact: Consistency with General Plan, Southeast Area Community Plan, and County Zoning Code

General Plan

The General Plan does not specifically address accessory uses or structures. The majority of the General Plan's goals, objectives, and policies related to the Agricultural-Residential land use designation pertain to expansion of the Urban Services Boundary (USB), protection of prime agricultural lands, and maintaining a minimum parcel size of five acres. The proposed project will not change the USB, will be served by private well and septic, is not designated as prime agricultural lands on the important farmlands map, and is five acres in size. Therefore, the project is consistent with the County's General Plan and Agricultural-Residential land use designation.

Community Plan

The Southeast Area Community Plan designation will remain Agricultural-Residential and the project is consistent with the uses and densities allowed in an Agricultural-Residential land use. The proposed project meets the five-acre minimum parcel size designated by the AR-5 land use designation in the Southeast Area Community Plan. The project will not disrupt or divide the existing community.

Zoning Code

Zoning Ordinance Section 5.3 provides development standards for Agricultural-Residential Zone districts. Section 5.3.2 addresses accessory structures and has different standards based on type of agricultural structure such as private or commercial or if the structure is residential such as a garage or shed. The proposed kennel facility, while not open to the public is somewhat commercial in nature as there will be two employees that do not live on the property and pursuant to the Building Code will be required to meet ADA parking and accessibility requirements. The setback requirements for commercial agriculture accessory structures is greater than for private agricultural accessory structures, however private accessory structures have greater restrictions on size and height. Table I identifies the zone district standards for both types of accessory structures and the proposed project's compliance with a respective standard.

Table LU-1: Development Standard Consistency

	Table 5.5 Commercial Accessory Structure Standards	Table 5.6 Private Accessory Structure Standards	Proposed Project
Minimum Parcel Size	5 acres per zoning	2 acres	5 acres
Setbacks, Building/Structures (measured from property line)			
Front/Side Street	55 feet	25 feet / 17.5	162 feet structure 123 feet kennel fence
Side Yard	50 feet	10 feet	295 feet structure 267 feet kennel fence
Rear Yard	50 feet	20 feet	137 feet structure 97 feet kennel fence
Building Height	50 feet	30 feet	12 feet
Maximum Building Size	No restrictions	200 % primary structure (4,570 feet)	2,700 square feet

As shown in

Table LU-1: Development Standard Consistency, the proposed project significantly exceeds minimum setback requirements and is well below the height and maximum size thresholds regardless of which accessory structure standard is used.

Some of the neighboring properties have horses and other livestock. Kennels are considered a generally compatible use within agricultural and agricultural/residential areas which allow other animal related uses. The proposed project is not expected to significantly alter current land uses in the area. Assuming compliance with the Zoning Code development standards, and standards of Animal Care and Regulation, no significant impacts are expected. Since the project is consistent with the General Plan, community plan, and County Zoning Code, the project's land use impacts are considered ***less than significant***.

MITIGATION MEASURES

No mitigation is required.

4 HYDROLOGY, DRAINAGE, & WATER QUALITY

INTRODUCTION

This chapter describes the existing hydrologic and water quality setting for the project site, including runoff, storm drainage, flooding, and groundwater. Applicable regulations and policies regarding hydrology and water quality are discussed, and impacts that may result from project implementation are identified.

ENVIRONMENTAL SETTING

CLIMATE

The climate of the Sacramento area is Mediterranean, with cool wet winters and hot dry summers. Precipitation within the Sacramento River watershed falls as both rain and snow, with precipitation in the winter falling primarily as snow in the higher elevations. Annual, monthly, and daily precipitation varies widely within the watershed, with the highest precipitation totals generally falling in winter in the Sierra Nevada, and in the northern part of the watershed. The high variability in precipitation, snowfall, and snowmelt results in highly variable runoff patterns each year and month during late fall, winter, and spring. Rainfall occurs primarily from November through April and ranges from about 7 to 37 inches per year, with an average annual rainfall of approximately 18 inches (Sacramento Groundwater Authority 2013).

HYDROLOGY

Water resources within the county include four rivers (Sacramento, American, Cosumnes, and Mokelumne), numerous streams, the Sacramento River Delta (Delta), and an extensive groundwater basin. The primary watershed within Sacramento County is the Sacramento River Basin, which encompasses 26,500 square miles and is bounded by the Sierra Nevada Mountains to the east, Coast Ranges to the west, the Cascade Range and Trinity Mountains to the north, and the Delta to the south. Within the Sacramento River Basin there are several sub-basins or smaller watersheds that drain to the tributaries of the Sacramento River including the Willow Creek (South) watershed. The project site is located within the Willow Creek (South) watershed.

DRAINAGE

The average runoff from the Sacramento River Basin is estimated to be 21.3 million acre-feet per year, and the melting snow pack in the Sierra Nevada keeps the water flowing during dry summer months. Drainage within Sacramento County, including the project vicinity, is primarily provided by engineered drainage systems consisting of pipes, gutters, swales, ditches, and graded land (County of Sacramento 2010).

The project site generally drains northwesterly towards the drainage channel at the northern end of property. Drainage continues west across the neighboring parcel where

it is channeled into the Willow Canal, which continues westerly across the next two properties before heading south across N. Valensin Road. The canal continues westerly across agricultural fields where it intersects Badger Creek, which terminates into the Cosumnes River. At its intersection with McKenzie Road, the Willow Canal also has a southern diversion, which flows into Laguna Creek (South) which terminates into the Cosumnes River (please see Plate WQ-1).

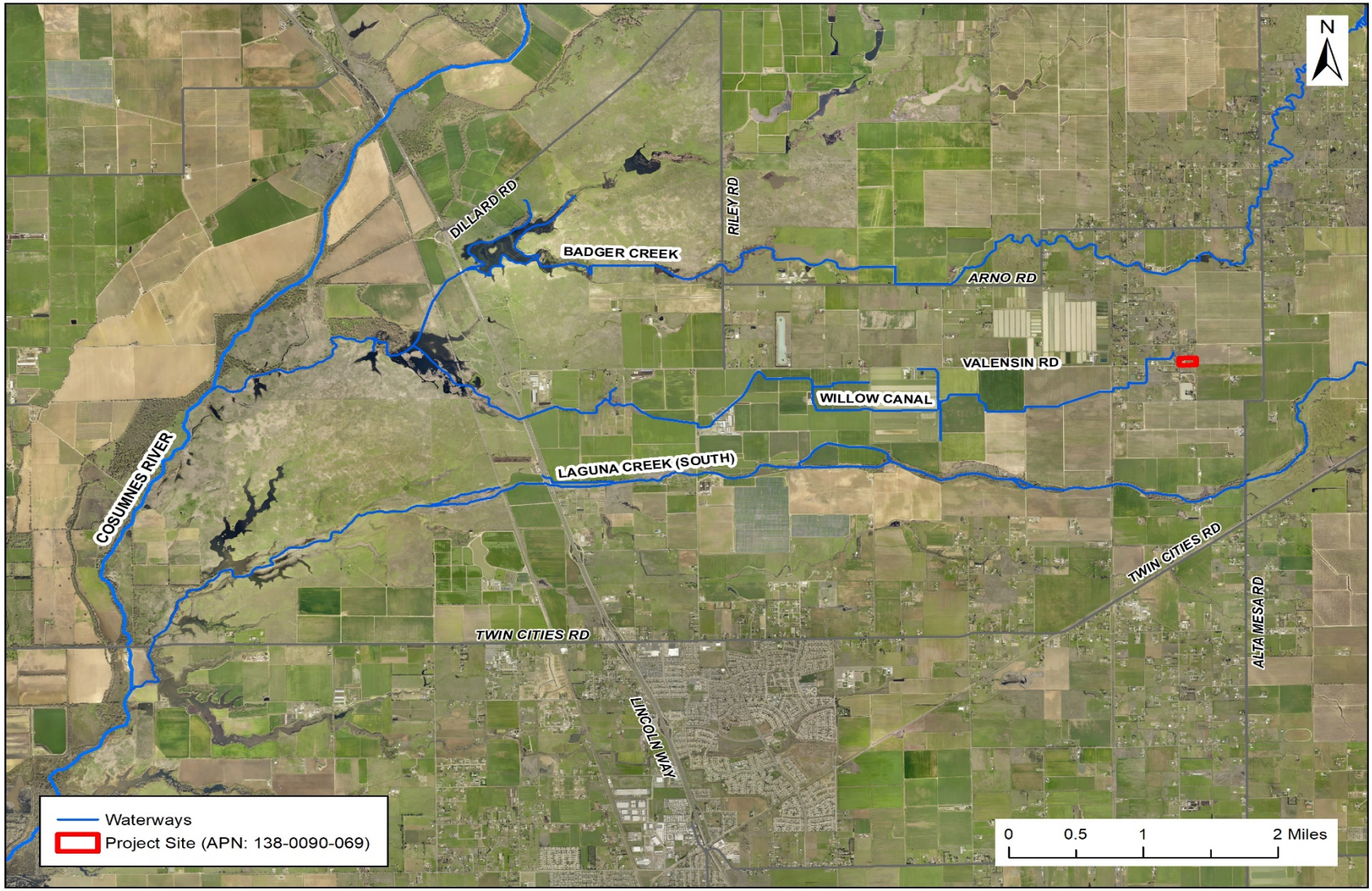
REGULATORY SETTING

FEDERAL

The Clean Water Act (CWA) is the primary federal statute governing the protection of water quality and was established to provide a comprehensive program to protect the nation's surface waters. U.S. Environmental Protection Agency (EPA) is the federal agency with primary authority for implementing regulations adopted pursuant to the CWA. The basis of the CWA consists of the federal Water Pollution Prevention and Control Act (Water Pollution Act) passed in 1948. The Water Pollution Act was substantially reorganized and expanded in subsequent amendments passed in 1972 and in 1977, when "Clean Water Act" became its common name. The Water Pollution Act required the EPA to establish nationwide effluent standards on an industry-by-industry basis. The 1972 amendment established the National Pollutant Discharge Elimination System (NPDES) program. As a result of the reauthorization of the CWA in 1987, Sections 402(p) through 405 were added. One of the results of the new sections was the creation of a framework for regulating discharges under the NPDES permit program, which is discussed later in this section.

Under federal law, EPA has published water quality regulations under Volume 40 of the Code of Federal Regulations. Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question, and (2) criteria that protect the designated uses. Section 304(a) requires EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. EPA has designated the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs) with the authority to identify beneficial uses and adopt applicable water quality objectives. EPA has delegated to the State of California the authority to implement and oversee most of the programs authorized or adopted for CWA compliance through the Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act), described below.

Plate WQ-1: Regional Drainage from Project Site



STATE

In California, the State Water Resources Control Board has broad authority over water quality control issues for the state. The SWRCB is responsible for developing statewide water quality policy and exercises the powers delegated to the state by the federal government under the CWA. Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The regional boards are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in the plans. The Central Valley RWQCB is responsible for water resources in the project vicinity.

On January 20, 2005, the SWRCB adopted the Low Impact Development (LID) Policy, which promotes “sustainability” as a key parameter to be considered during the design and planning process for future development. The sustainability practice promotes LID to benefit water supply and contribute to water quality protection. LID has been a proven approach in other parts of the country and is seen in California as an alternative to conventional stormwater management. It is necessary to incorporate LID into the design of proposed projects to meet the “maximum extent practicable” standard of the Phase II General Permits (see discussion of NPDES permits, below). LID practices include measures such as reducing impervious surface area, using natural drainage systems, and designing development to correspond to existing terrain.

PORTER-COLOGNE WATER QUALITY CONTROL ACT

The Porter-Cologne Act is California’s statutory authority for the protection of water quality. Under the Porter-Cologne Act, the state must adopt water quality policies, plans, and objectives that protect the state’s waters for the use and enjoyment of the people. The act sets forth the obligations of the SWRCB and RWQCBs to adopt and periodically update basin plans. Basin plans are the regional water quality control plans required by both the CWA and Porter-Cologne Act in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California.

The Porter-Cologne Act also requires waste dischargers to notify the RWQCBs of their activities through the filing of reports of waste discharge and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, NPDES permits, Section 401 water quality certifications, and other approvals. The RWQCBs also have the authority to issue waivers to reports of waste discharge/waste discharge requirements for broad categories of “low threat” discharge activities that have minimal potential for adverse water quality effects when implemented according to prescribed terms and conditions.

STATE NON-DEGRADATION POLICY

In 1968, the SWRCB adopted a nondegradation policy aimed at maintaining high quality for waters in California. The nondegradation policy states that the disposal of wastes into state waters shall be regulated to achieve the highest water quality consistent with maximum benefit to the people of the state and to promote the peace, health, safety, and welfare of the people of the state. The policy provides as follows:

a) Where the existing quality of water is better than required under existing water quality control plans, such quality would be maintained until it has been demonstrated that any change would be consistent with maximum benefit to the people of the state and would not unreasonably affect present and anticipated beneficial uses of such water.

b) Any activity which produces waste or increases the volume or concentration of waste and which discharges to existing high-quality waters would be required to meet waste discharge requirements.

LOCAL

SACRAMENTO COUNTY GENERAL PLAN

The Conservation Element of the County General Plan (2011) contain the following policies that are applicable to the project:

Policy CO-24. Comply with the Sacramento Areawide National Pollutant Discharge Elimination System Municipal Stormwater Permit (NPDES Municipal Permit) or subsequent permits, issued by the Central Valley Regional Water Quality Control Board (Regional Board) to the County, and the Cities of Sacramento, Elk Grove, Citrus Heights, Folsom, Rancho Cordova, and Galt (collectively known as the Sacramento Stormwater Quality Partnership [SSQP]).

Policy CO-26. Protect areas susceptible to erosion, natural water bodies, and natural drainage systems.

Policy CO-30. Require development projects to comply with the County's stormwater development/design standards, including hydromodification management and low impact development standards, established pursuant to the NPDES Municipal Permit. Low impact development design and associated landscaping may serve multiple purposes including reduction of water demand, retention of runoff, reduced flooding and enhanced groundwater recharge. (Modified 2016)

Policy CO-31. Require property owners to maintain all required stormwater measures to ensure proper performance for the life of the project.

Policy CO-105a. Encourage flood management designs that respect the natural topography and vegetation of waterways while retaining flow and functional integrity. (Added 2016)

Policy CO-107. Maintain and protect natural function of channels in developed, newly developing, and rural areas.

Policy CO-114. Protect stream corridors to enhance water quality, provide public amenities, maintain flood control objectives, preserve and enhance habitat, and offer recreational and educational opportunities.

Policy CO-118. Development adjacent to waterways should protect the water conveyance of the system, while preserving and enhancing the riparian habitat and its function.

SACRAMENTO COUNTY STORMWATER AND EROSION CONTROL

The County has established a Stormwater Ordinance (Sacramento County Code 15.12). The Stormwater Ordinance prohibits the discharge of unauthorized non-stormwater to the County's stormwater conveyance system and local creeks. It applies to all private and public projects in the County, regardless of size or land use type. In addition, Sacramento County Code 16.44 (Land Grading and Erosion Control) requires private construction sites disturbing one or more acres or moving 350 cubic yards or more of earthen material to obtain a grading permit. To obtain a grading permit, project proponents must prepare and submit for approval an Erosion and Sediment Control (ESC) Plan describing erosion and sediment control best management practices (BMPs) that will be implemented during construction to prevent sediment from leaving the site and entering the County's storm drain system or local receiving waters. Construction projects not subject to SCC 16.44 are subject to the Stormwater Ordinance (SCC 15.12) described above.

In addition to complying with the County's ordinances and requirements, construction sites disturbing one or more acres are required to comply with the State's General Stormwater Permit for Construction Activities. The Construction General Permit is issued by the State Water Resources Control Board (http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml) and enforced by the Regional Water Board. Coverage is obtained by submitting a Notice of Intent (NOI) to the State Water Board prior to construction. The General Permit requires preparation and implementation of a site-specific Stormwater Pollution Prevention Plan (SWPPP) that must be kept on site at all times during construction for review.

Applicable projects applying for a County grading permit must show proof that a NOI has been filed and must submit a copy of the SWPPP. Although the County has no enforcement authority related to the Construction General Permit, the County is required by its Municipal Stormwater Permit (Order Number R5-2008-0142) to verify that the SWPPP program includes six minimum components (public education and outreach on storm water impacts, public involvement participation, illicit discharge detection and elimination, construction site storm water runoff control, post-construction storm water management in new development and redevelopment, and pollution prevention/good housekeeping for municipal operations).

In addition to the above construction controls, new development is required to include treatment of urban runoff using the BMPs required by the current standard defined in the *Stormwater Quality Design Manual for the Sacramento and South Placer Regions, 2014*. The BMPs include a number of options for treatment including simple grassy swales and rain gardens, to more complex systems that use cisterns, pumps, and sand filters. Updates and background on the County's requirements for post-construction

stormwater quality treatment controls, along with several downloadable publications, can be found at the following websites:

http://www.waterresources.saccounty.net/stormwater/Pages/newdevelopment.aspx

Sacramento County Floodplain Management Ordinance

Sacramento County has participated in the National Flood Insurance Program since 1979. A County Floodplain Management Ordinance which meets or exceeds the minimum standards of the Federal Emergency Management Agency (FEMA) is a requirement of such participation. The Floodplain Management Ordinance specifically describes what types of development activities are allowed and how proposed development may be permitted. The purpose of floodplain management is to realize the extent of flood hazards and to manage the flooding in a manner so as to reduce damage to structures and infrastructure and to minimize the risk of human casualties.

All proposed development activity in floodplains -- those areas designated by FEMA on the Flood Insurance Rate Maps for Sacramento County (Community Number 060262) and other areas subject to flooding -- must be reviewed and permitted by the County's Floodplain Administrator (Department of Water Resources) prior to construction.

Sacramento County Environmental Management Department

The Environmental Management Department **Liquid Waste Program** oversees the following activities throughout the County of Sacramento:

- Design, construction, and installation of on-site wastewater treatment systems and wastewater holding tanks.
- Businesses and vehicles engaged in the cleaning of septic tanks, portable toilets, and wastewater holding tanks.
- On-site wastewater processing and or treatment facilities

Significance Criteria

Based on CEQA Guidelines Appendix G, the project would result in a significant impact to hydrology or water quality if it would:

- violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

- substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;

- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of

impervious surfaces, in a manner which would result in substantial erosion or siltation on- or offsite;

- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the amount of surface runoff in a manner which would result in flooding on- or offsite;
- create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- impede or redirect flood flows;
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation;
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

ISSUES NOT DISCUSSED FURTHER

A discussion of groundwater supply is contained within the Public Services chapter of this document. The project would not result in more than one acre of impervious surfaces and would not interfere with groundwater recharge. Impacts related to ground water supply are ***less than significant***. Please reference Chapter 5 Public Services for further discussion.

Because of the distance from the nearest open waterbody, the Pacific Ocean (more than 100 miles to the west), and the nearest lake, Folsom Lake (more than 37 miles to the north), the project would not be affected by inundation as a result of seiche or tsunami. The project site is flat and there are no steep areas that would have the potential to generate mudflows.

IMPACTS AND ANALYSIS

IMPACT: 100-YEAR FLOODPLAIN

The project is located within a FEMA “Zone X”(outside the 100-year floodplain) area and will not place structures in a FEMA designated floodplain or flood hazard area. County Department of Water Resources (DWR) staff (Michel Meaney) provided correspondence on July 20, 2017, confirming that:

- the project is located within a FEMA “Zone X”;
- The parcel may be part of a local floodplain. Additional review would be needed to determine the flood elevation, if any;

- an existing drainage easement along the north property boundary is located over an existing drainage ditch;
- existing drainage control is located at the centerline of Valensin Road at a drainage culvert (crossing north to south), approximately 1,400 feet west of the parcel.

DWR indicate that while the parcel is outside the FEMA floodplain, it may be within a more localized floodplain. Flood elevations would be determined during plan review and before issuance of building permits. DWR placed a condition of approval upon the project, that minimum pad/floor elevations would be required pursuant to the Sacramento County Floodplain Management Ordinance. Compliance with the Floodplain Management Ordinance will minimize any impacts due to drainage from the project site; drainage impacts that could result in on- and/or off-site flooding are ***less than significant.***

IMPACT: CREATE OR CONTRIBUTE RUNOFF WHICH WOULD EXCEED THE CAPACITY OF EXISTING OR PLANNED STORMWATER DRAINAGE SYSTEMS OR PROVIDE SUBSTANTIAL ADDITIONAL SOURCES OF POLLUTED RUNOFF

In California, primate waste is not classified as biohazardous and is disposed as regular waste by typical commercial waste management contractors. A letter from the California National Primate Research Center at UC, Davis stated:

> "Neither the California Department of Public Health nor California Occupational Health and Safety Administration classifies non-human primate waste as medical or biohazardous waste unless the animal is either experimentally infected or suspected, by a veterinarian, to be infected with a pathogen that could be transferred to humans (zoonosis).
>
> The plan to contain monkey waste, i.e., feces and urine soiled materials (e.g., wood shavings, wood mulch straw/hay), in regular heavy-duty plastic bags and disposing it as regular waste in a container provided and removed by a commercial waste company is appropriate for this squirrel monkey population.
>
> In the unlikely event a monkey is diagnosed with a zoonosis, the SMH zoonotic disease prevention plan states appropriately that this waste would be treated as biohazardous when deemed necessary be veterinarians. Biohazardous medical waste is contained in receptacles provided and collected by commercial medical waste contractors. The staff associated with SMH is experienced to manage such waste appropriately."

Indoor housing would be sanitized weekly. This involves stripping the absorbent bedding (wood shavings) with feces and urine residues out of the cage, rinsing, applying a sanitizer, and then rinsing again. The indoor housing would have a central drain in the cement floor to collect rinse water during cleaning. The rinse water would drain into a dedicated septic system that would be designed by RC Berti Construction of

Wilton with input, permitting, and inspection by Sacramento County Environmental Management Division. The project, therefore, would not exceed the capacity of existing or planned drainage systems and would not contribute polluted runoff to those systems. Impacts are considered ***less than significant.***

IMPACT: WATER QUALITY

As discussed in the regulatory framework section of this chapter, there are local ordinances that must be complied with during construction. The Stormwater Ordinance prohibits the discharge of unauthorized non-stormwater to the County's stormwater conveyance systems and local creeks. In addition, the Land Grading and Erosion Control Ordinance requires private construction sites disturbing one or more acres or moving 350 cubic yards or more of earthen material to obtain a grading permit.

Correspondence from the State Regional Water Quality Control Board (Muhl) stated:

> "We reviewed the information submitted to us by the Sacramento County Planning Department and reviewed the plan and other information you submitted to our office via email. Based on the information submitted we have no current water quality concerns with the Squirrel Monkey Haven project."

The Sacramento County Environmental Management Department regulates the installation of septic systems and will be responsible for reviewing the plans and specifications for the proposed new system to be installed on-site. Generally, new septic systems must meet certain setbacks from other sources of water (e.g., wells, ponds, drainages). Current regulations indicate that a septic tank must be at least 100-feet from a well, 50 feet from a pond, and 50-feet from a drainage or stream. The proposed septic system would be able to achieve these setback requirements.

The project involves minimal grading of less than 1 acre and less than 350 cubic yards of material and will not need to secure a grading permit. The new septic system will require review from the County EMD, but appears to be able to achieve required setbacks from other sources of water. Impacts to water quality are, therefore, considered ***less than significant***.

POST CONSTRUCTION STORMWATER QUALITY

As discussed in the regulatory framework section of this chapter, post-construction stormwater quality measures include, but are not limited to, BMPs, vegetated swales, and water quality detention basins. DWR staff reviewed the proposed project and did not provide conditions requiring the implementation of post construction stormwater quality; however, this does not preclude DWR from requiring stormwater control devices and/or measures later on. DWR will have the opportunity to review and provide additional comment during building improvement plan check. Neither DWR nor RWQCB provided comments or water quality requirements specific to operating a kennel or monkey sanctuary. Impacts to water quality, post-construction, are considered ***less than significant***.

MITIGATION MEASURES

No mitigation is required.

5 PUBLIC SERVICES

INTRODUCTION

This chapter describes the utility systems (water, wastewater, solid waste, energy, and telecommunications) and public services (police and fire) serving the project site and identifies the potential impacts that could result from implementation of the project. For more information on surface and groundwater resources relating to the project, see Chapter 4 “Hydrology & Water Quality.”

SETTING

The subject parcel is located outside the Urban Services Boundary, therefore no public water supply or sewer services are currently available. A new private septic system is proposed to coincide with the existing well and septic system.

PRIVATE WELLS

The project site contains an existing well, which serves the existing single-family residence. The proposed facility plan relies on the existing well and indicates 41,000 gallons of water to be used annually, which equates to approximately 112 gallons per day (this estimate is for the Squirrel Monkey facility only).

PRIVATE SEPTIC SYSTEMS

The project site has one existing private septic system that serves the single-family residence. The applicant is proposing one additional septic system to capture runoff during cleaning (rinsing) of the facility; however, the applicant has indicated that monkey excrement will be bagged, placed in a covered bin, and disposed of via Cal-Waste Management Recovery Systems of Galt.

SOLID WASTE SERVICE

Unincorporated area residents south of Calvine Road receive service from Central Valley Waste, a private waste hauling firm, under a contract with Sacramento County Department of Waste Management and Recycling.

ENERGY SERVICES

Sacramento Metropolitan Utility District (SMUD) is responsible for providing electricity, and Pacific Gas and Electric (PG&E) is responsible for providing natural gas in the project area. Electrical and gas utility connections are currently available to service this area.

Fire Protection

The project site is located within the Herald Fire Protection District (HFPD), which provides fire protection and emergency services. The nearest station to the project site is HFPD Station 87 at 12746 Ivie Road, approximately 4.0 miles south. HFPD has an additional station (Station 88) located at 11620 Clay Station Road, approximately 7.0 miles northeast of the project site.

The project site is not located in a state responsibility area and is not located in a California Department of Forestry and Fire Protection (CAL FIRE) Fire Hazard Severity Zone.

Law Enforcement

The project site is located within the jurisdiction of the Sacramento County Sheriff's Department. The Sacramento County Sheriff's Department provides general law enforcement services to the unincorporated areas of Sacramento County, as well as the incorporated cities of Rancho Cordova and Isleton. The nearest sheriff's station is the Wilton Service Center, which is located 6.5 miles north of the project site at 7800 Dillard Road.

Regulatory Setting

Federal

USDA Animal Welfare Act

Passed by Congress in 1966, the Animal Welfare Act (AWA) sets general standards for humane care and treatment that must be provided for certain animals that are bred for commercial sale, sold sight unseen (Internet sales), exhibited to the public, used in biomedical research, or transported commercially. Congress assigned the U.S. Department of Agriculture (USDA) the responsibility for enforcing the AWA. The Animal and Plant Health Inspection Service (APHIS) is the agency within USDA responsible for ensuring this occurs. These regulations are included in Appendix F.

State

California Department of Fish and Wildlife Wild Animal Permit

The California Department of Fish and Wildlife requires a Restricted Species Permit for every person who imports, exports, transports, or possesses any restricted animal listed in Section 671(c), Title, 14, of the California Code of Regulations (CCR). These regulations are included in Appendix E.

Local

Sacramento County General Plan Policies

The following policies related to Public Facilities are applicable to the proposed project:

> **Policy PF-13.** Public sewer systems shall not extend service into agricultural-residential areas outside the urban policy area unless the Environmental Management Department determines that there exists significant environmental or health risks created by private disposal systems serving existing development and no feasible alternatives exist to public sewer service.
>
> **Policy PF-14.** Independent community sewer systems shall not be established for new development.

Animal Care and Regulation Wild Animal Permit

In addition to the Use Permit for a kennel, the applicant will be required to obtain a Wild Animal Permit from Sacramento County Department of Animal Care and Regulation pursuant to Section 8.26 of the Sacramento County Code. The Chief of Animal Control shall, with the approval of the Director, set minimum standards for the proper care and maintenance both of a kennel or cattery or a place of keeping of wild animals and of the animals kept therein which are, at a minimum, consistent with applicable State and Federal standards.

The Chief of Animal Control shall conduct investigation of the background of the owner and the applicant and the history and physical condition of the kennel or cattery or the keeping of wild animal, including physical inspection of the premises, as is deemed appropriate. The Chief of Animal Control shall evaluate each application to determine whether the operation of the kennel or cattery or the keeping of the wild animal will involve a risk to the health, safety, or welfare of the public or the animal to be kept.

Each applicant or permit holder must demonstrate that the premises, facilities, cages, vivariums, aquariums and equipment addressed in the permit comply with the Standards on an ongoing basis. Upon request of the Chief of Animal Control, and during normal business hours or by a mutually agreed time for appointment, the applicant or permit holder must make the premises, facilities, cages, vivariums, aquariums and equipment available for inspection by the Chief of Animal Control. All animals to be kept or kept pursuant to the permit shall be subject to visual inspection on the designated premises by the Chief of Animal Control. Failure to allow visual inspection as required shall be deemed failure to comply with the requirements of this chapter and shall be considered cause for denial of application or for revocation of the permit.

If the applicant or permit holder fails to meet the requirements set in the Standards, the Chief of Animal Control shall so notify the applicant or permit holder in writing within three (3) calendar days of discovery of the failure to comply with the Standards. The written notice shall advise the applicant or permit holder of any existing deficiency and the corrective measures that must be taken and completed to bring the premises,

facilities, cages, vivariums, aquariums and equipment into compliance with the Standards.

The applicant or permit holder shall be given no more than thirty (30) calendar days and no less than fourteen (14) calendar days to complete the corrective measures, except that if any deficiency threatens the health or welfare of the animals kept or of the public, such corrective measures shall be made immediately or no later than one day after the discovery of the deficiency.

Failure to correct the noted deficiencies as required shall be deemed failure to comply with the Standards and shall be considered cause for denial of application or for revocation of the permit and may be considered cause for animal nuisance abatement. These regulations are included in Appendix D.

SIGNIFICANCE CRITERIA

The project would have a significant impact on public services and utilities if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the expansion of which could cause significant environmental effects;
- Have insufficient water supplies available to serve the project from existing entitlements and resources;
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the projected demand in addition to the provider's existing commitments;
- Be served by a landfill without sufficient capacity to accommodate the project's solid waste needs.
- Not comply with federal, state, and local statutes and regulations related to solid waste;
- Adversely affect local and regional energy supplies, requiring additional capacity or depleting energy resources, due to the wasteful, inefficient, or unnecessary consumption of energy; or
- Result in substantial adverse physical impacts associated with the provision of new or physically-altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for
    - Fire protection,
    - Police protection,
    - Schools,
    - Parks, or

  - Other public facilities.
- Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

The project is located outside of the Urban Service Boundaries and would not rely upon public water or public sewage facilities, and therefore could not exceed the capacity of these facilities.

The project is not proposing any new residential construction and would not result in the need for additional demand in fire protection, police protection, schools, or park facilities.

Construction and operation of the project would follow all relevant federal, state, and local statutes and regulations associated with collection and disposal of waste generated at the site; there would be no impact related to violation of solid waste laws and regulations and this topic is not discussed further.

The provision of electrical service to the facility would be provided by the property's existing SMUD service, and would not constitute a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy. The proposal also does not conflict nor obstruct state or local plans for renewable energy or energy efficiency. SMUD was contacted about the proposed project and had no comments to offer.

IMPACTS AND ANALYSIS

IMPACT: EFFECTS TO WATER SUPPLY

The applicant is proposing to use the existing private well on the property for the proposed facility's operations. The proposed facility plan estimates 41,000 gallons of water will be used annually (112 gallons per day) for facility needs including monkey drinking water, cleaning, and landscaping. On average, each person in a household uses about 100 gallons of water a day. Sacramento County Environmental Management Department (EMD) has reviewed the proposed project and concluded that the existing well is adequate to serve the existing home and the proposed monkey sanctuary. EMD also evaluated the location of the facility from adjacent well sites and indicated that the proposed facility met all required setbacks. Impacts related to groundwater supply are ***less than significant***.

IMPACT: WASTEWATER TREATMENT

Table PS-1 compares the estimated fecal and urine outputs of the 51 squirrel monkeys to one human and one adult horse.

Table PS-1: Comparison of Fecal and Urine Output

	Estimated daily urine output (gal)	Estimated daily feces output (lb)	Estimated daily water intake (gal)
51 squirrel monkeys (values are totals for all 51 monkeys; 98 lbs total)	0.8	0.8	1.8
One adult human	0.4	0.3	0.5
One adult horse 1,000 lb	2.4	37.0	6.0

The 51 squirrel monkeys daily output of urine would be equivalent to 2 humans and 1/4th of what a horse would produce. Fecal output would be nearly equivalent to 3 humans and slightly less than 1/37th of what a horse would produce.

A dedicated septic system will be constructed to capture all effluent from the project site. The proposed septic system will be constructed to County standards and is subject to inspection by EMD. EMD reviewed the proposed location and determined that it meets setbacks from the existing well and from those on the neighboring properties. Compliance with County standards will ensure that impacts related to the proposed septic system remain ***less than significant***.

IMPACT: EFFECTS TO SOLID WASTE FACILITIES

Absorbent bedding (e.g. wood shavings) would be used indoors on the cement floor of each cage to trap and deodorize feces and urine. Soiled bedding would be removed daily and all bedding would be removed weekly and refreshed after cages are sanitized. Outdoor habitats would be mulched and soiled areas cleaned and refreshed twice weekly. Soiled bedding/mulch and animal waste would be put in heavy-duty plastic bags and disposed of in a commercial waste bin that has a heavy securable cover. The bin will be stored next to the facility and will be picked up weekly by Cal-Waste Management Recovery Systems of Galt. Cal-Waste has confirmed that they will schedule weekly pick-up to coordinate with building cleaning days such that waste will be picked up within 24 hours of weekly cleaning days.

According to correspondence from the Global Federation of Animal Sanctuaries and UC Davis, the State of California does not consider primate waste biohazardous and does not require it to be handled as biohazardous medical waste (refer to Appendix L and M).

Waste can be handled and disposed as regular waste by typical commercial waste management contractors.

The California Department of Resources Recycling and Recovery (CalRecycle) provides estimated solid waste generation rates for various sources. Data from the CalRecycle website indicates 10 pounds per day for single-family homes (CalRecycle 2013). The expected fecal output from the monkeys is 0.8 pounds per day, which would result in a monthly output of 24 pounds a month. This increase in solid waste would not fill a substantial proportion of the available permitted capacity at Keifer Landfill and would not result in the need to expand or construct new landfill facilities. Impacts to solid waste facilities would be ***less than significant.***

IMPACT: POLICE SERVICES

The Sacramento County Sheriff's Department Subdivision and Project Review representative conducted a review and assessment of the project planning documents associated with the project. The Sheriff's Department provided the following conditions pursuant to the Sacramento County Zoning Code and Crime Prevention through Environmental Design standards:

- Approved numbers or addresses shall be placed on all new or existing buildings in such a position as to be easily read from the street or road fronting the property. The minimum size of the numbers shall not be less than six (6) inches and shall be mounted immediately adjacent to a light source and shall also contrast with their background.

- Applicant shall comply with the Sacramento County Emergency Alarm Ordinance prior to the installation of any alarm system as specified in Sacramento County Code 9.96.085. Additional details about the county alarm ordinance can be obtained by contacting the Sacramento County Sheriff's Department Alarm Ordinance Bureau at (916) 874-4616 or e-mail to: **alarms@sacsheriff.com**.

- Applicant shall comply with the Sacramento County Gate Permit requirements as outlined in Sacramento County Code 17.04, Section 503.6.1 for any gate installations subject to this code.

- Applicant shall amend their ***Emergency Prevention and Action Plan*** to include **immediate notification** of the Sacramento County Sheriff's Department in the event of a missing or escaped monkey. Additionally, this plan shall also be amended to provide notification to the Sacramento County Sheriff's Department of the return or capture of any monkey reported as missing or escaped.

The Sheriff expressed no other concerns with the facility or the plans for operation. Impacts to police services are considered ***less than significant.***

IMPACT: ANIMAL CONTROL SERVICES

The Director of Sacramento County Animal Control and Regulation, David Dickinson, was contacted about the project and indicated that a Wild Animal permit would be required. Mr. Dickinson indicated that a Wild Animal permit would not be granted until after the inspection of the facility; therefore, such inspection could not take place until a Use Permit is approved for the facility. He also indicated that he "…did not anticipate any problems as long as they do not deviate from the proposed plans" and that …"prior to populating the facility with the Monkeys we would need documentation for each animal including medical history with vaccinations."

The facility would be subject to regular inspections from the Department of Animal Control and Regulation. Should the Director determine that the facility is not in compliance with the permit, the applicant will be given the opportunity to correct any violations, or the permit may be revoked and the facility would need to be vacated. The Director has indicated that if the facility is in compliance he sees no detrimental impacts associated with it. Impacts associated with provision of Animal Care services are, therefore, considered ***less than significant.***

MITIGATION MEASURES

No mitigation is required.

6 TRAFFIC/CIRCULATION

INTRODUCTION

This chapter evaluates the impacts on the vehicular components of the transportation system that may result from implementation of the project. The existing traffic and transportation setting and regulatory framework are described and the impacts of implementing the project are identified and assessed.

SETTING

The project site is located at the terminus of North Valensin Road in the unincorporated Southeast Area community. North Valensin Road is a private road serving eight parcels.

ROADWAY SYSTEM

North Valensin Road is a west-east private roadway/ access easement that extends approximately 0.40 miles from its intersection at Colony Road. The western portion of this intersection is the terminus of Valensin Road (further discussion below). N. Valensin Road is a single-lane, paved road.

Colony Road predominantly runs north-south. It begins at Dillard Road and runs south-easterly for 0.65 miles before continuing south for 6.00 miles and terminating at the southern portion of Valensin Road. Colony Road is a public two-lane, paved collector street.

Valensin Road begins where Arno Road intersects itself 3.0 miles west of its intersection at Colony Road; there is also another segment of Valensin Road, located 0.32 miles to the south at the southern terminus of Colony Road. Valensin Road is classified as a collector street and is a public, two-lane roadway that runs west-east.

ACCESS AND PARKING

Access to the property is currently provided by a driveway off N. Valensin Road, which is a private right-of-way serving eight parcels. The access easement for the private roadway does not preclude property owners from operating businesses.

REGULATORY SETTING

LOCAL

SACRAMENTO COUNTY GENERAL PLAN

The Sacramento County General Plan (Sacramento County 2011a) recognizes mobility as an important principle in the development of transportation infrastructure. Mobility

goals of the general plan relate to the need for a network of “complete” streets to enable multi-modal (automobile, transit, pedestrian, and bicycle) forms of transport in all urban, suburban, and rural neighborhoods within the county. Goals and policies for mobility, including roadways, transit, and bicycle and pedestrian facilities that are relevant to the development of the project are listed below.

Policy CI-9. Plan and design the roadway system in a manner that meets Level of Service (LOS) D on rural roadways and LOS E on urban roadways, unless it is infeasible to implement project alternatives or mitigation measures that would achieve LOS D on rural roadways or LOS E on urban roadways. The urban areas are those areas within the Urban Service Boundary as shown in the Land Use Element of the Sacramento County General Plan. The areas outside the Urban Service Boundary are considered rural.

Policy CI-10. Land development projects shall be responsible to mitigate the project’s adverse impacts to local and regional roadways.

Policy CI-12. To preserve public safety and local quality of life on collector and local roadways, land development projects shall incorporate appropriate treatments of the Neighborhood Traffic Management Program.

SIGNIFICANCE CRITERIA

Based on the State CEQA guidelines, the project would have a significant impact on traffic and transportation elements if it would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- Result in inadequate emergency response.

ISSUES NOT DISCUSSED FURTHER

The project is located in a rural area of unincorporated Sacramento County. The estimated ten daily trips would not significantly increase hazards or pose a substantial safety risk.

The estimated ten daily trips do not conflict with any ordinances or policies and would not significantly contribute to roadway congestion or impact existing transit facilities.

The project would not have impacts on air traffic, and would not result in incompatible uses in the study area. Impacts related to air traffic are therefore not addressed in this analysis.

IMPACTS AND ANALYSIS

ACCESS AND PARKING

There are no specific parking requirements for kennels in the County Zoning Code; however, Sacramento County Planning and Environmental Review staff reviewed the proposed project and have determined that because the amount of traffic to the site is expected to be minor, due to the nature of the proposed use, the existing driveway and paved areas adjacent to the existing home and barn are adequate to serve the proposed facility. The Building Department will require that an ADA compliant parking space be designated along with an accessible path of travel from the parking area to the kennel be provided. The Building Department requirements will be included as part of the project conditions if the project is approved.

Land Division and Site Improvement Review (LDSIR) staff reviewed the project and had no comments. DOT Staff reviewed the project and provided advisory conditions if additional driveway or gates were proposed in the future.

TRAFFIC GENERATION

A traffic impact study is typically required if any of the following are true:

1. The project will generate 100 or more new a.m. or p.m. peak hour vehicle trip-ends.

2. The project will generate 1,000 or more daily vehicle trip-ends.

3. New project traffic will substantially affect an intersection or a roadway segment already identified as operating at an unacceptable level of service.

4. The project may create a hazard to public safety.

5. The project will substantially change the off-site transportation system or connections to it.

A trip-end is defined as either an origin or destination of a trip. For example, a round trip between two locations (home-shopping) creates two trip-ends at each location.

The a.m. peak hour is defined as the peak consecutive hour during the 7-9 a.m. peak period, and the p.m. peak hour is defined as the peak consecutive hour during the 4-6 p.m. peak period. Both are on a weekday. Special time periods may be required depending on the land use.

As shown in Table TC-1, the project will generate 10 daily trips. In addition, one additional truck trip per week will be generated to accommodate the waste disposal for the facility.

Impacts related to traffic and circulation associated with the proposed project are ***less than significant.*** No further analysis needed.

Table TC-1: Trip Generation Table

Condition	Zoning or Use (Area)	Source	Daily Trip Rate	Daily Trips
Proposed Project	Animal Shelter 2 Employees[1]	Applicant	3.00 VTE/Emp	6
	2 Visitors	Applicant	2.00 VTE/Visitor	4
Total Trips				10

Notes: VTE =Vehicle Trip Ends
Emp=Employee
[1] Assumed 3 Daily trips per employee

MITIGATION MEASURES

No mitigation is required.

7 AIR QUALITY

INTRODUCTION

This chapter summarizes the existing air quality conditions and regulatory framework within or adjacent to the project site, and includes an analysis of potential short- and long-term air quality impacts associated with the project.

ENVIRONMENTAL SETTING

The project site is located in the unincorporated area of Sacramento County, California, which is part of the Sacramento Valley Air Basin (SVAB). The SVAB also includes all of Butte, Colusa, Glenn, Shasta, Sutter, Tehama, Yolo, and Yuba Counties; the western portion of Placer County; and the eastern portion of Solano County.

The ambient concentrations of air pollutant emissions are determined by the amount of emissions released by the sources of air pollutants and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources, as discussed separately below.

CLIMATE AND ATMOSPHERIC CONDITIONS

The SVAB is a relatively flat area bordered by the north Coast Ranges to the west and the northern Sierra Nevada to the east. Air flows into the SVAB through the Carquinez Strait, which is the only breach in the western mountain barrier, and moves across the Sacramento River–San Joaquin River Delta from the San Francisco Bay area.

The Mediterranean climate type of the SVAB is characterized by hot, dry summers and cool, rainy winters. During the summer, daily temperatures range from 50 degrees Fahrenheit (°F) to more than 100°F. The inland location and surrounding mountains shelter the area from much of the ocean breezes that keep the coastal regions moderate in temperature. More than half the total annual precipitation falls during the winter rainy season (November through February); the average winter temperature is a moderate 49°F. Also characteristic of SVAB winters are periods of dense and persistent low-level fog, which are most prevalent between storms.

May through October is ozone season in the SVAB. This period is characterized by poor air movement in the mornings with the arrival of the Delta sea breeze from the southwest in the afternoons. In addition, longer daylight hours provide a plentiful amount of sunlight to fuel photochemical reactions between reactive organic gases (ROG) and oxides of nitrogen (NO_X), which result in ozone formation. Typically, the Delta breeze transports air pollutants northward out of the SVAB; however, a phenomenon known as the Schultz Eddy prevents this from occurring approximately half of the time from July to September. The Schultz Eddy phenomenon causes the wind to shift southward and

blow air pollutants back into the SVAB. This phenomenon exacerbates the concentration of air pollutants in the area and contributes to the area violating the ambient-air quality standards.

The local meteorology of the project site and surrounding area is represented by measurements recorded at the Sacramento station. The normal annual precipitation is approximately 17 inches. January temperatures range from a normal minimum of 38°F to a normal maximum of 54°F. July temperatures range from a normal minimum of 59°F to a normal maximum of 93°F (WRCC 2016). The predominant wind direction and speed is from the south at eight miles per hour (WRCC 2016, 2002).

Air Pollutants and Ambient Air Quality Standards

Criteria Air Pollutants

Concentrations of ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter with an aerodynamic diameter of 10 micrometers or less (PM_{10}), fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less ($PM_{2.5}$), and lead are “criteria air pollutants” used as indicators of ambient air quality conditions. Criteria air pollutants are air pollutants for which acceptable levels of exposure can be determined and for which an ambient air quality standard has been set by the U.S. Environmental Protection Agency (EPA) and California Air Resources Board (ARB). Concentrations of emissions from criteria air pollutants are used to indicate the quality of the ambient air. Brief descriptions of key criteria air pollutants, including emission source types and their associated acute and chronic health effects, are summarized in Table AQ-1.

Table AQ-1: Sources and Health Effects of Criteria Air Pollutants

Pollutant	Sources	Acute[1] Health Effects	Chronic[2] Health Effects
Ozone	secondary pollutant resulting from reaction of ROG and NO_X in presence of sunlight. ROG emissions result from incomplete combustion and evaporation of chemical solvents and fuels; NO_X results from the combustion of fuels	increased respiration and pulmonary resistance; cough, pain, shortness of breath, lung inflammation	permeability of respiratory epithelia, possibility of permanent lung impairment
Carbon monoxide (CO)	incomplete combustion of fuels; motor vehicle exhaust	headache, dizziness, fatigue, nausea, vomiting, death	permanent heart and brain damage
Nitrogen dioxide (NO_2)	combustion devices; e.g., boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines	coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis or pulmonary edema; breathing abnormalities, cough, cyanosis, chest pain, rapid heartbeat, death	chronic bronchitis, decreased lung function
Sulfur dioxide (SO_2)	coal and oil combustion, steel mills, refineries, and pulp and paper mills	Irritation of upper respiratory tract, increased asthma symptoms	Insufficient evidence linking SO_2 exposure to chronic health impacts

Pollutant	Sources	Acute[1] Health Effects	Chronic[2] Health Effects
Respirable particulate matter (PM_{10}), Fine particulate matter ($PM_{2.5}$)	fugitive dust, soot, smoke, mobile and stationary sources, construction, fires and natural windblown dust, and formation in the atmosphere by condensation and/or transformation of SO_2 and ROG	breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, premature death	alterations to the immune system, carcinogenesis
Lead	metal processing	reproductive/ developmental effects (fetuses and children)	numerous effects including neurological, endocrine, and cardiovascular effects

Notes: NO_X = oxides of nitrogen; ROG = reactive organic gases.

[1] "Acute" refers to effects of short-term exposures to criteria air pollutants, usually at fairly high concentrations.

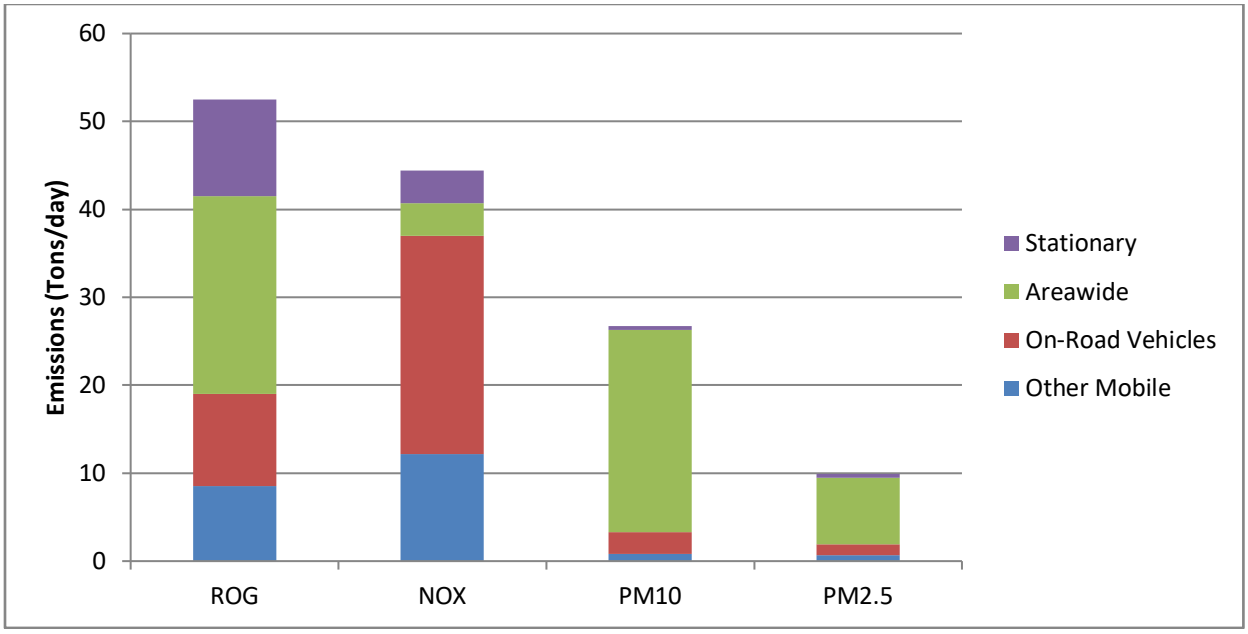
[2] "Chronic" refers to effects of long-term exposures to criteria air pollutants, usually at lower, ambient concentrations.

Sources: EPA 2016. Data compiled by Ascent Environmental 2016.

Emission Sources

ARB developed an emissions inventory projection for Sacramento County for 2015 (ARB 2013a). The county inventory is generally representative of the types of emissions sources that are included in the county and project area. The county emissions inventory is summarized in Table AQ-2.

Table AQ-2: Criteria Air Pollutants & Precursors (tons per day) Sacramento County 2015



Notes: NO_x = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; ROG = reactive organic gases.

Source: ARB 2013a.

According to the ARB inventory, mobile sources, such as cars and trucks, are the largest contributor to the estimated air pollutant level of sulfur oxides (SO_X), CO, and NO_X, accounting for approximately 50%, 80%, and 83%, of total respective emissions in Sacramento County. Mobile sources account for 36% of ROG emissions. Area sources (e.g., the use of consumer products, residential fuel combustion, architectural coatings and related process solvents, and farming operations) are the largest contributor to ROG emissions at 43%. Stationary sources, such as industrial and manufacturing activities, contribute about 21% of ROG emissions.

Area sources account for approximately 83% and 74% of the county's PM_{10} and $PM_{2.5}$ emissions, respectively, most of which result from construction and demolition, vehicle travel on paved and unpaved roads, and residential fuel combustion activity (ARB 2013a).

Toxic Air Contaminants

Concentrations of toxic air contaminants (TACs) are also used to indicate the quality of ambient air. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. Unlike criteria air pollutants, TACs are pollutants of local concern because they can present harmful effects when they are emitted in close proximity to sensitive receptors. Sensitive receptors are people, or facilities that generally house people (e.g., schools, hospitals, residences), that may experience adverse effects from unhealthful concentrations of air pollutants.

The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most prominent being diesel PM (ARB 2009). In addition to diesel PM, the TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene. Naturally occurring asbestos (NOA) is also recognized by ARB as a TAC.

Odors

Sacramento Metropolitan Air Quality Management District (SMAQMD) identifies typical land uses that have the potential to result in increases in odorous emissions and provides recommendations for siting new sensitive land uses in close proximity to these land uses. Examples of land uses that have the potential to generate considerable odors include wastewater treatment plants, sanitary landfills, recycling and composting facilities, food packaging plants, petroleum refineries, and chemical manufacturing plants (SMAQMD 2016a). The project area does not include any facilities known to generate considerable odors and no known land uses with the potential to generate considerable odors are located within the screening distances identified by SMAQMD (SMAQMD 2016a).

REGULATORY SETTING

FEDERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

EPA is in charge of implementing national air quality programs. EPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA), enacted in 1970. Congress made the most recent major amendments to the CAA in 1990.

CRITERIA AIR POLLUTANTS

The CAA required EPA to establish national ambient air quality standards (NAAQS). As shown in Table AQ-3, EPA has established primary and secondary NAAQS for the following criteria air pollutants: CO, NO_2, SO_2, respirable and fine particulate matter (PM_{10} and $PM_{2.5}$), and lead. The primary standards protect the public health and the secondary standards protect public welfare. The CAA also required each state to prepare an air quality control plan referred to as a State implementation plan (SIP).

The federal Clean Air Act Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and whether implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.

TOXIC AIR CONTAMINANTS/HAZARDOUS AIR POLLUTANTS

Air quality regulations also focus on TACs, which federal agencies refer to as hazardous air pollutants (HAPs). In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. In other words, there is no threshold level below which adverse health impacts may not be expected to occur. (By contrast, for the criteria air pollutants, acceptable levels of exposure are determinable; Table 7-3 shows the established ambient standards). Instead, EPA and, in California, ARB, regulate HAPs and TACs, respectively, through statutes and regulations that generally require the use of the maximum available control technology or best available control technology for toxics to limit emissions. These, in conjunction with additional rules set forth by SMAQD, described below under "Sacramento Metropolitan Air Quality Management District," establish the regulatory framework for TACs.

EPA has programs for identifying and regulating HAPs. Title III of the CAAA directed EPA to promulgate National Emissions Standards for HAPs (NESHAP). The NESHAP for major sources may differ from that for area sources of HAPs. Major sources are defined as stationary sources with potential to emit more than 10 tons per year of any HAP or more

than 25 tons per year of any combination of HAPs; all other sources are considered area sources. EPA first developed technology-based emission standards designed to produce the maximum emission reduction achievable. These standards are generally referred to as requiring maximum available control technology for toxics. For area sources, the standards may be different, based on generally available control technology. EPA has also promulgated health risk-based emissions standards when deemed necessary to address risks remaining after implementation of the technology-based NESHAP standards.

Table AQ-3: Ambient Air Quality Standards

Pollutant	Averaging Time	California[a,b]	National[c]	
			Primary[b,d]	Secondary[b,e]
Ozone	1-hour	0.09 ppm (180 µg/m^3)	–[e]	Same as primary standard
	8-hour	0.070 ppm (137 µg/m^3)	0.075 ppm (147 µg/m^3)	
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	Same as primary standard
	8-hour	9 ppm[f] (10 mg/m^3)	9 ppm (10 mg/m^3)	
Nitrogen dioxide (NO_2) [g]	Annual arithmetic mean	0.030 ppm (57 µg/m^3)	53 ppb (100 µg/m^3)	Same as primary standard
	1-hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	—
Sulfur dioxide (SO_2	24-hour	0.04 ppm (105 µg/m^3)	—	—
	3-hour	—	—	0.5 ppm (1300 µg/m^3)
	1-hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	—
Respirable particulate matter (PM_{10})	Annual arithmetic mean	20 µg/m^3	—	Same as primary standard
	24-hour	50 µg/m^3	150 µg/m^3	
Fine particulate matter ($PM_{2.5}$)	Annual arithmetic mean	12 µg/m^3	12.0 µg/m^3	15.0 µg/m^3
	24-hour	—	35 µg/m^3	Same as primary standard
Lead [g]	Calendar quarter	—	1.5 µg/m^3	Same as primary standard
	30-Day average	1.5 µg/m^3	—	—
	Rolling 3-Month Average	–	0.15 µg/m^3	Same as primary standard
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m^3)	No national standards	
Sulfates	24-hour	25 µg/m^3		
Vinyl chloride [f]	24-hour	0.01 ppm (26 µg/m^3)		
Visibility-reducing particulate matter	8-hour	Extinction of 0.23 per km		

Notes: µg/m³ = micrograms per cubic meter; km = kilometers; ppb = parts per billion; ppm = parts per million.

[a] California standards for ozone, SO_2 (1- and 24-hour), NO_2, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] Concentration expressed first in units in which it was issued. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[c] National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. The PM_{10} 24-hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. The $PM_{2.5}$ 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. Environmental Protection Agency for further clarification and current federal policies.

[d] National primary standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[e] National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[f] The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Source: ARB 2015

STATE

CALIFORNIA AIR RESOURCES BOARD

ARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA). The CCAA, which was adopted in 1988, required ARB to establish California ambient air quality standards (CAAQS).

CRITERIA AIR POLLUTANTS

ARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. In most cases, the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health effects studies considered during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

The CCAA requires that all local air districts in the state endeavor to achieve and maintain the CAAQS by the earliest date practical. The act specifies that local air districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources, and provides air districts with the authority to regulate indirect sources.

TOXIC AIR CONTAMINANTS/HAZARDOUS AIR POLLUTANTS

TACs in California are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807, Chapter 1047, Statutes of 1983) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588, Chapter 1252, Statutes of 1987). AB 1807 sets forth a formal procedure for ARB to designate substances as TACs. Research, public participation, and scientific peer review are required before ARB can designate a substance as a TAC. To date, ARB has identified more than 21 TACs and

adopted EPA's list of HAPs as TACs. Most recently, PM exhaust from diesel engines (diesel PM) was added to ARB's list of TACs.

Once a TAC is identified, ARB adopts an airborne toxics control measure for sources that emit that particular TAC. If a safe threshold exists for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate best available control technology for toxics to minimize emissions.

ARB has adopted diesel exhaust control measures and more stringent emissions standards for various transportation-related mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors, generators). Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, diesel PM) have been reduced significantly over the last decade and will be reduced further in California through a progression of regulatory measures (e.g., Low Emission Vehicle/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies. With implementation of ARB's Risk Reduction Plan, it is expected that diesel PM concentrations will be 85 percent less in 2020 than in the year 2000. Adopted regulations are also expected to continue to reduce formaldehyde emissions from cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

LOCAL

SACRAMENTO COUNTY ATTAINMENT STATUS

As described above, EPA and ARB adopted NAAQS and CAAQS to regulate air quality within air basins in the state and nation. Both agencies make determinations about the status of each air basin relative to these standards, known as attainment designations. The purpose of these designations is to identify those areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are "nonattainment," "attainment," and "unclassified." Nonattainment areas are areas that do not meet air quality standards, whereas attainment areas meet air quality standards. "Unclassified" is used in areas that cannot be classified on the basis of available information as meeting or not meeting the NAAQS or CAAQS.

The most current National and California attainment designations for Sacramento County are shown in Table AQ-4, below, for each criteria air pollutant. Sacramento County is in nonattainment status for the following pollutants:

- Ozone: CAAQS and NAAQS standards,
- PM_{10}: CAAQS standard, and
- $PM_{2.5}$: NAAQS Standard.

Table AQ-4: Attainment Status Designations for Sacramento County

Pollutant	Federal Standard	State Standard
Ozone	Nonattainment (1-hour)[1] Classification = Severe	Nonattainment (1-hour) Classification = Serious[2]
	Nonattainment (8-hour)[3] Classification = Severe	Nonattainment (8-hour)
	Nonattainment (8-hour)[4] Classification = Severe	
Respirable particulate matter (PM_{10})	Attainment (24-hour)	Nonattainment (24-hour)
		Nonattainment (Annual)
Fine particulate matter ($PM_{2.5}$)	Nonattainment (24-hour) Classification = Moderate	(No State Standard for 24-hour)
	Unclassified/Attainment (Annual)	Attainment (Annual)
Carbon monoxide (CO)	Attainment (1-hour)	Attainment (1-hour)
	Attainment (8-hour)	Attainment (8-hour)
Nitrogen dioxide (NO_2)	Unclassified/Attainment (1-hour)	Attainment (1-hour)
	Unclassified/Attainment (Annual)	Attainment (Annual)
Sulfur dioxide (SO_2)[5]	Attainment (1-hour)	Attainment (1-hour)
		Attainment (24-hour)
Lead (Particulate)	Unclassified/Attainment (3-month rolling average)	Attainment (30 day average)
Hydrogen Sulfide	No Federal Standard	Unclassified (1-hour)
Sulfates		Attainment (24-hour)
Visibly Reducing Particles		Unclassified (8-hour)

Notes: EPA designates areas as "unclassified/attainment" if they meet the standard or are expected to meet the standard despite a lack of monitoring data.

[1] Air Quality meets Federal 1-hour Ozone standard (77 FR 64036). U.S. EPA revoked this standard, but some associated requirements still apply. SMAQMD attained the standard in 2009. SMAQMD has requested EPA recognize attainment to fulfill the requirements.

[2] Per Health and Safety Code (HSC) § 40921.5(c), the classification is based on 1989 – 1991 data, and therefore does not change.

[3] 1997 Standard.

[4] 2008 Standard.

[5] Cannot be classified.

Sources: SMAQMD 2013b; Data compiled by Ascent Environmental 2016.

Sacramento Metropolitan Air Quality Management District

SMAQMD is the primary agency responsible for planning to meet federal and State ambient air quality standards in Sacramento County. SMAQMD works with other local air districts in the Sacramento region to maintain the region's portion of the SIP for ozone. The SIP is a compilation of plans and regulations that govern how the region and State will comply with the CAA requirements to attain and maintain the federal ozone standard. Ozone plans in the Sacramento Metro region include the 1994 Sacramento Area Regional Ozone Attainment Plan and the 2016 8-Hour Ozone Attainment and Reasonable Further Progress Plan (SMAQMD 2016). These plans were produced to develop a strategy to attain the federal one-hour and eight-hour ozone standards. The Sacramento Region has been designated as a "severe" eight-hour ozone nonattainment area with an extended attainment deadline of June 15, 2019 (SMAQMD 2016).

Additionally, SMAQMD has developed a set of CEQA guidelines for use by lead agencies when preparing environmental documents. The guidelines contain thresholds of significance for criteria pollutants and TACs, and also make recommendations for conducting air quality analyses. Once SMAQMD guidelines have been consulted and the air quality impacts of a project have been assessed, the lead agency's analysis undergoes a review by SMAQMD. SMAQMD submits comments and suggestions to the lead agency for incorporation into the environmental document. These guidelines are discussed further below. SMAQMD also enforces air quality regulations, educates the public about air quality, and implements a number of programs to provide incentives for the replacement or retrofit of older diesel engines and to influence land use development in Sacramento County.

All projects are subject to adopted SMAQMD rules and regulations in effect at the time of construction (SMAQMD 2016). Specific rules applicable to the construction of the project may include the following:

> **Rule 201: General Permit Requirements.** Any project that includes the use of equipment capable of releasing emissions to the atmosphere may be required to obtain permit(s) from SMAQMD before equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact SMAQMD early to determine whether a permit is required, and to begin the permit application process. Portable construction equipment (e.g., generators, compressors, pile drivers, lighting equipment) with an internal combustion engine greater than 50 horsepower must have a SMAQMD permit or ARB portable equipment registration.
>
> **Rule 402: Nuisance.** A person shall not discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause or have natural tendency to cause injury or damage to business or property.
>
> **Rule 403: Fugitive Dust.** The developer or contractor is required to control dust emissions from earthmoving activities or any other construction activity to prevent airborne dust from leaving the project site.
>
> **Rule 442: Architectural Coatings.** The developer or contractor is required to use coatings that comply with the content limits for volatile organic compounds specified in the rule.

TOXIC AIR CONTAMINANTS

At the local level, air pollution control or management districts may adopt and enforce ARB control measures. Under SMAQMD Rule 201 ("General Permit Requirements"), Rule 202 ("New Source Review"), Rule 207 ("Federal Operating Permit") and Rule 214 ("Federal New Source Review"), all sources that possess the potential to emit TACs are required to obtain permits from the district. Permits may be granted to these operations

if they are constructed and operated in accordance with applicable regulations, including new-source-review standards and air-toxics control measures. Additionally, under Regulation 9 ("National Emissions Standards for Hazardous Air Pollutants (NESHAPs)"), SMAQMD limits emissions and exposure of specific TACs; for example, Rule 902 ("Asbestos"), is designed to limit the emissions of asbestos into the atmosphere (SMAQMD 2016b). SMAQMD also limits emissions and public exposure to TACs through a number of district programs. SMAQMD prioritizes TAC-emitting stationary sources based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors.

ODORS

Offensive odors rarely cause any physical harm. They are generally regarded as an annoyance rather than a health hazard. National and California air quality regulations do not contain any requirements for their control. However, odors can severely affect livability and quality of life and manifestations of personal reactions to odors can range from psychological to physiological.

SMAQMD developed Rule 402 to place general limitations on, "...such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or to the public, or which cause, or have a natural tendency to cause, injury or damage to business or property" (SMAQMD 2016b).

Chapter 7 of SMAQMD's *Guide to Air Quality Assessment in Sacramento County* includes guidance on identifying and mitigating potential odor impacts that could result from siting a new odor source near sensitive receptors, or siting a new sensitive receptor near an existing odor source.

SACRAMENTO COUNTY GENERAL PLAN

The goal of the Air Quality Element of the General Plan is to improve air quality to promote the public health, safety, welfare, and environmental quality of the community (Sacramento County 2011). There are 22 air quality-specific policies, including the following policies that may be applicable to the project:

Policy AQ-3. Buffers and/or other appropriate mitigation shall be established on a project-by-project basis and incorporated during review to provide for protection of sensitive receptors from sources of air pollution or odor. The CARB's "Air Quality and Land Use Handbook: A Community Health Perspective," and the AQMD's approved Protocol (Protocol for Evaluating the Location of Sensitive Land uses Adjacent to Major Roadways) shall be utilized when establishing these buffers.

Policy AQ-4. Developments which meet or exceed thresholds of significance for ozone precursor pollutants as adopted by the SMAQMD, shall be deemed to have a significant environmental impact. An Air Quality Mitigation Plan shall be submitted to the County of Sacramento prior to project approval, subject to review and recommendation as to technical adequacy by the Sacramento Metropolitan Air Quality Management District.

SIGNIFICANCE CRITERIA

Per Appendix G of the CEQA Guidelines and SMAQMD's CEQA guidance (SMAQMD 2016a), air quality impacts are considered significant if the project would:

- result in construction-generated criteria air pollutant or precursor emissions that exceed SMAQMD-recommended thresholds of 85 pounds per day (lb/day) for NOX, 80 lb/day and 14.6 tons per year (tons/year) for PM10, or 82 lb/day and 15 tons/year for PM2.5. In addition, all SMAQMD-recommended Basic Construction Emission Control Practices, also known as best management practices (BMPs) shall be implemented to minimize emissions of PM10 and PM2.5; otherwise, the threshold for both PM10 and PM2.5 is 0 lb/day;

- result in a net increase in long-term regional criteria air pollutant or precursor emissions that exceed SMAQMD-recommended threshold of 65 lb/day for ROG and NOX, 80 lb/day and 14.6 tons/year for PM10, or 82 lb/day and 15 tons/year for PM2.5;

- result in long-term operational local mobile-source CO emissions that would violate or contribute substantially to concentrations that exceed the California 1-hour ambient air-quality standard of 20 parts per million (ppm) or the 8-hour standard of 9 ppm;

- result in construction-related TAC emissions that would expose sensitive receptors to an incremental increase in cancer risk that exceeds 10 in 1 million or a hazard index greater than 1.0;

- expose sensitive receptors to substantial pollutant concentrations; or

- create objectionable odors affecting a substantial number of people.

IMPACTS AND ANALYSIS

METHODOLOGY

Regional and local criteria air pollutant emissions and associated impacts, as well as impacts from TACs, CO concentrations, and odors, were assessed in accordance with SMAQMD-recommended methodologies. The project's emissions are compared to SMAQMD's operational thresholds because of the long-term operational nature of activities on site.

Short-term construction-generated emissions were estimated using the SMAQMD-approved California Emissions Estimator Model (CalEEMod) Version 2016.3.2 computer program (SCAQMD 2016). CalEEMod is designed to model construction emissions for land use development projects using emission factors developed by ARB, and allows for the input of project-specific information. Modeling was based on project-specific information (e.g., floor surface area, area to be graded, existing parking,

prefabricated building, energy information, two employees' commute, estimated operational water and wastewater), where available; reasonable assumptions based on typical construction activities; and default values in CalEEMod that are based on the project's location and land use type. Construction of the project was assumed to take approximately one month. For a detailed description of model input and output parameters and assumptions, refer to Appendices H and I. Maximum daily operational emissions of criteria air pollutants and precursors were also estimated using CalEEMod, in accordance with SMAQMD guidance. Emissions estimates included long-term operational emissions of ozone precursors (i.e., ROG and NOX) associated with mobile-sources (i.e., trip generation). This modeling incorporated the trip generation rates identified for the project in the trip table that was provided by the Sacramento County Department of Transportation to support the analysis in Chapter 6, "Transportation and Circulation." Emissions from natural gas combustion used for heating were estimated based on the default consumption levels emission factors contained in CalEEMod.

Health risk from project-generated, construction- and operation-related emissions of TACs were assessed qualitatively. This assessment is based on the location from which construction- or operation-related TAC emissions would be generated by the proposed land uses to offsite sensitive receptors, as well as the duration during which TAC exposure would occur.

Similarly, the assessment of odor-related impacts is based on the types of odor sources associated with the land uses that would be developed and their location relative to onsite receptors as subsequent phases are built.

IMPACT: RESULT IN SHORT-TERM, CONSTRUCTION-GENERATED EMISSIONS OF ROG, NO_X, PM_{10}, AND $PM_{2.5}$ THAT EXCEED SMAQMD-RECOMMENDED THRESHOLDS

Initial project construction activities would consist of site preparation, which includes importing 50 cubic yards of gravel to be used to elevate the building pad. The project includes a 2,700 square foot prefabricated, steel building with 18 attached outdoor habitat areas ranging in size from 240 to 288 square feet (~7,800 total square feet). Since the building is prefabricated, the expected construction window is only 30 days.

Construction-related emissions would be temporary in nature and would include site preparation, grading, paving, building construction, and application of architectural coatings. Emissions of NO_X would be primarily associated with off-road (e.g., gasoline- and diesel-powered) construction equipment exhaust. Additional emission sources would include on-road trucks used to haul equipment and materials to and from the site and worker vehicles for commuting. Worker commute trips, off-gassing application of architectural coatings would be the principal sources of ROG, with additional ROG generated by off- and on-road construction equipment. Emissions of fugitive PM_{10} and $PM_{2.5}$ dust would primarily be associated with ground-disturbance activities during site preparation and grading, and may vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and vehicle miles

traveled onsite and offsite. PM_{10} and $PM_{2.5}$ are also contained in vehicle and equipment exhaust.

Construction equipment may include a backhoe, a rubber tire dozer, front-end loaders, generators, and dump trucks, which would be used during excavation for utilities and building foundations. Concrete trucks and concrete pumps would be used to pour foundations and slabs. Forklifts would be used during erection of walls and delivery of materials from storage yards. Minimal import of 50 cubic yards of gravel to elevate the building pad. An additional 25 cubic yards of decomposed granite will be placed in the outdoor habitat areas.

Construction related emissions were estimated using CalEEMod and are summarized in Table AQ-5. Refer to Appendix E for detailed modeling input parameters and results.

Table AQ-5: Summary of Construction-Generated Emissions of Criteria Air Pollutants and Precursors

Construction Year	Emissions[1]			
	ROG[3]	NO_X	PM_{10}	$PM_{2.5}$
	lb/day	lb/day	lb/day	lb/day
2019	72.58	11.75	1.31	0.93
Threshold of Significance[2]	NONE	85	85	82

Notes: lb/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less;

[1] Emissions estimates do not account for reductions that would result from compliance with SMAQMD-recommended BMPs.

[2] If all applicable SMAQMD-recommended BMPs are not implemented, then the threshold of significance for emissions of PM_{10} and $PM_{2.5}$ is zero.

[3] SMAQMD does not have an established construction threshold of significance for ROG. ROG emissions are disclosed for informational purposes only.

Refer to Appendix E for detailed assumptions, modeling parameters, and output files.

As shown in Table AQ-5, construction-generated emissions of NO_X would not exceed the SMAQMD threshold of significance. Because construction-generated emissions of PM_{10} and $PM_{2.5}$ would not exceed the applicable adopted mass emissions thresholds adopted by SMAQMD, construction-generated emissions of PM_{10} and $PM_{2.5}$ would not contribute to a localized exceedance of the CAAQS and NAAQS for of PM_{10} and $PM_{2.5}$ or contribute to the nonattainment status of the SVAB with respect to the CAAQS for PM_{10} and the NAAQS for $PM_{2.5}$; therefore, this impact would be **less than significant**.

IMPACT: RESULT IN LONG-TERM, OPERATIONAL EMISSIONS OF ROG, NO_X, PM_{10} AND $PM_{2.5}$ THAT EXCEED SMAQMD-RECOMMENDED THRESHOLDS

Once a project is completed, additional pollutants are emitted through the use, or operation, of the site. Land use development projects typically involve the following sources of emissions: motor vehicle trips generated by the land use; fuel combustion from landscape maintenance equipment; natural gas combustion emissions used for

space and water heating; evaporative emissions of ROG associated with the use of consumer products; and, evaporative emissions of ROG resulting from the application of architectural coatings.

Ultimately, a project typically must have large acreages or intense uses in order to result in significant operational air quality impacts. For ozone precursor emissions the screening table in the SMAQMD Guide allows users to screen out projects. Because this project involves a use that is not specifically listed in the SMAQMD screening table the California Emissions Estimator Model (CalEEMod) was used to model project emissions (Appendix E). Based on the unique characteristics of the proposed monkey sanctuary, PER staff consulted with SMAQMD staff regarding the appropriate land use classification and variables to use in the model.

Table AQ-6: CalEEMod Operational (long-term) Emissions

Emissions Source	Emissions			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
	lb/day	lb/day	lb/day	lb/day
Area Source	<1	<1	<1	<1
Natural Gas Combustion	<1	<1	<1	<1
Mobile Source (Vehicle Trips)	<1	<1	<1	<1
Total	0.39	1.06	0.69	0.20
Threshold of Significance[2]	NA	65	85	82

Notes: lb/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less;

Refer to Appendix E for detailed assumptions and modeling output files.

As shown Table AQ-6, the operational emissions would not exceed SMAQMD-adopted daily or annual mass emission thresholds for ROG (precursor to ozone), NOX, and PM10 and PM2.5. Therefore, operational emissions of criteria air pollutants and precursors would not contribute considerably to the nonattainment status of the SVAB with respect to the CAAQS and NAAQS for ozone, the CAAQS for PM10, or the NAAQS for PM2.5. Moreover, operational emissions of PM10 and PM2.5 would not contribute to localized concentrations of PM10 and/or PM2.5 that would exceed or contribute to an exceedance of the CAAQS or NAAQS. As a result, this impact would be ***less than significant***.

IMPACT: RESULT IN LONG-TERM, OPERATIONAL MOBILE-SOURCE CO CONCENTRATIONS THAT EXCEED AIR QUALITY STANDARDS DUE TO INCREASED TRAFFIC

Local mobile-source CO emissions near roadway intersections are a direct function of traffic volume, speed, and delay. Transport of CO is extremely limited because it disperses rapidly with distance from the source under normal meteorological conditions. However, under certain specific meteorological conditions, CO concentrations near

roadways and/or intersections may reach unhealthy levels at nearby sensitive land uses, such as residential units, hospitals, schools, and childcare facilities. As a result, it is recommended that CO not be analyzed at the regional level, but at the local level.

Project-generated traffic would be associated with the operational phase. According to Sacramento County Department of Transportation, the project is anticipated to generate ten daily trips.

SMAQMD provides a screening methodology to determine project impacts from localized CO emissions. This screening methodology was utilized to analyze local CO emissions from the construction and operation of this project. The screening methodology has two tiers of screening criteria, as summarized below. If the first set is not met, then the second tier may be applied (SMAQMD 2016a).

First-Tier

The project would result in a less-than-significant impact to air quality for local CO if:

- Traffic generated by the project would not result in deterioration of intersection level of service (LOS) to LOS E or F; and
- The project would not contribute additional traffic to an intersection that already operates at LOS of E or F.

Second-Tier

If a project does not comply with the first-tier criteria, but all of the following criteria are met, the project would result in a less-than-significant impact to air quality for local CO.

- The project would not result in an affected intersection experiencing more than 31,600 vehicles per hour;
- The project would not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadway; or other locations where horizontal or vertical mixing of air will be substantially limited; and
- The mix of vehicle types at the intersection would not anticipated to be substantially different from the County average (as identified by the EMFAC or CalEEMod models).

Ten daily trips would not result in, or substantially contribute to, concentrations that exceed the 1-hour or 8-hour CAAQS and NAAQS for CO. As a result, this impact would be ***less than significant***.

Impact: Expose Sensitive Receptors to TACs

The exposure of sensitive receptors (e.g., existing and future offsite residents) to TAC emissions from project-generated construction and operational sources, as well as

exposure of the new residential receptors proposed by the project, are discussed separately below.

Short-Term Construction-Related TAC Emissions

Construction-related activities would result in temporary, short-term project-generated emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing and grading); paving; application of architectural coatings; and other miscellaneous activities.

Particulate exhaust emissions from diesel-fueled engines (i.e., diesel PM) were identified as a TAC by the ARB in 1998. The potential cancer risk from the inhalation of diesel PM outweighs the potential for all other health impacts (ARB 2003). Acute and chronic exposure to non-carcinogens is expressed as a hazard index, which is the ratio of expected exposure levels to an acceptable reference exposure levels. Based on the construction emission estimates presented in Table AQ-5 above, maximum daily exhaust emissions of $PM_{10,}$ considered a surrogate for diesel PM, could reach up to 1.31 lb/day during construction.

The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment (OEHHA), HRAs, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 30-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2012:11-3). Consequently, it is important to consider that the use of off-road heavy-duty diesel equipment would be limited to the construction period, with peak activity occurring for approximately one year. Also, studies show that diesel PM is highly dispersive (e.g., decrease of 70 percent at 500 feet from the source) (Zhu et al. 2002).

Therefore, considering the highly dispersive properties of diesel PM, the low mass of diesel PM emissions that would be generated during project construction, and the relatively short duration of construction activities, construction-related TAC emissions would not expose sensitive receptors to an incremental increase in cancer risk that exceeds 10 in 1 million or a hazard index greater than 1.0.

Long-Term Operational TAC Emissions

The project would not include the long-term operation of sources of diesel PM, except for occasional waste collection services, which is typical in residential areas. The project also would not include any land uses that would harbor large, backup diesel generators; therefore, operation of the project would not expose the existing nearby residential receptors to TAC concentrations atypical of single-family home neighborhoods.

Exposure of the Proposed Project to TAC Emissions

The proposed land use that would be developed by the project would not be considered sensitive receptors in the context of TAC emissions. The project site is not located in close proximity to permitted stationary sources of TACs. It's also not located within 500 feet of a freeway or high-volume roadway, which is the setback distance recommended in ARB and beyond which substantial exposure to TACs is not anticipated (ARB 2005:4).

Summary

Project-related construction would not expose nearby sensitive receptors to an incremental increase in cancer risk that exceeds 10 in 1 million or a hazard index greater than 1.0, the project would not introduce new stationary sources of TACs, and the project would not be developed in a location where future residents would be exposed to relatively high concentrations of TACs from offsite emission sources. For these reasons, this impact would be ***less than significant***.

Impact: Expose Sensitive Receptors to Odors

The occurrence and severity of odor impacts depends on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose a substantial number of members of the public to objectionable odors would be deemed to have a significant impact.

The facility proposes to have up to 51 squirrel monkeys initially; however, the facility is designed to allow for a maximum of 55 monkeys. An evaluation on the amount of urine and waste produced by the proposed facility as compared to humans and livestock such as horses was conducted. As shown in Table AQ-7, the proposed squirrel monkey sanctuary with 51 monkeys will produce significantly less waste than a single adult horse and about the same amount of urine as two adult humans and as much feces as three adult humans (at maximum capacity the change in waste output is negligible).

Table AQ-7: Comparison of Waste Outputs

	Estimated daily urine output (gal)	Estimated daily feces output (lb)
51 squirrel monkeys (value is total)	0.6	0.8
One adult human	0.4	0.3
One adult horse (1,000 lb)	2.4	37.0

The applicant has developed an odor control program to ensure that odors are minimized and will not result in a public nuisance. The plan includes the following:

- Absorbent bedding (e.g. wood shavings) would be used indoors on the cement floor of each cage to trap and deodorize feces and urine. Soiled bedding would be removed daily and all bedding would be removed weekly and refreshed after cages are sanitized.

- Indoor caging, floors, and walls would be cleaned and deodorized weekly with a sanitizing solution (e.g. Rescue).

- Outdoor habitats would be mulched and soiled areas cleaned and refreshed twice weekly.

- Aisles in the building would be swept and mopped daily with 1:32 bleach solution to keep area clean and prevent odors.

- Soiled bedding/mulch and animal waste would be put in heavy-duty plastic bags and disposed of in a commercial waste bin that has a heavy securable cover to prevent animal entry and odor escape. The bin will be stored next to the monkey housing area and will be picked up weekly by Cal-Waste Recover of Galt. Cal-waste has confirmed that they will schedule weekly pick-up to coordinate with building cleaning days such that waste will be picked-up within 24 hours of weekly cleaning days. No special handling of the waste is required.

- All effluent from the facility would be directed to the dedicated septic system for the facility.

Based on the small amount of urine and waste that will be produced by the monkeys at the facility along with implementation of the odor control plan potential impacts associated with Odor are considered ***less than significant.***

MITIGATION MEASURES

None required.

8 NOISE

INTRODUCTION

This chapter summarizes the fundamentals of acoustic analysis, existing receptors and ambient noise, applicable regulations, and the noise impact analysis conducted for the proposed project.

SETTING

The project site is located in a rural, agricultural-residential area of unincorporated Sacramento County. The project site is located on a 5-acre parcel that is currently developed with a single-family residence and accessory structures. All adjacent parcels, with the exception of the east bounding parcel, have similar land use and zoning designations as the subject parcel; these properties are developed with single-family residences and accessory structures. The parcel to the east is zoned Agricultural – 20 Acres (AG-20), has a General Agricultural 20 acres (GA-20) land use designation, and is in agricultural production.

Existing noise in the area is generated by residential traffic, farm animals, and agricultural operations. Sensitive receivers to the proposed projects include surrounding single-family residents.

FUNDAMENTALS OF ACOUSTICS

Acoustics is the scientific study that evaluates perception, propagation, absorption, and reflection of sound waves. Sound is a mechanical form of radiant energy, transmitted by a pressure wave through a solid, liquid, or gaseous medium. Sound that is loud, disagreeable, unexpected, or unwanted is generally defined as noise. Noise is typically expressed in “decibels” (dB), which is a common measurement of sound energy. Common sources of environmental noise and noise levels are presented in Table NO-1.

Table NO-1: Typical Noise Levels

Common Outdoor Activities	Noise Level (dB)	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet	100	
Gas lawnmower at 3 feet	90	
Diesel truck moving at 50 mph at 50 feet	80	Food blender at 3 feet, Garbage disposal at 3 feet
Noisy urban area, Gas lawnmower at 100 feet	70	Vacuum cleaner at 10 feet, Normal speech at 3 feet
Commercial area, Heavy traffic at 300 feet	60	
Quiet urban daytime	50	Large business office, Dishwasher in next room
Quiet urban nighttime	40	Theater, Large conference room (background)
Quiet suburban nighttime	30	Library, Bedroom at night, Concert hall (background)
Quiet rural nighttime	20	Broadcast/Recording Studio
	10	
Threshold of Human Hearing	0	Threshold of Human Hearing

Notes: dB= decibels; mph=miles per hour

Source: California Department of Transportation (Caltrans) 2013a.

SOUND PROPERTIES

A sound wave is initiated in a medium by a vibrating object (e.g., vocal chords, the string of a guitar, the diaphragm of a radio speaker). The wave consists of minute variations in pressure, oscillating above and below the ambient atmospheric pressure. The number of pressure variation cycles occurring per second is referred to as the frequency of the sound wave and is expressed in hertz.

Directly measuring sound pressure fluctuations would require the use of a very large and cumbersome range of numbers. To avoid this and have a more useable numbering system, the dB scale was introduced. A sound level expressed in decibels is the logarithmic ratio of two like pressure quantities, with one pressure quantity being a reference sound pressure. For sound pressure in air the standard reference quantity is generally considered to be 20 micropascals, which directly corresponds to the threshold of human hearing. The use of the decibel is a convenient way to handle the million-fold range of sound pressures to which the human ear is sensitive. A decibel is logarithmic; it does not follow normal algebraic methods and cannot be directly summed. For example, a 65 dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). A sound level increase of 10 dB corresponds to 10 times the acoustical energy, and an increase of 20 dB equates to a 100-fold increase in acoustical energy.

The loudness of sound perceived by the human ear depends primarily on the overall sound pressure level and frequency content of the sound source. The human ear is not equally sensitive to loudness at all frequencies in the audible spectrum. To better relate

overall sound levels and loudness to human perception, frequency-dependent weighting networks were developed. The standard weighting networks are identified as A through E. There is a strong correlation between the way humans perceive sound and A-weighted sound levels (dBA). For this reason, the dBA can be used to predict community response to noise from the environment, including noise from transportation and stationary sources. All sound levels expressed as dB in this chapter are A-weighted sound levels, unless noted otherwise.

Noise can be generated by a number of sources, including mobile sources (i.e., transportation) such as automobiles, trucks, and airplanes and stationary sources (i.e., non-transportation) such as construction sites, machinery, and commercial and industrial operations. As acoustic energy spreads through the atmosphere from the source to the receiver, noise levels attenuate (i.e., decrease) depending on ground absorption characteristics, atmospheric conditions, and the presence of physical barriers. Noise generated from mobile sources generally attenuate at a rate of 4.5 dB per doubling of distance. Stationary noise sources spread with more spherical dispersion patterns that generally attenuate at a rate of 6 to 7.5 dB per doubling of distance.

All buildings provide some exterior-to-interior noise reduction. A building constructed with a wood frame and a stucco or wood sheathing exterior typically provides a minimum exterior-to-interior noise reduction of 24 dB with its windows closed (U.S. Environmental Protection Agency [EPA] 1978). Buildings constructed of a steel or concrete frame, a curtain wall or masonry exterior wall, and fixed plate glass windows of 0.25-inch thickness provide an exterior-to-interior noise reduction greater than that of wood frame and a stucco or wood sheathing exterior.

COMMON NOISE TERMINOLOGY

The intensity of environmental noise fluctuates over time, and several different descriptors of time-averaged noise levels are used. The selection of a proper noise descriptor for a specific source depends on the spatial and temporal distribution, duration, and fluctuation of both the noise source and the environment. The noise descriptors most often used in relation to the environment are defined below (Caltrans 2013a).

Equivalent Noise Level (L_{eq}): The equivalent steady-state noise level in a specified period of time that would contain the same acoustic energy as the time-varying noise level during the same period (i.e., average noise level). Because it represents average noise energy, the same L_{eq} value could represent a relatively stable sound source, or a highly variable sound environment.

Minimum Noise Level (L_{min}): The lowest instantaneous noise level during a specified time period.

Maximum Noise Level (L_{max}): The highest instantaneous noise level during a specified time period.

Day-Night Noise Level (L_{dn}): The 24-hour L_{eq} with a 10-dB penalty applied to sounds occurring during the noise-sensitive hours from 10 p.m. to 7 a.m., which are typically reserved for sleeping. The L_{dn} and CNEL (defined below) are the most common noise descriptors used for transportation noise considerations or other noise sources that may occur both during daytime and more noise-sensitive nighttime (during typical relaxation and sleep) hours.

Community Noise Equivalent Level (CNEL): Similar to the L_{dn} described above with an additional 5-dB penalty applied during the noise-sensitive hours from 7 p.m. to 10 p.m., which are typically reserved for relaxation, conversation, reading, and watching television.

EFFECTS OF NOISE ON HUMANS

Excessive and chronic exposure to elevated noise levels can result in auditory and non-auditory effects on humans. Auditory effects of noise on people are those related to temporary or permanent hearing loss caused by loud noises. Non-auditory effects of exposure to elevated noise levels are those related to behavioral and physiological effects. The non-auditory behavioral effects of noise on humans are associated primarily with the subjective effects of annoyance, nuisance, and dissatisfaction, which lead to interference with activities such as communications, sleep, and learning. The non-auditory physiological health effects of noise on humans have been the subject of considerable research attempting to discover correlations between exposure to elevated noise levels and health problems, such as hypertension and cardiovascular disease. The mass of research infers that noise-related health issues are predominantly the result of behavioral stressors and not a direct noise-induced response. The extent to which noise contributes to non-auditory health effects remains a subject of considerable research, with no definitive conclusions.

The degree to which noise results in annoyance and interference is highly subjective and may be influenced by several non-acoustic factors. The number and effect of these non-acoustic environmental and physical factors vary depending on individual characteristics of the noise environment such as sensitivity, level of activity, location, time of day, and length of exposure. One key aspect in the prediction of human response to new noise environments is the individual level of adaptation to an existing noise environment. The greater the change in the noise levels that are attributed to a new noise source, relative to the environment an individual has become accustom to, the less tolerable the new noise source will be perceived.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency (1,000 to 8,000 hertz) range. In typical noisy environments, changes in noise of 1 to 2 dB are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5-dB increase is generally perceived as a readily noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness. Therefore, a doubling of sound energy (e.g., doubling the

volume of traffic on a highway) that would result in a 3-dB increase in sound would generally be perceived as barely perceptible (Caltrans 2013a:2-45).

Negative effects of noise exposure include physical damage to the human auditory system, interference, and disease. Exposure to noise may result in physical damage to the auditory system, which may lead to gradual or traumatic hearing loss. Gradual hearing loss is caused by sustained exposure to moderately high noise levels over a period of time; traumatic hearing loss is caused by sudden exposure to extremely high noise levels over a short period. Gradual and traumatic hearing loss both may result in permanent hearing damage. In addition, noise may interfere with or interrupt sleep, relaxation, recreation, and communication. Although most interference may be classified as annoying, the inability to hear a warning signal may be considered dangerous. Noise may also be a contributor to diseases associated with stress, such as hypertension, anxiety, and heart disease. The degree to which noise contributes to such diseases depends on the frequency, bandwidth, and level of the noise, and the exposure time.

Regulatory Setting

Federal

The Federal Noise Control Act of 1972

The basic motivating legislation for noise control in the United States was provided by the Federal Noise Control Act (1972), which addressed the issue of noise as a threat to human health and welfare, particularly in urban areas.

State

California State Building Code Title 24

State of California's noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, California Building Code. Title 24 is applied to new construction in California and states that interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. An acoustical analysis documenting compliance with the interior sound level standards shall be prepared for structures containing habitable rooms within the CNEL noise contours of 60-dB or greater.

Local

Sacramento County General Plan

Policy NO-5. The interior and exterior noise level standards for noise-sensitive areas of new uses affected by existing non-transportation noise sources in Sacramento County are shown by Table NO-2. Where the noise level standards of Table NO-2 are predicted to be exceeded at a proposed noise-sensitive area due to existing non-transportation

noise sources, appropriate noise mitigation measures shall be included in the project design County of Sacramento General Plan 11 Noise Element Amended December 13, 2017 to reduce projected noise levels to a state of compliance with the Table NO-2 standards within sensitive areas.

Policy NO-6. Where a project would consist of or include non-transportation noise sources, the noise generation of those sources shall be mitigated so as not exceed the interior and exterior noise level standards of Table NO-2 at existing noise-sensitive areas in the project vicinity

Policy NO-8. Noise associated with construction activities shall adhere to the County Code requirements. Specifically, Section 6.68.090(e) addresses construction noise within the County.

Table NO-2: Non-Transportation Noise Standards from the Sacramento County General Plan

Receiving Land Use	Outdoor Area (Median [L_{50}]/Maximum [L_{max}][1,2]		Interior[3]
	Daytime	Nighttime	Day/Night
All Residential	55/75	50/70	35/55
Transient Lodging[4]	55/75	-	35/55
Hospitals & Nursing Homes[5,6]	55/75	-	35/55
Theaters & Auditoriums[6]	-	-	30/50
Churches, Meeting Halls, Schools, Libraries, etc.[6]	55/75	-	35/60
Office Buildings[6]	60/75	-	45/65
Commercial Buildings[6]	-	-	45/65
Playgrounds, Parks, etc.[6]	65/75	-	-
Industry[6]	60/80	-	50/70

Notes: L_{50} = noise level that is exceeded 50% of a given period; L_{max}= the maximum instantaneous noise level

1 Standards in this table shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards of this table, then the noise level standards shall be increased at 5 dB increments to encompass the ambient. Where median (L_{50}) noise level data is not available for a particular noise source, average (L_{eq}) values may be substituted for the standards of this table provided the noise source in question operates for at least 30 minutes of an hour. If the source in question operates less than 30 minutes per hour, then the maximum noise level standards shown would apply.

2 The primary outdoor activity area associated with any given land use at which noise-sensitivity exists and the location at which the County's exterior noise level standards are applied.

3 The primary outdoor activity area associated with any given land use at which noise-sensitivity exists and the location at which the County's exterior noise level standards are applied.

4 Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.

5 Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.

6 Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.

Source: Sacramento County 2011

Sacramento County Noise Control Ordinance

Section 6.68.070 of the Sacramento County Code contains exterior noise standards for specific zoning districts. The project is currently zoned as AR-2 (2-acre minimum lots). The lots adjacent to the project site in the County are all zoned for agricultural-residential with between 1-acre minimum lots to 10-acre minimum lots. The exterior noise standards for the zoning districts detailed above is 55 dB between 7 a.m. and 10 p.m. and 50 dB between 10 p.m. and 7 a.m. (please reference Table NO-3)

Table NO-3: Sacramento County Exterior Noise Standards

Cumulative Period of Time (minutes per hour)	Daytime 7:00 a.m. to 10:00 p.m.	Nighttime 10:00 p.m. to 7:00 a.m.
30	55	50
15	60	55
5	65	60
1	70	65
0	75	70

Note: A cumulative duration of 30 minutes in an hour is equivalent to the L_{50} for that hour. Likewise, a cumulative duration of 15 minutes in an hour is equivalent to the L_{25}, a cumulative duration of 5 minutes in an hour is equivalent to the $L_{8.3}$, and a cumulative duration of 1 minute in an hour is equivalent to the $L_{1.6}$. The noise level not to be exceeded at all in a given hour represents the maximum noise level or L_{max}.

SOURCE: Sacramento County, 1987.

Significance Criteria

Based on Appendix G of the State CEQA Guidelines, the project would have a significant noise impact if it would result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- Exposure of persons to or generation of excessive groundborne vibration or groundborne or noise levels?
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would

the project expose people residing or working in the project area to excessive noise levels?

- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

ISSUES NOT DISCUSSED FURTHER

The closest airport to the project site is Lucchetti Ranch Aiport, which is located approximately nine miles to the north. The project would not expose people working in the project area to excessive noise levels from air traffic.

IMPACTS AND ANALYSIS

IMPACT: RESULT IN SUBSTANTIAL CONSTRUCTION-GENERATED NOISE

Section 6.68.090 of the Sacramento County Code provides the following exemption to the exterior noise standards:

Noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided said activities do not take place between the hours of 8 p.m. and 6 a.m. on weekdays and Friday commencing at 8 p.m. through and including 7 a.m. on Saturday; Saturdays commencing at 8 p.m. through and including 7 a.m. on the next following Sunday and on each Sunday after the hour of 8 p.m. However, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 8 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner.

Construction noise levels in the vicinity of the project site would fluctuate depending on the particular type, number, and duration of usage for the varying equipment. The effects of construction noise largely depends on the type of construction activities occurring on any given day, noise levels generated by those activities, distances to noise-sensitive receptors, and the existing ambient noise environment in the receptor's vicinity. Construction generally occurs in several discrete stages with varying equipment type, quantity, and intensity. These variations in the operational characteristics of the equipment change the effect they have on the noise environment of the project site and on the surrounding community for the duration of the construction process.

Construction is expected to begin in Spring 2019. The project does not involve any demolition activities. Since the project site is relatively flat grading would be minimal, if needed. Limited site preparation would involve grubbing/removal of vegetation, the placement of 1,365 cubic feet of gravel and 700 cubic feet of decomposed granite,

pouring of concrete pad. The proposed structure is prefabricated, which drastically shortens the construction timeline.

Based on the types of construction activities associated with the project (e.g. hauling, concrete mixing, concrete pours, clearing/grubbing, structure erection) it is expected that the primary sources of noise would be from forklifts, tractors, compressors, pumps, and various trucks (job trucks, concrete trucks, hauling trucks). Reference noise levels of these types of construction equipment are shown in Table NO-4.

Table NO-4: Typical Noise Levels from Construction Equipment

Equipment Type	Typical Noise Level (dB) at 50 feet
Aerial Lifts	85
Air Compressors	80
Concrete Saws	90
Excavators	85
Generator Sets	82
Graders	85
Pavers	85
Plate Compactors	80
Pumps	77
Rollers	85
Dozers	85
Scrapers	85
Tractors/Loaders/Backhoes	80–84
Trucks	74–88

Notes: Assumes all equipment is fitted with a properly maintained and operational noise control device, per manufacturer specifications. Noise levels listed are manufacture-specified noise levels for each piece of heavy construction equipment.

Source: FTA 2006

Noise-sensitive receptors near the construction site would experience elevated noise levels from construction activities. The closest off-site receptors to the project-related construction activities would be the neighboring residential land uses. These receptors would be exposed to the highest levels of construction noise during grubbing and grading activities. Grading and grubbing tend to involve the operation of scrapers and/or dozers moving about at a steady speed; however, it should be noted that the site preparation is limited and grading may not be necessary.

Noise-generating construction activity would occur between 7:00 a.m. and 7:00 p.m., Monday through Friday. The Sacramento County Code (Section 6.68.090) exempts construction-related noise, provided that construction activity does not occur between 8:00 p.m. and 6:00 a.m. on weekdays. Additionally, no pile driving or blasting would occur during construction. Therefore, construction would not result in the exposure of

persons to, or generation of, noise levels in excess of applicable standards. This impact would be ***less than significant***.

IMPACT: RESULT IN CONSTRUCTION-GENERATED GROUND VIBRATION AT NEARBY SENSITIVE LAND USES

Construction activities generate varying degrees of ground vibration, depending on the specific construction equipment used and activities involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. The effects of ground vibration may be imperceptible at the lowest levels, result in low rumbling sounds and detectable vibrations at moderate levels, and high levels of vibration can cause sleep disturbance in places where people normally sleep or annoyance in buildings that are primarily used for daytime functions and sleeping.

As described in above, proposed construction activities would may require on-site heavy-duty construction equipment for grubbing and possibly grading. Table NO-5 shows the maximum ground vibration levels generated by the types of equipment (and activities) that would be used during construction of the project. Construction-related ground vibration is normally associated with impact equipment such as pile drivers, blasting, and the operation of some heavy-duty construction equipment, such as dozers and trucks; however, no pile driving or blasting would be performed during project construction.

Table NO-5: Representative Ground Vibration and Noise Levels for Construction Equipment

Equipment	PPV at 25 feet (in/sec)[1]	Approximate L_v (VdB) at 25 feet[2]
Large Dozer	0.089	87
Loaded Trucks	0.076	86
Small Dozer	0.003	58

Notes: PPV = peak particle velocity; L_V = the root mean square velocity expressed in vibration decibels (VdB), assuming a crest factor of 4

Source: FTA 2006

As shown in Table NO-5, the maximum ground vibration level generated by a large dozer is 0.089 in/sec PPV and 87 VdB at 25 feet. The use of a large dozer would not exceed the Caltrans recommended level of 0.2 in/sec PPV with respect to structural damage, as the noted vibration level at 25 feet is substantially below 0.2 in/sec PPV. Further, multiple dozers are generally not used in close proximity for safety reasons. No structures are located within 25 feet of the project site boundary; therefore, the exposure at the closest buildings from a large dozer would be less than the Caltrans recommended level of 0.2 in/sec PPV.

With respect to human disturbance, the use of a large dozer would exceed the Federal Transportation Agency's maximum acceptable level of 80 VdB within 40 feet of dozing

activity. The existing structure nearest to where construction would occur is beyond 40 feet from the project site boundary. Thus, construction activities performed by dozers would not occur within 40 feet of existing structures and therefore, vibration levels would not exceed the Federal Transportation Agency's maximum acceptable level for human annoyance of 80 VdB; therefore, construction that would occur on project site would not result in the exposure of any sensitive receptors or structure to excessive vibration levels. This impact would be ***less than significant***.

IMPACT: SUBSTANTIAL INCREASE (TEMPORARY, PERIODIC, OR PERMANENT) IN AMBIENT NOISE LEVELS

The existing noise environment in the project vicinity is defined by noise sources typical in a rural setting. Noise sources contributing to measured ambient noise levels consisted of wind blowing through grass, wildlife, insects, birds, and intermittent traffic on North Valensin Road. To quantify existing background noise levels in the project vicinity, long-term ambient noise level measurements were conducted on the project site from Saturday, July 8 through Monday, July 10, 2017, by Bollard Acoustical Consultants, Inc. Ambient noise level monitoring was conducted along the southern property line (reference Plate NO-1). Table NO-6 summarizes the measured ambient noise levels (please reference Appendix D for the complete Noise Study).

Table NO-6: Measured Ambient Noise Level Summary

		Measured Noise Levels (dBA)			
		Daytime (7 AM to 10 PM)		Nighttime (7 AM to 10 PM)	
Site[1]	Date	L_{50}	L_{max}	L_{50}	L_{max}
1	Saturday, July 8, 2017	44	58	58	62
	Sunday, July 9, 2017	45	60	57	62
	Monday, July 10, 2017	45	57	55	65
	Average:	45	58	57	63
Sacramento County Standards (Table 1):		55	75	50	70

Notes:

1. Ambient noise level monitoring was conducted along the southern property line. Location is shown on Figure 1.

Plate NO-1: Noise-Sensitive Locations and Ambient Noise Measurement Location

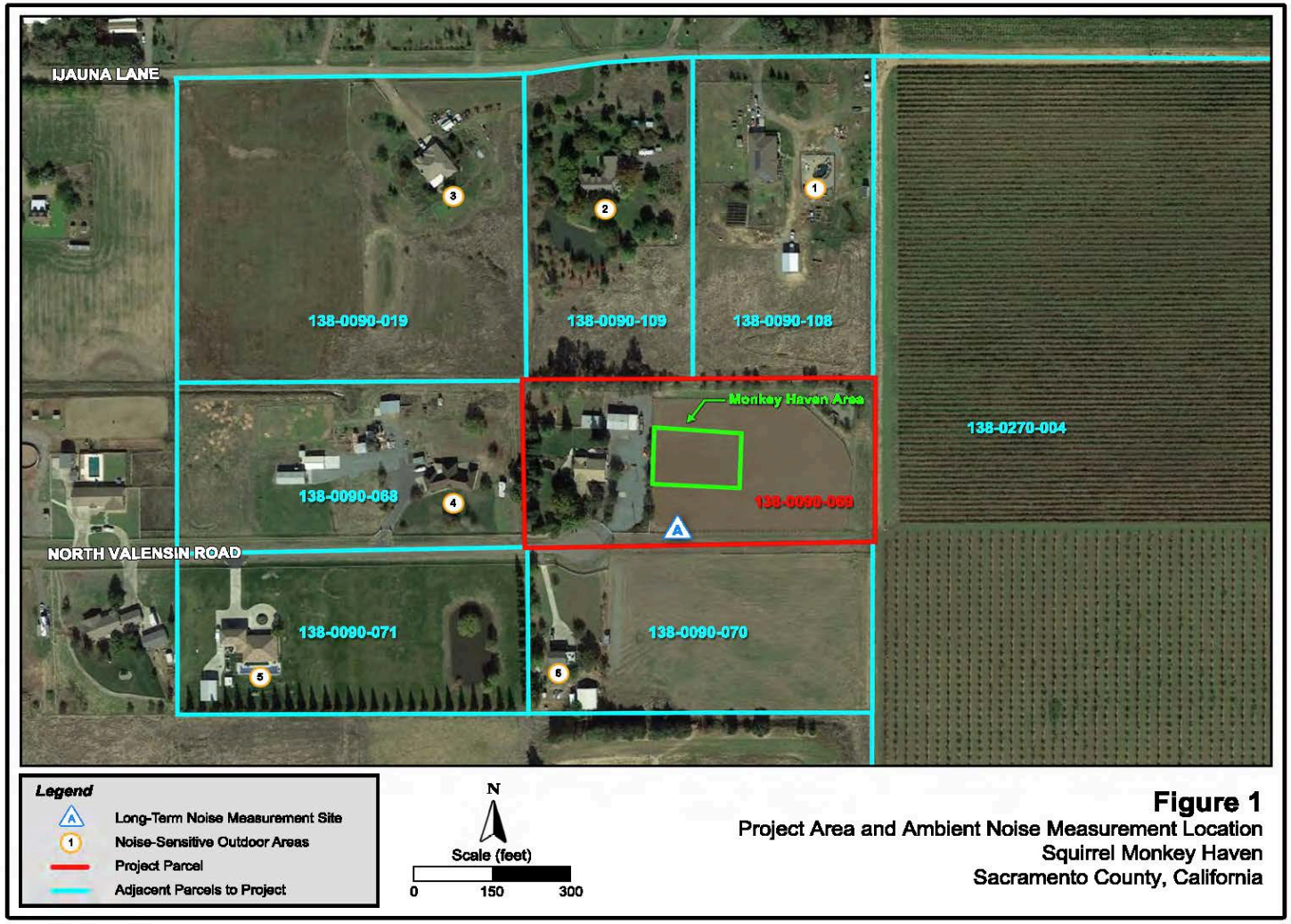


Figure 1
Project Area and Ambient Noise Measurement Location
Squirrel Monkey Haven
Sacramento County, California

Table NO-6 data indicate that existing ambient noise levels in the project vicinity were consistent from day-to-day and night-to-night. The measured ambient data from the three-day monitoring period was averaged to determine the baseline noise level condition in the project vicinity. The calculated daytime and nighttime median noise levels were 45 dB and 57 dB, while daytime and nighttime maximum noise levels were 58 dB and 63 dB. The elevated nighttime noise levels are believed to be attributable to the presence of increased insect activity during the nighttime hours.

The project parcel and surrounding parcels are large lot agriculturally zoned parcels containing single-family residences. The monkeys sleep pattern is diurnal like humans, awake during daytime hours and asleep during nighttime hours. Furthermore, the monkeys would be indoors within the proposed agricultural building during nighttime hours. Because noise-generation from the monkeys is not anticipated during nighttime hours, only the Sacramento County General Plan daytime (7 a.m. to 10 p.m.) noise level standards would be applicable to the project.

The primary noise source associated with this facility would be the vocalizations of the monkeys. The project applicant has indicated that the population of 51 monkeys will consist of 35 females and 16 males. The males are not heard vocalizing very often. If they do it is either a happy twitter at feeding time or a brief cackle to threaten a neighboring male. The females chit chat a lot throughout the day. The conversational chit chat (e.g., purrs, chirps, chucks) occur between monkeys when they are close to each another. According to the project applicant, these types of vocalizations are similar in sound level to average human conversation. Other vocalizations, which are the loudest, are given in reaction to specific events that are scary (alarm call yap) or annoying (cackle, shrieks). About 3-5 episodes of social drama occur daily that involve shrieking. These episodes are momentary and last about 30-60 seconds. Squirrel monkeys vocalize for specific reasons and do not vocalize impulsively or repetitively like dogs barking at strangers, out of boredom, or to protect territory.

According to footnote 7 of Table NO-3, the median (L_{50}) noise level standards are applicable to noise sources present in excess of 30 minutes out of the hour while the maximum (L_{max}) noise level standards are applicable to noise sources present less than 30 minutes out of the hour. It is our understanding that most of the vocalizations from monkeys throughout the day are “conversational chit-chat” with limited episodes of shrieking, occurring approximately 3-5 times per day. Because the conversational chit-chat could potentially occur in excess of 30 minutes out of an hour, it would be subject to the median (L_{50}) noise level standard of 55 dB. Because the shrieking would only occur on limited occasions, it would be subject to the maximum (L_{max}) noise level standard of 75 dB.

The journal article published by the Acoustical Society of America titled, “Responses of Squirrel Monkeys to their Experimentally Modified Mobbing Calls,” by Claudia Fichtel and Kurt Hammerschmidt (May 2003), provides reference noise levels for squirrel monkey vocalizations. Specifically, the article provides reference noise levels for the

alarm call yap. The yap, according to the article, serves to inform members of the same species about the presence of a mammalian predator and is often uttered in a chorus as a mobbing reaction. The maximum squirrel monkey yap noise levels were measured to be 76 dB ± 5 dB at a distance of 3 feet. Therefore, the worst- case maximum noise levels of for yaps documented in the journal article were 81 dB at 3 feet. As indicated previously, the loudest types of monkey vocalizations are alarm call yaps, cackles and shrieks. The project applicant has indicated that the shrieks are the loudest of the three vocalizations but not by a wide margin. In order to conservatively assess maximum noise levels associated with shrieks, 5 dB was added to the documented worst-case yap noise levels of 81 dB at 3 feet, resulting in reference maximum noise level of 86 dB at 3 feet. Median monkey vocalizations (twitters) were conservatively assumed to be 15 dB quieter than maximum yap noise levels, resulting in a reference noise level of 66 dB at 3 feet. Average male human conversation in a raised voice is approximately 65 dB at 3 feet, providing good agreement with the applicants' subjective similarity of the monkey twitter to human conversation. To provide a conservative assessment of median squirrel monkey noise generation (twitters) at the proposed facility, half (18) of the females were assumed to vocalizing simultaneously for the duration of an hour, resulting in a reference median noise level of 79 dB at 3 feet.

The reference noise levels discussed in the preceding paragraphs were projected to the nearest identified outdoor activity areas assuming normal spherical spreading of sound (6 dB decrease per doubling of distance from the noise source). Table NO-7 shows the predicted median and maximum noise levels at each of the six nearest residential outdoor activity areas to the proposed shelter for worst-case squirrel monkey vocalization noise generation.

Table NO-7: Predicted Squirrel Monkey Noise Levels at Neighboring Parcels

Predicted Squirrel Monkey Noise Levels at Nearest Outdoor Activity Areas				
			Predicted Noise Levels (dBA)	
Residence[1]	APN	Distance (feet)[2]	L_{50}	L_{max}
1	138-0090-108	520	34	41
2	138-0090-109	480	34	42
3	138-0090-019	640	32	39
4	138-0090-068	400	36	44
5	138-0090-071	840	30	37
6	138-0090-070	430	35	43
Sacramento County Daytime Standards:			**55**	**75**

Notes:

1. Nearest residential outdoor activity areas are illustrated on Figure 1.
2. Distances were scaled from the center of the nearest outdoor habitat area to nearest residential outdoor activity areas.

Table NO-7 indicates that predicted worst-case squirrel monkey noise levels generated by the proposed project would be satisfactory relative to the County's noise standards. Furthermore, predicted noise levels would be below measured ambient noise levels presented in Table NO-6.

Predicted Noise Levels at Nearest Property Lines

Although the Sacramento County's noise level standards are applied at residential outdoor activity areas, monkey vocalization noise levels were also conservatively predicted at the nearest project property lines. The same methodology described in the previous section was utilized to predict monkey vocalization noise levels at the property lines. Those results are presented in Table NO-8.

Table NO-8: Noise Levels at Nearest Property Lines

Squirrel Monkey Haven – Sacramento County, California				
			Predicted Noise Levels (dBA)	
Direction	**APN**	**Distance (feet)[1]**	**L_{50}**	**L_{max}**
North	138-0090-109	110	47	55
East	138-0270-004	265	40	47
South	138-0090-070	135	45	53
West	138-0090-068	265	40	47
Sacramento County Daytime Standards:			**55**	**75**

Notes:

1. Distances were scaled from the nearest outdoor habitat area to the nearest property lines.

Table NO-8 indicates that predicted worst-case squirrel monkey noise levels generated by the proposed project would be satisfactory relative to the County's noise standards, even if they were assessed at the nearest project property lines rather than outdoor activity areas. Furthermore, predicted property line noise levels would be below the measured ambient noise levels presented in Table NO-6.

Single Event Analysis

Sound Exposure Level (SEL) represents the entire sound energy of a given single-event normalized into a one-second period regardless of event duration. According to the project applicant, about 3-5 episodes of social drama occur daily that involve shrieking with each episode lasting about 30-60 seconds. Given maximum shrieking noise levels of 86 dB at 3 feet and 60 seconds of continuous shrieking, the SEL for worst-case squirrel monkey vocalizations was calculated to be 104 dB at a distance of 3 feet. Table NO-9 shows the predicted interior SEL at each of the six nearest residences. The analysis assumes a building façade transmission loss of 15 dB and 25 dB for bedroom windows in the open and closed positions, respectively.

Table NO-9: Estimated Noise Levels at Nearest Neighboring Bedrooms

Squirrel Monkey Haven – Sacramento County, California				
			Predicted SEL (dBA)[3]	
Residence[1]	APN	Distance (feet)[2]	Windows Open[4]	Windows Closed[5]
1	138-0090-108	510	44	34
2	138-0090-109	500	44	34
3	138-0090-019	670	42	32
4	138-0090-068	350	47	37
5	138-0090-071	810	40	30
6	138-0090-070	400	46	36
Recommended Interior SEL Standard[6]:			**55**	**55**

Notes:

1. Nearest residences are illustrated on Figure 1.
2. Distances were scaled from the center of the nearest outdoor habitat area to nearest residential facade.
3. SEL = Sound Exposure Level
4. Predicted noise levels were adjusted by -15 dB to account for the transmission loss provided by the residential building facades with the bedroom windows in the open position.
5. Predicted noise levels were adjusted by -25 dB to account for the transmission loss provided by the residential building facades with the bedroom windows in the closed position.
6. No universal SEL criterion has been developed for environmental noise assessments. The Sacramento County General Plan does not contain an SEL standard.

Table NO-9 indicates that worst-case squirrel monkey sound exposure levels are predicted to be well below the recommended interior SEL standard of 55 dB. No further consideration of noise mitigation measures would be warranted for the project relative to the recommended interior SEL standard of 55 dB.

Comparison of Proposed Project Relative to Typical Dog Kennel

Due to the unique nature of this project, estimated noise generated by the squirrel monkeys was compared to the noise generation of a typical dog kennel operation. The primary noise source associated with a typical outdoor dog kennel is periodic dog barking. Bollard has considerable experience in preparing noise studies for dog boarding facilities and, even under the most ideal boarding conditions with highly trained supervision, dogs occasionally still bark. Usually barking occurs in response to some stimuli, such as persons or other dogs entering the kennel area. The degree of barking depends largely on the experience of the staff and the level of stimuli the dogs receive.

To quantify noise levels associated with a typical outdoor dog kennel, Bollard averaged data collected at the All Pets Boarding (Loomis), Sacramento SPCA, and Nadelhaus Kennels (Chico). The results of the barking dog noise measurements indicate that at a distance of approximately 200 feet from the dogs, the maximum noise level generated by the barking dogs was approximately 55 dB L_{max}. The average noise level measured at 200 feet with approximately 30-40 dogs barking intermittently was 50 dB L_{eq}. Because the county's standards are in terms of the median noise level descriptor, and not average (L_{eq}), median barking dog noise levels were conservatively assumed to be

50 dB L_{50}. At the Nadelhaus Kennels, median noise levels were approximately 5 dB lower than average noise levels, therefore the assumed median noise level of 50 dB L_{50} for this comparative analysis would be considered conservative. Table NO-10 shows the predicted squirrel monkey vocalization and barking dog noise levels at the outdoor activity areas of the six nearest residences.

Table NO-10: Comparison of Predicted Squirrel Monkey Noise Levels to Typical Dog Kennel

Squirrel Monkey Haven – Sacramento County, California						
			Predicted Noise Levels (dBA)			
			Squirrel Monkeys		Dogs Barking	
Residence[1]	APN	Distance (feet)[2]	L_{50}	L_{max}	L_{50}	L_{max}
1	138-0090-108	520	34	41	42	47
2	138-0090-109	480	34	42	42	47
3	138-0090-019	640	32	39	40	45
4	138-0090-068	400	36	44	44	49
5	138-0090-071	840	30	37	38	43
6	138-0090-070	430	35	43	43	48

Notes:

1. Nearest residential outdoor activity areas are illustrated on Figure 1.
2. Distances were scaled from the center of the nearest outdoor habitat area to nearest residential outdoor activity areas.

As indicated above in Table 6, predicted median noise levels due to barking dogs are approximately 8 dB higher than squirrel monkey vocalizations. Predicted maximum barking dog noise levels are approximately 6 dB higher than maximum squirrel monkey vocalization noise levels.

The low density rural character of the community generally provides a suitable environmental setting in which kennels would be compatible. According to the project applicant, the kennel will be closed-up at night between 8 p.m. and 7 a.m. weekdays and 8 p.m. and 9 a.m. weekends and holidays; therefore limiting the potential for nighttime noise disturbance. The location of the kennel from sensitive receptors along with the typical noise level produced by this species of monkey reduces any anticipated noise impact to ***less than significant***.

MITIGATION MEASURES

None required.

9 CULTURAL RESOURCES

INTRODUCTION

This chapter analyzes and evaluates the potential impacts of the project on known and unknown cultural resources, and on unknown fossil deposits of paleontological importance. Cultural resources include historic buildings and structures, historic districts, historic sites, culturally sacred sites, prehistoric and historic archaeological sites, and other prehistoric and historic objects and artifacts. Paleontological resources (i.e., fossils) include the remains of plant and animal life and, unlike cultural resources, are exclusive of human remains and artifacts.

The following is based largely on the information and evaluation presented in a report entitled, *Cultural Resources Inventory Squirrel Monkey Haven Project, Sacramento County, California* prepared by John W. Dougherty of PAR Environmental Services Inc. This report details the results of a records search conducted by the North Central Information Center (NCIC), California Historical Resources Information System; a sacred lands file search by the Native American Heritage Commission (NAHC), contacts with Native Americans identified by the NAHC a paleontological database search archival research and literature review; and field inspection.

SETTING

CULTURAL HISTORY

PREHISTORY

The prehistory of California's Central Valley and Sierra Nevada have been addressed repeatedly over the span of the twentieth century (e.g. Lillard et al. 1939; Moratto 1984; Rosenthal et al. 2007). The following summary adheres to Rosenthal et al. (2007) and Rosenthal (2011). Discussing the central Sierra Nevada, Rosenthal (2011) collated and analyzed projectile point data emphasizing the Bodie Hills obsidian source to derive a regional chronology tied to regional archaeological data. Rosenthal (2011) recognizes five primary prehistoric periods:

- Early Archaic: before 7,000 cal. BP;
- Middle Archaic: 7,000 to 3,000 cal. BP;
- Late Archaic: 3,000 to 1,100 cal. BP;
- Recent Prehistoric I: 1,100 to 610 cal. BP; and
- Recent Prehistoric II: 610 cal. BP to historic contact.

The Archaic Period by definition is considered to reflect a period of more mobile, possibly band-level societies moving seasonally within the region, exploiting seasonally available resources (c.f. Fredrickson 1973, Willey and Phillips 1958). Typological and materials source information reflects extended geographic social interactions extending from the California Coastal region to the Great Basin and from as far north as southern Oregon and south to the Mono Lake region. In the Great Valley during the Late Archaic and Recent Prehistoric, material preferences appear to change over time with minor amounts of obsidian in earlier sites and a steady increase in the prevalence of obsidian from Coast Range sources toward the present (Lillard et al. 1939; Moratto 1984; Rosenthal et al. 2007). Dougherty (1990), however, suggested that the apparent changes in obsidian usage were more technological in nature and did not involve increased obsidian use by individuals.

The Recent Prehistoric I reflects the earliest archaeologically identifiable development of the societies ancestral to the historic ethnographic populations. A period of apparent reduced population punctuates the transition between the Late Archaic and earliest Recent Prehistoric I (Rosenthal 2011). The Recent Prehistoric II presents indications of increased sedentary lifestyle, larger village populations, a potential shift from foraging to logistically managed subsistence and resource intensification (Fredrickson 1973). Other indicators that suggest increased social complexity include evidence of inherited status for individuals, increased importance of ritual, and the spread of clamshell disk beads used as a medium of exchange (Fredrickson 1973; Rosenthal 2011).

ETHNOHISTORY

The Project Area falls within territory ethnographically attributed to the Plains Miwok people of Central California (Bennyhoff 1977; Levy 1978; Milliken 1995). The Miwok language is a member of the Penutian language family. Penutian languages are estimated to have been spoken by half of California's native population at the time of historic contact (Moratto1984:538-539).

Plains Miwok economy depended extensively on the acorn and riparian and marsh resources including fish and waterfowl from streams and marshes, and large game from the neighboring plains. The Plains Miwok hunted and gathered year-round (Levy 1978:398-413). For other materials they participated in an extensive economic network through which both finished goods and raw materials moved. Plains Miwok technology was dependent natural materials including stone, bone, shell, wood, plant fiber, and animal products. The Miwok engaged in trade with neighboring groups and acquired obsidian from sources in the Napa Valley and from trans-Sierran sources in eastern California and western Nevada (Kroeber 1976; Levy 1978). Trade and exchange links reached the Great Basin to the east, and the Pacific coast to the west where marine shell occurred (Hull 2007).

HISTORY

The project area is located in southern Sacramento County. The nearest named place is Herald, located about two miles south-southwest of the project location. There is little historical information available for the area, which is largely agricultural. Galt is located within the historical boundaries of the Cosumnes Township. The town was laid out in

1869 by one Obed Harvey and the Western Pacific Railroad Company (Reed 1923:119-120). Reed (1923 noted that during the 1920s colonies were being laid out near Arno and “the Valensin place.” The Central California electric road ran nearby. Reed noted that during the latter half of the 19th century farms became smaller, dropping from half-section ranches to smaller 20 to 40-acre operations, more intensively worked and with a more diverse pattern of crops. This pattern largely persists at present.

REGULATORY SETTING

FEDERAL

NATIONAL HISTORIC PRESERVATION ACT

The 1966 National Historic Preservation Act (NHPA) set forth national policy for recognizing and protecting historic properties. It established the National Register of Historic Places (NRHP), State Historic Preservation Officers and programs, and the Advisory Council on Historic Preservation. The implementing regulations for Section 106, Title 36, Section 800 of the Code of Federal Regulations, set forth specific steps federal agencies must follow in order to take into account the effects of their projects on historic properties. In most cases, compliance with Section 106 is carried out by federal agencies through consultation with the State Historic Preservation Officer, and in the case of projects involving tribal lands, with the tribal representative. Properties of traditional religious and cultural importance to Native Americans are considered under Section 101(d)(6)(A) of NHPA.

The NRHP - the nation’s master inventory of known historic resources - is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, and cultural value. The formal criteria (contained in Title 36, Section 60.4 of the Code of Federal Regulations) for determining NRHP eligibility are as follows:

1. The property is at least 50 years old (however, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP);

2. It retains integrity of location, design, setting, materials, workmanship, feeling, and associations; and

3. It possesses at least one of the following characteristics:

    a. Association with events that have made a significant contribution to the broad patterns of history (events).

    b. Association with the lives of persons significant in the past (persons).

    c. Distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or

represents a significant, distinguishable entity whose components may lack individual distinction (architecture).

d. Has yielded, or may be likely to yield, information important to prehistory or history (information potential).

Ordinarily, buildings and structures less than 50 years old are not considered eligible for listing in the NRHP. A resource that lacks integrity or does not meet one of the NRHP criteria is not considered a historic property under federal law, and effects to such a resource are not considered significant under the NHPA.

STATE

CALIFORNIA CODE OF REGULATIONS

The California Register of Historic Resources (CRHR) is a listing of State of California resources that are significant within the context of California's history. The CRHR is a statewide program of similar scope and with similar criteria for inclusion as those used for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR. A historic resource must be significant at the local, state, or national level under one or more of the criteria defined in the California Code of Regulations Title 15, Chapter 11.5, Section 4850. All resources listed in, or formally determined eligible for, the NRHP are automatically listed in the CRHR.

The following four evaluation criteria determine listing eligibility of a resource to the CRHR:

1. Is associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

2. Is associated with the lives of persons important to local, California, or national history.

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values.

4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Similar to the NRHP, a resource must meet one of the above criteria and retain integrity.

CALIFORNIA HEALTH AND SAFETY CODE

If human remains are discovered during construction outside of a dedicated cemetery, California Health and Safety Code Section 7050.5 requires that the project owner contact the County coroner and further excavation or disturbance of land in the vicinity of the discovery cease until the coroner has made a determination. If the coroner

determines the remains are Native American, the coroner must contact NAHC within 24 hours and the procedures outlined in Public Resources Code (PRC) Section 5097.98 must be followed.

Native American Historic Resource Protection Act

The Native American Historic Resource Protection Act California (PRC 5097-5097.993) describes the duties of the NAHC. As established in Section 5097.98, whenever the commission receives notification of a discovery of Native American human remains from a County coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods.

California Environmental Quality Act

CEQA statutes [PRC 2100l(b) et seq.] require planning agencies to carefully consider the potential effects of a project on historical resources. Under the revised and adopted CEQA guidelines in Section 15064.5, a "historical resource" includes: a resource listed in or eligible for the CRHR; or listed in a local register of historical resources; or identified in a historical resource survey and meeting requirements in Section 5024.l(g) of the PRC; or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines historically significant, provided the determination is supported by substantial evidence in light of the whole record; or a resource so determined by a lead agency as defined in PRC 5020.l(j) or Section 5024.1. Under the State CEQA Guidelines, "[a] project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment [Public Resources Code Section 15064.5(b)]." Substantial adverse change is "... physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (PRC 15064.5(b)(2)).

CEQA also requires planning agencies to consider the effects of a project on unique archaeological resources. If an archaeological site meets the definition of a unique archaeological resource (PRC 21083.2), then the site must be treated in accordance with the special provisions for such resources, which include time and cost limitations for implementing mitigation. Resources that neither meet any of the criteria for listing on the NRHP or CRHR, nor qualify as a “unique archaeological resource” under PRC Section 21083.2 are viewed as not significant. Under CEQA, “[a] nonunique archaeological resource need be given no further consideration, other than the simple recording of its existence by the lead agency if it so elects” (PRC Section 21083.2(h)). Under CEQA, if an archeological site is not a significant “historical resource” but meets the definition of a “unique archeological resource” as defined in PRC Section 21083.2, then it should be treated in accordance with the provisions of that section. A unique archaeological resource is defined as follows:

> An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
>
> > (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
> >
> > (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
> >
> > (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

State CEQA Guidelines Section 15064.5(e), requires that excavation activities be stopped whenever human remains are uncovered and that the County coroner be called in to assess the remains. If the County coroner determines that the remains are those of Native Americans, the NAHC must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as timely identified by the NAHC. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

In addition to the mitigation provisions pertaining to accidental discovery of human remains, the State CEQA Guidelines also require that a lead agency make provisions for the accidental discovery of historical or archaeological resources. Pursuant to Section 15064.5(f), these provisions should include “an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place.”

TRIBAL CULTURAL RESOURCES

Assembly Bill (AB) 52, “Native Americans: California Environmental Quality Act,” amended CEQA to identify a “Tribal Cultural Resource” as a new, separate, and distinct resource to be analyzed under CEQA. The bill also amends Section 5097.94 (Native American Historical, Cultural, and Sacred Sites) of the PRC and adds Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21084.2, and 21084.3 to the CEQA statutes. The additions to CEQA mandate clear timelines for consultation with California Native American tribes.

AB 52 applies to all projects that have a notice of preparation or a notice of negative declaration or mitigated negative declaration filed on or after July 1, 2015. The bill requires that a lead agency notify a California Native American tribe about projects in its purview if that tribe has requested, in writing, to be kept informed of projects proposed by the lead agency and continue to consult with the tribe, if requested. The bill also

specifies mitigation measures that may be considered to avoid or minimize impacts on Tribal Cultural Resources.

LOCAL

SACRAMENTO COUNTY GENERAL PLAN

Policies related to cultural resources are set forth in Section VIII of the Conservation Element. Policies relevant to the project include the following:

Policy CO-155. Native American burial sites encountered during preapproved survey or during construction shall, whenever possible, remain in situ. Excavation and reburial shall occur when in situ preservation is not possible or when the archeological significance of the site merits excavation and recording procedure. On-site reinternment shall have priority. The project developer shall provide the burden of proof that off-site reinternment is the only feasible alternative. Reinternment shall be the responsibility of local tribal representatives.

Policy CO-158. As a condition of approval of discretionary permits, a procedure shall be included to cover the potential discovery of archaeological resources during development or construction.

Policy CO-161. As a condition of approval for discretionary projects, require appropriate mitigation to reduce potential impacts where development could adversely affect paleontological resources.

Policy CO-163. Require that a certified geologist or paleoresources consultant determine appropriate protection measures when resources are discovered during the course of development and land altering activities.

SIGNIFICANCE CRITERIA

Based on Appendix G of the State CEQA Guidelines, the project was determined to result in a significant impact to cultural resources if it would:

- cause a substantial adverse change in the significance of an historical resource as defined in Section 15064.5 of the State CEQA Guidelines;
- cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5 of the State CEQA Guidelines;
- disturb any human remains, including those interred outside of formal cemeteries; or
- directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;

- cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe.

IMPACTS AND ANALYSIS

METHODOLOGY

The impacts analysis for cultural resources is based on the findings and recommendation of the *Cultural Resources Inventory Squirrel Monkey Haven Project, Sacramento County, California* (Dougherty 2017). The analysis is also informed by the provisions and requirements of federal, state, and local laws and regulations applicable to cultural resources.

IMPACT: ADVERSELY AFFECT IMPORTANT CULTURAL OR ARCHAEOLOGICAL RESOURCES

The cultural resources inventory and evaluation did not identify any archaeological or tribal resources on the project site or within a quarter-mile of the project area (Dougherty 2017). The NCIC records search did not yield any resources, studies, or reports within a quarter-mile of the project area. The NAHC did not identify any sacred sites that could be affected by the project.

Although no NRHP- or CRHR-listed or eligible resources, unique archaeological resources, tribal cultural resources, or traditional cultural properties have been documented in the project site, the project is located in a region where significant prehistoric and historic-era cultural resources have been recorded and there remains a potential that undocumented cultural resources could be unearthed or otherwise discovered during ground-disturbing and construction activities. Prehistoric or ethnohistoric materials might include flaked stone tools, tool-making debris, stone milling tools, shell or bone items, and fire-affected rock or soil darkened by cultural activities (midden); examples of significant discoveries would include villages and cemeteries. Historic materials might include metal, glass, or ceramic artifacts; examples of significant discoveries might include former privies or refuse pits. Due to the potential for these undocumented resources to occur on the project site, there could be significant impacts on cultural resources.

Implementation of Mitigation Measure CR-1 would ensure that any undocumented cultural resources or inadvertent discoveries of cultural resources made during construction or ground-disturbing activities would be properly recorded and the historical significance of the resources documented. This mitigation is consistent with Sacramento County General Plan Policy CO-158, which requires that procedures to cover the potential discovery of archaeological resources during development or construction be included as a condition of approval of discretionary permits. Therefore, potentially

significant impacts resulting from inadvertent damage or destruction of unknown cultural resources during construction would be reduced to a ***less-than-significant*** level.

Impact: Disturb Human Remains, Including Those Interred Outside of Formal Cemeteries

There is no known evidence of potential for human burials on the project site. In the event human remains are discovered, the contractor would be required to comply with existing regulations. Pursuant to Section 7050.5 of the California Health and Safety Code, in case of the discovery of human remains, all work would stop and the County coroner would be immediately notified. If the remains are determined to be Native American, guidelines of the NAHC would be adhered to in the treatment and disposition of the remains, consistent with PRC Section 5097.98 and Sacramento County General Plan Policy CO-155. With application of applicable laws and regulations, any disturbance of human remains would be handled such that there would be a ***less-than-significant*** impact.

Impact: Adversely Affect a Unique Paleontological Resource or Site, or a Unique Geologic Feature

According to the State CEQA Guidelines, a project is considered to have a significant impact on paleontological resources if it would directly or indirectly result in the destruction of a unique paleontological resource. No known paleontological resources or sites occur at the project location; therefore, Sacramento County General Plan Policy CO-161 (which requires appropriate mitigation to reduce potential impacts where development could adversely affect paleontological resources) would not apply. Because no paleontological resources are known to be present and the site has very low potential for paleontological resources, this impact would be ***less than significant***.

Impact: Adversely Affect Tribal Cultural Resources

Pursuant to AB52, Tribes that have requested notification of projects in accordance with Public Resources Code 21080.3.1(b)(1) were notified and provided an opportunity to request consultation. Wilton Rancheria was the only tribe that requested consultation. Documents were shared with Wilton and a consultation meeting was determined not to be necessary. In addition, The Cultural Resources Inventory did not identify any sacred sites on or near the project site. Impacts to tribal cultural resources are, therefore, considered ***less than significant.***

Mitigation Measures

Mitigation Measure CR-1: If cultural resources are discovered during project-related construction activities, all ground disturbances within a minimum of 50 feet of the find shall be halted and the Planning and Environmental Review Division of the Community Development Department shall be immediately notified at (916) 874-7499. Work shall remain suspended until a County-identified, qualified professional archaeologist can

evaluate the discovery. The archaeologist shall examine the resources, assess their significance, and recommend appropriate procedures to the lead agency to either further investigate or mitigate adverse impacts. If the find is determined to be a significant historical resource and the archaeological resource cannot be avoided, then applicable mitigation measures for significant resources shall be completed (e.g., preservation in place, data recovery program pursuant to PRC Section 21083.2[i]). The project applicant shall be required to implement any mitigation deemed necessary for the protection of such cultural resources. During evaluation or mitigated treatment, ground disturbance and construction work could continue on other parts of the project site.

10 GREENHOUSE GASES & CLIMATE CHANGE

INTRODUCTION

This chapter provides a discussion of climate change science and greenhouse gas (GHG) emissions sources in California and Sacramento County; a summary of applicable regulations with respect to local, regional, and statewide GHG emission sources; and includes an analysis of potential short- and long-term GHG impacts caused by the project.

GHG emissions have the potential to adversely affect the environment because, on a cumulative basis, they contribute to global climate change. In turn, global climate change has the potential to result in rising sea levels, which can inundate low-lying areas; affect rain and snow fall, leading to changes in water supply; result in increased risk of catastrophic wildfire; and to affect habitat, leading to adverse effects on biological and other resources.

SETTING

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

THE PHYSICAL SCIENTIFIC BASIS

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. The absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. The earth has a much lower temperature than the sun; therefore, the earth emits lower frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), chlorofluorocarbons (CFCs), and fluorinated gases hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Some GHGs such as CO_2 occur naturally, and are emitted to the atmosphere through natural processes and human activities. Other GHGs (e.g., fluorinated gases) are created and emitted solely through human activities.

Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global

warming. It is “extremely likely” that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors (Intergovernmental Panel on Climate Change [IPCC] 2014:3, 5).

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any particular GHG molecule is dependent on multiple variables and cannot be determined with any certainty, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptake every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains in the atmosphere (IPCC 2013:467).

EFFECTS OF CLIMATE CHANGE ON THE ENVIRONMENT

IPCC was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme to provide the world with a scientific view on climate change and its potential effects. According to the IPCC global average temperature is expected to increase relative to the 1986-2005 period by 0.3 to 4.8 degrees Celsius (°C) (0.5 to 8.6 degrees Fahrenheit [°F]) by the end of the 21st century (2081-2100), depending on future GHG emission scenarios (IPCC 2014:SPM-8). According to the California Natural Resources Agency (CNRA), temperatures in California are projected to increase 2.7°F above 2000 averages by 2050 and, depending on emission levels, 4.1 to 8.6°F by 2100 (CNRA 2012:2).

Physical conditions beyond average temperatures could be affected by the accumulation of GHG emissions. For example, changes in weather patterns resulting from increases in global average temperature are expected to result in a decreased volume of precipitation falling as snow in California and an overall reduction in snowpack in the Sierra Nevada. Based on historical data and modeling, the California Department of Water Resources (CDWR) projects that the Sierra snowpack will decrease by 25 to 40 percent from its historic average by 2050 (CDWR 2008:4). An increase in precipitation falling as rain rather than snow also could lead to increased potential for floods because water that would normally be held as snow in the Sierra Nevada until spring could flow into the Central Valley concurrently with winter storm events (CNRA 2012:5). This scenario would place more pressure on California’s levee/flood control system.

Another outcome of global climate change is sea level rise. Sea level rose approximately 7 inches during the last century and, assuming that sea-level changes along the California coast continue to reflect global trends, sea level along the state’s coastline in 2050 could be 10 to 18 inches higher than in 2000, and 31 to 55 inches higher by the end of this century (CNRA 2012:9).

As the existing climate throughout California changes over time, the ranges of various plant and wildlife species could shift or be reduced, depending on the favored temperature and moisture regimes of each species. In the worst cases, some species would become extinct or be extirpated from the state if suitable habitat conditions are no longer available (CNRA 2012:11, 12).

Changes in precipitation patterns and increased temperatures are expected to alter the distribution and character of vegetation and associated moisture content of plants and soils. An increase in frequency of extreme heat events and drought are also expected. These changes are expected to lead to increased frequency and intensity of large wildfires (CNRA 2012:11).

GREENHOUSE GAS EMISSIONS SOURCES

STATEWIDE GREENHOUSE GAS EMISSIONS INVENTORY

Emissions of GHGs contributing to global climate change are attributable, in large part, to human activities associated with on-road and off-road transportation, industrial/manufacturing, electricity generation by utilities and consumption by end users, residential and commercial onsite fuel usage, agriculture, high global warming potential (GWP) gases, and recycling and waste sectors (California Air Resources Board [ARB] 2015). The most recent California statewide GHG emissions inventory is summarized in Table CC-1.

In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation (ARB 2015). Emissions of CO_2 are, largely, byproducts of fossil fuel combustion. CH_4, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N_2O is also largely attributable to agricultural practices and soil management. Additionally, high-GWP gases have atmospheric insulative properties that are hundreds to tens of thousands of times greater than that of CO_2. HFCs, PFCs, and SF_6 are some of the most common types of high-GWP gases and result from a variety of industrial processes. HFCs and PFCs are used as refrigerants and can be emitted through evaporation and leakage. SF_6 is a powerful electrical insulator used in power transmission and semiconductor manufacturing and is emitted through evaporation and leakage into the atmosphere.

Table CC-1: California Statewide Greenhouse Gas Emissions Inventory (1990-2016)

Emissions Sector	MMT CO_2e				Percent of Total (2016)	Percent Change (1990-2016)
	1990[1]	2000	2010	2016		
Transportation	151	176	170	174	41%	15%
Electricity Generation[2]	111	105	91	69	16%	38%
Industrial	103	105	101	100	23%	-3%
Commercial and Residential Fuel Use	44	45	51	51	12%	16%
Agriculture	23	32	34	34	8%	48%
Total[3]	432	471	448	429	100	-1%

Notes: GWP = global warming potential; MMT CO_2e = million metric tons of carbon dioxide equivalent

[1] California's first 1990 GHG emissions inventory was prepared in 2007 by ARB using GWP values from the IPCC Second Assessment Report (IPCC 1995). All other inventory years shown use GWP values from the IPCC Fourth Assessment Report (IPCC 2007).

[2] Includes both in-state electricity generation and out-of-state imported electricity that is consumed in-state.

[3] Totals may not sum exactly due to rounding and "not specified" categories being left out.

Sources: ARB 2007, ARB 2018.

SACRAMENTO COUNTY GREENHOUSE GAS INVENTORY

In June 2009, Sacramento County worked with other local agencies in the county to inventory GHG emission sources and quantities using data from 2005 (Sacramento County 2011a). This 2005 baseline approximates the "current levels" of emissions referenced in ARB Scoping Plan. The inventory is broken down into the following three categories in the County's Climate Action Plan (CAP): 1) entire county (referred to as "countywide"), 2) unincorporated county area, and 3) Sacramento County government operations (Sacramento County 2011a). The inventory provides useful information for selecting and prioritizing actions to reduce emissions, and it serves as a baseline for measuring progress toward meeting the statewide GHG reduction target mandated by the Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32). The original 2009 inventory and updated 2011 inventory for some of the sectors were used to prepare the

Table **CC-2**

Table CC-2: 2015 Unincorporated Sacramento County Community Greenhouse Gas Inventory

Sectors	2015 ($MTCO_2e$/year)	Percent of Total
Residential Energy	1,193,311	25%
Commercial/Industrial Energy	890,603	18%
Building Total	*2,083,914*	*43%*
On-Road Vehicles	1,671,596	34%
Off-Road Vehicles	196,769	5%
Transportation Total	*1,868,365*	*39%*
Solid Waste	352,909	7%
Agriculture	254,899	5%
High-GWP Gases	251,085	5%
Wastewater	27,253	<1%
Water-Related	15,222	<1%
Total	**4,853,647**	**100%**

Notes: Totals may not add due to rounding. $MTCO_2e$ = metric tons of carbon dioxide equivalent; GWP = Global Warming Potential

Source: Data compiled by Ascent Environmental in 2016.

Regulatory Setting

Federal

Federal Clean Air Act

The U.S. Environmental Protection Agency (EPA) is the federal agency responsible for implementing the federal Clean Air Act (CAA) and its amendments. The Supreme Court of the United States ruled on April 2, 2007 that CO_2 is an air pollutant as defined under the CAA, and that EPA has the authority to regulate emissions of GHGs. The ruling in this case resulted in EPA taking steps to regulate GHG emissions and lent support for state and local agencies' efforts to reduce GHG emissions.

National Program to Cut Greenhouse Gas Emissions and Improve Fuel Economy for Cars and Trucks

On August 28, 2014, EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) finalized a new national program that would reduce GHG emissions and improve fuel economy for all new cars and trucks sold in the U.S. (NHTSA 2012). EPA proposed the first-ever national GHG emissions standards under the CAA, and NHTSA proposed Corporate Average Fuel Economy standards under the Energy Policy and Conservation Act. This proposed national program allows automobile manufacturers to build a single light-duty national fleet that satisfies all requirements under both Federal programs and the standards of California and other states. While this program will increase fuel economy to the equivalent of 54.5

miles per gallon for cars and light-duty trucks by Model Year 2025, additional phases are being developed by NHTSA and EPA that address GHG emission standards for new medium- and heavy-duty trucks.

STATE

CALIFORNIA GLOBAL WARMING SOLUTIONS ACT

In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Global Warming Solutions Act of 2006. AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 also requires that these reductions "…shall remain in effect unless otherwise amended or repealed. (b) It is the intent of the Legislature that the statewide greenhouse gas emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020. (c) The (Air Resources Board) shall make recommendations to the Governor and the Legislature on how to continue reductions of greenhouse gas emissions beyond 2020." [California Health and Safety Code, Division 25.5, Part 3, Section 38551]

CLIMATE CHANGE SCOPING PLAN AND UPDATE

In December 2008, ARB adopted its Climate Change Scoping Plan, which contains the main strategies California will implement to achieve reduction of approximately 118 MMT CO_2e, or approximately 22 percent, from the State's projected 2020 emission level of 545 MMT CO_2e under a business-as-usual scenario. This is a reduction of 47 MMT CO_2e, or almost 10 percent, from 2008 emissions. ARB's original 2020 projection was 596 MMT CO_2e, but this revised 2020 projection takes into account the economic downturn that occurred in 2008 (ARB 2011). The Scoping Plan reapproved by ARB in August 2011 includes the Final Supplement to the Scoping Plan Functional Equivalent Document, which further examined various alternatives to Scoping Plan measures. The Scoping Plan also includes ARB-recommended GHG reductions for each emissions sector of the state's GHG inventory.

In May 2014, ARB released and has since adopted the *First Update to the Climate Change Scoping Plan* to identify the next steps in reaching AB 32 goals and evaluate the progress that has been made between 2000 and 2012 (ARB 2014:4 and 5). According to the update, California is on track to meet the near-term 2020 GHG limit and is well positioned to maintain and continue reductions beyond 2020 (ARB 2014: ES-2). The update also reports the trends in GHG emissions from various emission sectors. A new update is currently in process.

SUSTAINABLE COMMUNITIES AND CLIMATE PROTECTION ACT

The Sustainable Communities and Climate Protection Act of 2008 (SB 375) aligns regional transportation planning efforts, regional GHG emission reduction targets for cars and light trucks, land use planning, and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities

Strategy (SCS) or Alternative Planning Strategy, which integrates regional land use and transportation planning within an MPO's Regional Transportation Plan.

SB 375 requires ARB, in consultation with MPOs, to provide each region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years, but can be updated every four years, if advancements in emissions technologies affect the reduction strategies to achieve the targets.

Sacramento County is under the jurisdiction of the Sacramento Area Council of Governments (SACOG), which includes Yolo, Sutter, Yuba, Placer, El Dorado, and Sacramento Counties. In February 2016, SACOG adopted its 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS), which is the region's transportation and sustainability investment strategy for protecting and enhancing the region's quality of life and economic prosperity through 2035. Plan implementation is expected to result in regional benefits to mobility, economy, health and sustainability. SACOG's plan is also expected to help California reach its GHG reduction goals, with a 34 percent reduction in GHG emissions by 2020 (15 MMT CO_2e) and a 38 percent reduction by 2036 (14.15 MMT CO_2e)—compared with 2008 levels (22.7 MMT CO_2e (SACOG 2016)).

California Environmental Quality Act

SB 97 directed the California Natural Resources Agency to adopt amendments to the California Environmental Quality Act (CEQA) Guidelines related to analysis of GHG emissions on December 30, 2009. On February 16, 2010, the Office of Administrative Law approved the amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The Amendments became effective on March 18, 2010.

CEQA allows lead agencies to analyze and mitigate the significant effects of GHG emissions at a programmatic level, such as in a general plan, or as part of a separate plan (e.g., a climate action plan) to reduce GHG emissions (CEQA 15183.5).

California Building Efficiency Standards of 2016 (Title 24, Part 6)

Buildings in California are required to comply with California's Energy Efficiency Standards for Residential and Nonresidential Buildings established by the California Energy Commission (CEC) in 1978 and updated on an approximately 3-year cycle to allow consideration and possible incorporation of new energy efficient technologies and methods. All buildings for which an application for a building permit is submitted on or after January 1, 2017 must follow the 2016 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The CEC Impact Analysis for California's 2016 Building Energy Efficiency Standards estimates that the 2016 Standards are 28 percent more efficient than the previous 2013 standards for single-family residential construction (CEC 2016).

Clean Energy and Pollution Reduction Act

Approved by the Governor on October 7, 2015, the California Energy and Pollution Reduction Act (SB 350) targets a 50 percent renewable mix in California electricity by December 31, 2030 and a cumulative doubling of statewide energy efficiency savings in electricity and natural gas final end uses of retail customers by January 1, 2030 with annual targets established by the CEC. This bill is meant as an extension of the State's current 2020 Renewable Portfolio Standards goal. SB 350's energy efficiency goals are applicable to both existing building stock and new construction, but would have the most impact on existing building stock.

Executive Order B-30-15

On April 20, 2015, Governor Edmund G. Brown Jr. signed Executive Order (EO) B-30-15 to establish a new California GHG reduction target of 40 percent below 1990 levels by 2030, as well as increase statewide efforts to address the need for increased climate change adaptation measures by State agencies. This EO aligns California's GHG reduction targets with those of leading international governments such as the 28-nation European Union which adopted the same target in October 2014. California is on track to meet or exceed its legislated target of reducing GHG emissions to 1990 levels by 2020, as established in AB 32 (summarized above). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the United States to limit global warming below 2°C, the warming threshold at which there will likely be major climate disruptions such as super droughts and rising sea levels. The targets stated in EO B-30-15 have not been adopted by the State legislature.

Senate Bill 32 and Assembly Bill 197, Statutes of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize ARB to achieve a statewide GHG emission reduction of at least 40 percent below the AB 32 goal of 1990 levels by 2020 by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

SB 32 is contingent upon AB 197, which grants the State Legislature stronger oversight over ARB's implementation of its GHG reduction programs. AB 197 amended the existing Health and Safety Code sections and establish new statutory directions, including the following provisions. Section 9147.10 establishes a six-member Joint Legislative Committee on Climate Change Policies to ascertain facts and make recommendations to the Legislature. ARB is required to appear before this committee annually to present information on GHG emissions, criteria pollutants, and toxic air contaminants from sectors covered by the Scoping Plan. Section 38562.5 requires that ARB consider social cost when adopting rules and regulations to achieve emissions reductions, and prioritize reductions at large stationary sources and from mobile

sources. Section 38562.7 requires that each Scoping Plan update identify the range of projected GHG and air pollution reductions and the cost-effectiveness of each emissions reduction measure.

LOCAL

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Sacramento Metropolitan Air Quality Management District (SMAQMD), is the primary agency responsible for addressing air quality concerns in Sacramento County—its role is discussed further in Chapter 7, "Air Quality." SMAQMD also recommends methods for analyzing project-generated GHGs in CEQA analyses and offers a myriad of potential GHG reduction measures for land use development projects to be considered by lead agencies. SMAQMD has developed thresholds of significance to provide a uniform scale to measure the significance of GHG emissions from land use and stationary source projects in compliance with CEQA and AB 32. However, in accordance with SMAQMD guidance, when other local agencies have developed their own thresholds of significance for evaluating GHG emissions, these take precedence over SMAQMD thresholds.

SACRAMENTO COUNTY GENERAL PLAN

The Sacramento County 2030 General Plan includes the following policies in the Air Quality Element and in the Land Use Element, respectively, related to reducing GHG emissions in Sacramento County (Sacramento County 2011b).

Policy AQ-22. Reduce greenhouse gas emissions from County operations as well as private development.

Policy LU-115. It is the goal of the County to reduce GHG emissions to 1990 levels by the year 2020. This shall be achieved through a mix of State and local action.

SACRAMENTO COUNTY CLIMATE ACTION PLAN

The Sacramento County CAP Strategy and Framework Document presents a framework for reducing GHG emissions and managing water and other resources to best prepare for a changing climate (Sacramento County 2011a). It defines an overall strategy to address climate change, including:

- Reducing GHG emissions associated with the County's own operations, as well as taking actions that facilitate GHG emissions reduction in the community.
- Establishing priorities based on a number of factors, such as cost-effectiveness and co-benefits.
- Addressing projected vulnerabilities associated with climate change where cost-effective or required.

- Working collaboratively with other jurisdictions and leveraging existing programs and resources.

This CAP describes actions that the County has already taken or could take in the future to reduce GHG emissions and adapt to a changing climate, while being more resource efficient. Table CC-3 summarizes those actions most relevant to the project, broken down by emissions sector. The existing Sacramento County CAP does not meet all of the criteria in Section 15183.5(b)(1) as a plan for the reduction of GHG emissions. The County is currently preparing an updated CAP to meet all specified criteria.

Table CC-3: Sacramento County CAP Actions to Address Climate Change

Sector	Goals
Transportation and Land Use	Increase the average fuel efficiency of County-owned vehicles powered by gasoline and diesel and encourage increased fuel efficiency in community vehicles. Increase use of alternative and lower carbon fuels in the County vehicle fleet and facilitate their use in the community. Reduce total vehicle miles traveled per capita in the community and the region.
Energy	Improve energy efficiency of existing and new buildings in the unincorporated County. Improve energy efficiency of County infrastructure operation (roads, water, waste, buildings, etc). Decrease use of fossil fuels by transitioning to renewable energy sources.
Water	Achieve 20% reduction in per capita water use levels by 2020. Emphasize water use efficiency as a way to reduce energy consumption. Increase energy efficiency related to water system management. Strive to reduce uncertainties in water reliability and quality by increasing the flexibility of the water allocation and distribution system to respond to drought conditions and encouraging redundancy in water storage, supply, and treatment systems. Elevate the importance of floodplain and open space protection as a means of protecting water quality and habitat, sequestering carbon, and providing groundwater recharge opportunities.
Waste Management and Recycling	Promote reduction in consumption. Maximize waste diversion, composting, and recycling through expanding residential and commercial programs. Reduce methane emissions at Kiefer Landfill.
Agriculture and Open Space	Protect important farmlands, rangelands and open space from conversion and encroachment and maintain connectivity of protected areas. Educate the local agricultural community about the impacts of climate change and support efforts to promote sustainable practices. Promote water conservation to ensure reliable and sufficient water supplies for crop irrigation and livestock needs. Implement policies and programs which increase demand for locally grown and processed agricultural commodities. Achieve a net gain in the size, health, and diversity of protected open space and the local urban forest, encouraging native species wherever practical. Ensure community understanding of and appreciation for open space, parks, and trees both as a vital part of the region's character and as a greenhouse gas reduction strategy.

Source: Sacramento County 2011a

SIGNIFICANCE CRITERIA

Per Appendix G of the CEQA Guidelines and SMAQMD recommendations, greenhouse gas impacts are considered significant if the project would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG's.

The guidelines do not include a numeric significance threshold, but instead defer to the lead agency to determine whether there are thresholds which apply to the project. With regard to the third item, statewide plans include AB 32 and SB 375, as described in the Regulatory setting. The underlying strategy and assumptions of the AB 32 Scoping Plan were used to develop County thresholds. AB 32 requires emissions be reduced to 1990 levels by the year 2020, which is estimated in the AB 32 Scoping Plan to be 15% below existing (2005) emissions.

As previously discussed, Sacramento County prepared a GHG emissions inventory for the County, and as an offshoot of that process has published a Draft Climate Action Plan. Thresholds have been developed based on the County inventory (Table CC-4). As shown below, separate thresholds have been included for each sector. The purpose of this division is to provide additional information about the source of emissions. When making a final determination of significance, these thresholds can be combined to generate a total emissions threshold; it is this total threshold that will ultimately determine whether impacts are found to be significant.

Table CC-4: Greenhouse Gas Significance Thresholds (Annual Metric Tons CO_2e)

Sector	2005 Baseline	2020 Target	Thresholds
Residential Energy	1,033,142	878,275	1.33 per capita
Commercial & Industrial Energy	772,129	656,914	7.87 per Kft^2
Transportation	2,066,970	1,757,236	2.67 per capita
Trucks	*488,806*	*414,470*	*0.10 per 100 VMT*

Also note that the transportation sector is expressed in per capita, which is not applicable to non-residential projects. The determination was made that, in general, non-residential projects redistribute existing trips made by passenger vehicles – they do not generate new trips. The majority of trips to and from a commercial project are generated by residential uses. Residential projects are already being required to account for transportation emissions, so including them for commercial projects as well would result in double-counting; therefore, only the truck-trips generated by a commercial project itself will be subject to analysis. An exception to this rule is any commercial project which is a regional draw or unique draw and may cause the redistribution of existing trips in a manner that will increase total existing VMT.

IMPACTS AND ANALYSIS

METHODOLOGY

SMAQMD has established recommended thresholds that ensure that 90 percent of emissions from projects in the region are reviewed to determine the need for additional mitigation. According to SMAQMD's methodology, a land use development project with operational emissions that are less than 1,100 metric tons (MT) of carbon dioxide equivalent (CO_2e) per year will not result in a significant impact and will not require additional mitigation. SMAQMD assumes that projects with operational emissions below 1,100 MT of CO_2e /year will not exceed their construction GHG threshold of significance as long as the project does not include buildings that are more than four stories tall, significant trenching, demolition activities, a compact construction schedule, significant cut and fill operations, or significant truck activity.

SMAQMD has established an Operational Screening Levels table, which shows the size of development, by land use type, that SMAQMD has determined would not exceed the operational GHG emissions thresholds. Projects that are smaller than those listed in the table and, which meet the construction parameters listed above, are considered to have a less than significant impact related to Climate Change. For projects that exceed the development size listed in the table, SMAQMD recommends the use of CalEEMod to quantify the GHG emissions that would be generated by the project.

Pursuant to Sacramento County methodology, SMAQMD's threshold of 1,100 MT of CO_2e /year is used as an initial screening threshold. Projects which screen out using the screening threshold of 1,100 MT/year of CO_2e are considered to have a less than significant impact related to Climate Change and no further analysis is required. Projects which do not screen out using SMAQMD's GHG Operational screening levels table or SMAQMD's threshold of 1,100 MT of CO_2e /year must then be evaluated using the County's GHG thresholds (Table CC-4).

IMPACT: GENERATION OF GREENHOUSE GAS EMISSIONS

Pursuant to Sacramento County methodology, the project-related GHG emissions were first analyzed by comparing them to the SMAQMD threshold of 1,100 MT of CO_2e /year. Because this project involves a use that is not specifically listed in the SMAQMD screening table the California Emissions Estimator Model (CalEEMod) was used to estimate the annual metric tons of CO_2 equivalent (CO_2e) attributable to the construction and operation of the proposed project. (please refer to Appendix E for CalEEMod runs).

Based on the unique characteristics of the proposed monkey sanctuary; PER staff consulted with SMAQMD staff regarding the appropriate land use classification and variables to use in the model. In addition, the defaults in CalEEMod were changed to reflect the emission anticipated for operation in 2019, and carbon intensity forecasts for the Sacramento Municipal Utility District (SMUD) based on SMUD's 2009 reporting year.

Table CC-5 shows the project's estimated annual GHG emissions for construction and operation.

Table CC-5: Project's Estimated Greenhouse Gas Emissions

	MT of CO_2e /Year
Estimated Construction GHG Emissions	18.25
Estimated Annual Operational GHG Emissions	118.79
SMAQMD GHG Emissions Threshold	1,100
Exceed SMAQMD Threshold	No

As shown in Table CC-5, the estimated GHG emissions for both facility construction and annual operation are significantly below SMAQMD's thresholds of 1,100 annual metric tons. Impacts related to GHG emissions and contributions to climate change are ***less than significant.***

MITIGATION MEASURES

None required.

11 BIOLOGICAL RESOURCES

INTRODUCTION

This chapter addresses biological resources known or with potential to occur on the project site, and describes potential effects of project implementation on those resources. Biological resources include common vegetation and habitat types, sensitive plant communities, and special-status plant and animal species. The analysis includes a description of the existing environmental conditions, the methods used for assessment, the potential direct and indirect impacts of project implementation, and mitigation measures recommended to address impacts determined to be significant or potentially significant. Federal, state, and local regulations that pertain to biological resources are summarized.

The assessment is based largely on the information and evaluation presented in the Biological Resource Assessments (Bargas Environmental Consulting, 2018 ; Appendix F), as well as subsequent site reconnaissance and database queries.

SETTING

The site is located on a residential property in a rural community northeast of Galt, California. The western portion of the five-acre parcel is developed with a residential home and two accessory structures (reference Plate BR-1). The proposed kennel/monkey sanctuary will be located in the center of the parcel. This area is currently a fenced, agricultural pasture of approximately two acres. The pasture has an even grade and is kept mowed. Vegetation consists of annual grass, star thistle, and similar annual plants that prefer disturbed soil areas. A 0.07-acre, man-made pond is located at the northeast corner of the property. The pond is dominated by tules and cattails and is surrounded by valley oaks and ornamental pines.

The project area appears to contain only Galt clay soils. Galt clay soils are dense, dark clay soils developed in basin areas originally subject to flooding. The project site is located within the Willock Creek (South) watershed. The nearest perennial water courses are Badger Creek, located approximately 0.80 miles north and Laguna Creek located about 0.75 miles to the southeast.

Plate BR-1: Project Site

Special-Status Species

Special-status species are plants and animals that are legally protected or that are otherwise considered sensitive by federal, state, or local resource agencies. In this document, special-status species are defined as:

- species listed or proposed for listing as threatened, rare, or endangered under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA);
- species considered as candidates for listing under the ESA or CESA;
- taxa (i.e., taxonomic category or group) that meet the criteria for listing, even if not currently included on any list, as described in California Code of Regulations (CCR) Section 15380 of the State CEQA Guidelines;
- species identified by the California Department of Fish and Wildlife (CDFW) as Species of Special Concern;
- species listed as Fully Protected under the California Fish and Game Code;
- species afforded protection under local planning documents; and
- taxa considered by the CDFW to be “rare, threatened, or endangered in California” and assigned a California Rare Plant Rank (CRPR).

Special-status species are tracked in CDFW’s California Natural Diversity Database (CNDDB), a statewide inventory of the locations and conditions of the state’s rarest plant and animal taxa and vegetation types. CDFW’s CRPR includes five rarity and endangerment ranks for categorizing plant species of concern. All plants with a CRPR are considered “special plants” by CDFW. The term “special plants” is a broad term used by CDFW to refer to all of the plant taxa inventoried in the CNDDB, regardless of their legal or protection status. Plants ranked as CRPR 1A (plants presumed to be extinct in California), 1B (plants that are rare, threatened, or endangered in California and elsewhere), and 2 (plants that are rare, threatened, or endangered in California but more common elsewhere) may qualify as endangered, rare, or threatened species within the definition of State CEQA Guidelines (CCR Section 15380). In general, plant species ranked CRPR 3 (plants about which more information is needed) and 4 (plants of limited distribution) do not meet the definition of endangered, rare, or threatened pursuant to CEQA Section 15380. As such, CRPR 3 and 4 species are not included in this analysis.

The term “California species of special concern” is applied by CDFW to animals not listed under the federal ESA or CESA, but that are considered to be declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist. CDFW’s fully protected status was California’s first attempt to identify and protect animals that were rare or facing extinction. Most species listed as fully protected were eventually listed as threatened or endangered under CESA; however, some species remain listed as fully protected but do not have simultaneous listing under CESA. Fully protected species may not be taken or possessed at any time and no take permits can be issued for these species except for scientific research purposes or for relocation to protect livestock.

A list of special-status species known or with potential to occur on the project site or in the immediate vicinity was developed from database queries of USFWS' Information for Planning and Consultation (IPaC), CDFW's California Natural Diversity Database (CNDDB), and the California Native Plant Society Inventory (CNPS), together with reconnaissance surveys conducted by Bargas Environmental Consulting biological staff (Grayson Sandy), on May 1 and August 21, 2018.

SPECIAL-STATUS PLANTS

Table BR-1provides a list of the special-status plant species that have been documented in the CNDDB nine-quadrangle search (Elk Grove, Sloughouse, Carbondale, Galt, Clay, Goose Greek, Lodi North, Lockeford, and Clements USGS 7.5-minute quadrangles) and describes their regulatory status, habitat, and potential for occurrence on the project site.

Table BR-1: Special-Status Plant Species documented in Nine-Quadrangle CNDDB Query

Species	Status [1]			Habitat and Blooming Period	Potential for Occurrence[2]
	USFWS	CDFW	CRPR		
Ahart's dwarf rush *Juncus leiospermus* var. *ahartii*	–	–	1B.2	Vernal pools and swales in areas of low cover of competing vegetation; most often on gopher turnings along margins of pools or swales (Witham 2006:38); 0 to 1,000 feet elevation. Blooms March-May.	Not expected to occur. Suitable habitat for this species is present on the project site and two known occurrences are present within five miles of the project site.
Bogg's Lake hedge-hyssop *Gratiola heterosepala*	–	E	1B.2	Lake margin marshes and swamps, vernal pools, and other seasonal wetlands, primarily in clay soils; 30 to 8,000 feet elevation. Blooms April–August.	Not expected to occur. While the area on the margins of the stock pond may provide suitable habitat for the species, it is unlikely to exist as the pond is perennially-inundated; moreover, the species was not observed during biological surveys, which were conducted during the blooming period (Bargas 2018).
Legenere *Legenere limosa*	–	–	1B.1	Relatively deep and wet vernal pools (Witham 2006:39); below 3,000 feet elevation. Blooms April–June.	Not expected to occur. Known occurrences are located within 5 miles of the project site. Surveys conducted during blooming period did not detect this species.
Sacramento Orcutt grass *Orcuttia viscida*	E	E	1B.1	Vernal pools; 95 to 325 feet elevation. Blooms April–July.	Not expected to occur. The project site does not fall into the elevation range for this species. Surveys conducted during blooming period did not detect this species. Nearest known occurrence approximately seven miles east of project site.
Sanford's arrowhead *Sagittaria sanfordii*	–	–	1B.2	Shallow freshwater marshes and swamps; below 2,200 feet elevation. Blooms May–October.	Not expected to occur. The project site does not provide potential habitat. Surveys conducted during blooming period did not detect this species. Nearest known occurrence six miles northeast of project site.

Table BR-1: Special-Status Plant Species documented in Nine-Quadrangle CNDDB Query

Species	Status [1]			Habitat and Blooming Period	Potential for Occurrence[2]
	USFWS	CDFW	CRPR		
Succulent owl's clover *Castilleja campestris ssp. succulenta*	T	E	1B.2	Vernal pools and swales; 165 to 2,460 feet elevation. Blooms April – May.	Not expected to occur. The project site is well below the expected elevation range for this species. Surveys conducted during the blooming period did not detect this species.
Pinchushion navarretia *Navarretia myersii ssp. myersii*	-	-	1B.1	Vernal pools; 65 to 1080 feet elevation. Blooms April – May.	Not expected to occur. Surveys conducted during the blooming period did not detect this species.
Tuolumne button celery *Eryngium pinnatisectum*	-	-	1B.2	Vernal pools and similar wet habitat in the hills and grasslands; 230 to 3000 feet elevation. Blooms May – August.	Not expected to occur. The project site is well below the elevation range for this species; moreover, surveys conducted during the blooming period did not detect this species.

Notes: USFWS = U.S. Fish and Wildlife Service; CDFW = California Department of Fish and Wildlife; CRPR = California Rare Plant Rank; CNDDB = California Natural Diversity Database; ESA = Federal Endangered Species Act; CESA = California Endangered Species Act

[1] Legal Status Definitions

U.S. Fish and Wildlife Service:
E Endangered (legally protected)
T Threatened (legally protected)

California Department of Fish and Game:
E Endangered (legally protected)

California Rare Plant Ranks:
1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)
2 Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

CRPR Extensions:
.1 Seriously endangered in California (>80% of occurrences are threatened and/or high degree and immediacy of threat)
.2 Fairly endangered in California (20 to 80% of occurrences are threatened)

[2] Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present on the project site due to poor habitat quality, lack of suitable habitat features, or species not detected by surveys during blooming period.

Could occur: Suitable habitat is available on the project site; however, there are little to no other indicators that the species might be present.

Sources: Bargas 2018, CDFW 2018, CNDDB 2018, CNPS 2018

No special-status plant species were found on the project site. Biological surveys for special-status plant species were conducted in May and August of 2018 and did not detect any special-status plants.

SPECIAL-STATUS WILDLIFE

Table BR-2 provides a list of the special-status wildlife species that have been documented within the CNDDB nine-quadrangle search area and USFWS IPaC results for Sacramento County. The table describes their regulatory status, habitat, and potential for occurrence on the project site.

Table BR-2: Special-Status Wildlife and their Potential to Occur on the Project Site

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Invertebrates				
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	T	–	Elderberry shrubs below 3,000 feet in elevation, typically in riparian habitats. Found in stems measuring 1 inch or greater at ground level.	Not expected to occur. The project site does not contain elderberry shrubs, which are the sole hosts for this species.
Vernal pool fairy shrimp *Branchinecta lynchi*	T	–	Vernal pools and other seasonal wetlands in valley and foothill grasslands. Tends to occur in smaller wetland features (less than 0.05 acre in size) (USFWS 1994).	Not expected to occur. The study area does not provide suitable habitat for vernal pool invertebrates and is perennially inundated; moreover, the pond is dominated by American bullfrogs and mosquito fish. The nearest documented occurrence is located seven miles east of the project site.
Vernal pool tadpole shrimp *Lepidurus packardi*	E	–	Vernal pools and other seasonal wetlands in valley and foothill grasslands that pond for sufficient duration to allow the species to complete its life cycle. Typically found in ponds ranging from 0.1 to 80 acres in size (USFWS 1994).	Not expected to occur. The study area does not provide suitable habitat for vernal pool invertebrates and is perennially inundated; moreover, the pond is dominated by American bullfrogs and mosquito fish. The nearest documented occurrence is located seven miles east of the project site.
Amphibians and Reptiles				
California red-legged frog *Rana draytonii*	T	SC	Inhabits ponds, slow-moving creeks, and streams with deep pools that are lined with dense emergent marsh or shrubby riparian vegetation. Submerged root masses and undercut banks are important habitat features for this species.	Not expected to occur. No breeding habitat for this species is present on the project site The site is surrounded by suburban development and the species is considered extirpated from the Sacramento Valley floor.
California tiger salamander *Ambystoma californiense*	T	T	Vernal pools and seasonal wetlands with a minimum 10-week inundation period and surrounding uplands, primarily grasslands, with burrows and other belowground refugia (e.g., rock or soil crevices).	Not expected to occur. The study area does not provide suitable habitat for this species. The presence of American bullfrogs makes it highly unlikely that a viable California tiger salamander population could successfully breed in the pond. Moreover, the lack of rodent burrows in the surrounding upland habitat means that summer and fall sheltering habitat is minimal. The nearest documented occurrence is 4.4 miles northeast of the project site.
Giant garter snake *Thamnophis gigas*	T	T	Slow-moving streams, sloughs, ponds, marshes, inundated floodplains, rice fields, and irrigation/drainage ditches on the Central Valley floor with mud bottoms, earthen banks, emergent vegetation, abundant small aquatic prey and absence or low numbers of large predatory fish. Also require upland refugia not subject to flooding during the snake's inactive season.	Not expected to occur. No suitable habitat occurs on or immediately adjacent to the project site and the project site is located over over a half-mile from Laguna and Badger Creeks. The nearest known occurrence is 3.5 miles southeast of the site at Laguna Creek (south).

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Western pond turtle *Emys marmorata*	–	SC	Forage in ponds, marshes, slow-moving streams, sloughs, and irrigation/drainage ditches; nest in nearby uplands with low, sparse vegetation.	Not expected to occur. The project site does not provide suitable aquatic or upland habitat for this species; No suitable habitat occurs on or immediately adjacent to the project site and the project site is located over over a half-mile from Laguna and Badger Creeks, which is outside of the typical upland distance from aquatic habitat. The two closest known occurrences are approximately four miles from the project site.
Western spadefoot *Spea hammondii*	–	SC	Vernal pools and other seasonal ponds with a minimum three-week inundation period in valley and adjacent foothill grasslands.	Not expected to occur. The pond on the site is perennially inundated.
Birds				
Western burrowing owl *Athene cunicularia* (burrow sites)	–	SC	Nests and forages in grasslands, agricultural lands, open shrublands, and open woodlands with existing ground squirrel burrows or friable soils. Suitable burrow sites consist of short, herbaceous vegetation with only sparse cover of shrubs or taller herbs (Shuford and Gardali 2008: 221).	Not expected to occur. The lack of rodent burrows are the site rules out burrowing owls being present on the site. There are three known occurrences within five miles of the project site.
Song sparrow (Modesto population) *Melospiza melodia*	–	SC	Emergent freshwater marsh dominated by tules, and cattails; willow riparian scrub; valley oak riparian woodland with dense understory; and along vegetated irrigation canals and levees.	Not expected to occur. Project site does not contain suitable habitat.
Swainson's hawk *Buteo swainsoni*	–	T	Forages in grasslands and agricultural lands; nests in riparian and isolated trees.	Could occur. Trees on the project site may be used for nesting. There are 19 known occurrences within 5 miles of the project site. Further discussion below.
Tricolored blackbird *Agelaius tricolor* (nesting colony)	–	SC	Forages in agricultural lands and grasslands; nests in marshes, riparian scrub, and other areas that support cattails or dense thickets of shrubs or herbs. Requires open water and protected nesting substrate, such as flooded, spiny, or thorny vegetation (Schuford and Gardali 2008: 439).	Not expected to occur. The site contains suitable vegetation for tricolored blackbirds; however, the ponded habitat is too small to support a typical breeding colony. Furthermore, the presence of the more aggressive and territorial red-winged blackbird in the pond suggests that colonization and nesting by tricolored blackbirds is highly unlikely. There are 27 known occurrences are located within 5 miles of the project site. Further discussion below.
Common yellowthroat *Geothlypis trichas sinuosa*	-	SC	Breeding habitat typically found in woody swamp, brackicsh marsh, and freshwater marsh (Foster 1977).	Not expected to occur. Project site does not contain suitable habitat.
Yellow warbler *Dendroica petechia*	-	SC	Riparian vegetation (shrubs and trees) in close proximity to water along streams and	Not expected to occur. Project site does not contain suitable habitat.

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
			in wet meadows (Lowther et al. 1999).	

Note: CNDDB = California Natural Diversity Database; USFWS = U.S. Fish and Wildlife Service

[1] Legal Status Definitions

Federal:		State:	
E	Endangered (legally protected)	D Delisted	
T	Threatened (legally protected)	FP	Fully protected (legally protected)
D Delisted		SC	Species of special concern (no formal protection other than CEQA consideration)
		E	Endangered (legally protected)
		T	Threatened (legally protected)

[2] Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present on the project site due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

Could occur: Suitable habitat is available on the project site; however, there are little to no other indicators that the species might be present.

Known to occur: The species, or evidence of its presence, was observed on the project site during project surveys, or was otherwise documented.

Source: Foothill 2015; CNDDB 2016, CDFW 2016b; data compiled by Ascent Environmental in 2016

No special-status wildlife species were found on the project site. Biological surveys for special-status species were conducted in May and August of 2018 and did not detect any special-status wildlife. Based on the results of the CNDDB search, the biological reports provided by Bargas, and the IPaC results, it was determined that two special-status wildlife species could occur on the project site—Swainson's hawk and tricolored blackbird. These two species and applicable mitigation are discussed further in the impacts and analysis section.

Sensitive Habitats

Sensitive habitat types include those that are of special concern to CDFW, or that are afforded specific consideration through CEQA, Section 1602 of the California Fish and Game Code, the Porter-Cologne Act, and/or Section 404 of the Clean Water Act (CWA), as discussed further below. Sensitive habitats may be of special concern to regulatory agencies and conservation organizations for a variety of reasons, including their locally or regionally declining status, or because they provide important habitat to common and special-status species.

Waters of the Unites States and Waters of the State

The 0.07-acre pond located in the northeast portion of the project could potentially be considered waters of the US and subject to regulation under Section 404 of the CWA. It also has the potential to be considered waters of the state and subject to regulation under the Porter-Cologne Act.

Study Methods

Studies Performed

A reconnaissance level survey for special-status species, specifically vernal-pool branchiopods and California Tiger Salamander, was performed on May 1, 2018 by Grayson Sandy of Bargus Environmental. Prior to conducting the survey of the site, and per accepted protocol, a thorough review of habitat, special-status species, and jurisdictional wetland databases was performed. The databases queried to obtain background information for the study area included Natural Resource Conservation Service (NRCS) Web Soil Survey, California Department of Fish and Wildlife (CDFW Natural Diversity Database (CNDDB), U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC), USFWS National Wetlands Inventory and USFWS Online Critical Habitat Mapper. The CNDDB data was drawn from the Elk Grove, Sloughhouse, Carbondale, Galt, Clay, Goose Creek, Lodi North, Lockeford, and Clements USGS 7.5-minute quadrangles. The IPaC compiles a list of species from Sacramento County.

A second reconnaissance level survey was conducted by Grayson Sandy of Bargus Environmental on August 21, 2018. This survey focused on evaluating the habitat suitability for nesting tricolored blackbird. The pedestrian survey consisted of walking the perimeter of the pond area with an evaluation of current site conditions, and passive observation to listen for birds in the area and observe potential presence of tricolored blackbirds; investigation of potential habitat that could support tricolored blackbird and identification of wildlife and plants observed.

Regulatory Setting

Federal

Clean Water Act

Section 404 of the CWA requires project proponents to obtain a permit from USACE before performing any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters of the United States, interstate waters, tidally influenced waters, and all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries. Many surface waters and wetlands in California meet the criteria for waters of the United States.

In accordance with Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredged or fill material must obtain water quality certification from the appropriate regional water quality control board (RWQCB) indicating that the action would uphold state water quality standards.

Federal Endangered Species Act

Pursuant to the federal Endangered Species Act (ESA) (16 U.S.C. Section 1531 et seq.), the US Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS) regulate the taking of species listed in the ESA as threatened or endangered. In general, persons subject to ESA (including private parties) are prohibited from "taking" endangered or threatened fish and wildlife species on private property, and from "taking" endangered or threatened plants in areas under federal jurisdiction or in violation of state law. Under Section 9 of the ESA, the definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." USFWS has also interpreted the definition of "harm" to include significant habitat modification that could result in take.

Two sections of the ESA address take. Section 10 regulates take if a non-federal agency is the lead agency for an action that results in take and no other federal agencies are involved in permitting the action. However, if a project would result in take of a federally-listed species and federal discretionary action (even if a non-federal agency is the overall lead agency) is involved (i.e., a federal agency must issue a permit), the involved federal agency consults with USFWS under Section 7 of the ESA. Because this project may involve federal permits, interagency cooperation under Section 7 of the ESA is required. Section 7 of the ESA outlines procedures for federal interagency cooperation to protect and conserve federally listed species and designated critical habitat. Section 7(a)(2) requires federal agencies to consult with USFWS and NMFS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it shall be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. Under the MBTA, "take" is defined as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to carry out these activities." A take does not include habitat destruction or alteration, as long as there is not a direct taking of birds, nests, eggs, or parts thereof. The current list of species protected by the MBTA can be found in Title 50 of the Code of Federal Regulations (CFR), Section 10.13. The list includes nearly all birds native to the United States.

State

California Endangered Species Act

Pursuant to CESA, a permit from CDFW is required for projects that could result in the "take" of a plant or animal species that is listed by the state as threatened or endangered. Under CESA, "take" is defined as an activity that would directly or

indirectly kill an individual of a species, but the CESA definition of take does not include "harm" or "harass," like the ESA definition does. As a result, the threshold for take is higher under CESA than under ESA. Authorization for take of state-listed species can be obtained through a California Fish and Game Code Section 2081 incidental take permit.

California Fully Protected Species

Fully protected species are addressed in Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species and do not provide for authorization of incidental take unless a Natural Community Conservation Plan is prepared.

Protection for Birds and Raptors

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptor (e.g., hawks, owls, eagles, and falcons), including their nests or eggs. Section 3513 of the California Fish and Game Code codifies the federal MBTA.

Porter-Cologne Water Quality Act

Under the Porter-Cologne Act, waters of the state fall under the jurisdiction of the appropriate RWQCB. The RWQCB must prepare and periodically update water quality control plans (basin plans). Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control point and nonpoint sources of pollution to achieve and maintain these standards. The RWQCB's jurisdiction includes federally protected waters, as well as areas that meet the definition of "waters of the state." Waters of the state is defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The RWQCB has the discretion to take jurisdiction over areas not federally protected under Section 401 provided they meet the definition of waters of the state. Actions that affect waters of the state, including wetlands, must meet the RWQCB's waste discharge requirements.

Local

Sacramento County General Plan

The following policies of the Conservation Element of the *Sacramento County 2030 General Plan* (Sacramento County 2011) are applicable to the biological resources that may be affected by the project:

Policy CO-58. Ensure no net loss of wetlands, riparian woodlands, and oak woodlands.

Policy CO-59. Ensure mitigation occurs for any loss of or modification to the following types of acreage and habitat function: vernal pools, wetlands, riparian, native vegetative habitat, and special-status species habitat.

Swainson's Hawk Mitigation Fee Program

CDFW requires that mitigation for foraging habitat be provided within the known foraging radius of a nesting Swainson's hawk. In 1997, in response to the need to mitigate for the loss of Swainson's hawk foraging habitat in Sacramento County, the County Board of Supervisors adopted an ordinance that established a Swainson's Hawk Impact Mitigation Program (Chapter 16.130 of the Sacramento County Code). The Swainson's Hawk Impact Mitigation Program has been amended several times; the latest amendment went into effect December 2009. By adopting the Swainson's Hawk Impact Mitigation Program, the Board of Supervisors found that "the most effective means of mitigation for the loss of suitable Swainson's hawk foraging habitat is the direct preservation, in perpetuity, of equally suitable foraging habitat on an acre-per-acre basis based on the Project's determined acreage impact".

Under the Swainson's Hawk Impact Mitigation Program, only projects which have an impact of less than 40 acres are eligible to pay fees. Projects impacting 40 acres or more of foraging habitat must provide land acceptable to Fish and Game and the County. Land can be provided in fee title or through conservation easement. The Sacramento County Department of Planning and Environmental Review administers the Swainson's Hawk Impact Mitigation Program.

Statewide, CDFW recommends implementing the measures set forth in the Fish and Game Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California (November 1, 1994) for impacts to Swainson's hawk foraging habitat unless local jurisdictions develop an individualized methodology designed specifically for their location. Sacramento County has developed such a methodology and received confirmation from CDFW in May of 2006 that the methodology is a better fit for unincorporated Sacramento County and should replace the statewide, generalized methodology for determining impacts to foraging habitat.

Swainson's hawk foraging habitat value is greater in large expansive open space and agricultural areas than in areas which have been fragmented by agricultural-residential or urban development. The methodology for unincorporated Sacramento County is based on the concept that impacts to Swainson's hawk foraging habitat occur as properties develop to increasingly more intensive uses on smaller minimum parcel sizes. Therefore, the methodology relies mainly on the minimum parcel size allowed by zoning to determine habitat value.

For the purpose of the methodology, properties with zoning of AG-40 and larger are assumed to maintain 100% of their foraging habitat value and properties with AR-5 zoning and smaller are assumed to have lost all foraging habitat value. The methodology does allow case-by-case analysis for projects with unique characteristics.

South Sacramento Habitat Conservation Plan

The South Sacramento Habitat Conservation Plan (SSHCP) area encompasses 317,656 acres in the southern portion of Sacramento County, including portions of unincorporated Sacramento County (County), Galt, and the southern half of Rancho Cordova (Plan Area). The SSHCP is a regional effort that provides development and infrastructure projects with streamlined, predictable federal and state permitting processes while creating a preserve system to protect habitat, open space, and agricultural lands. The SSHCP provides a more effective process for protecting natural resources as compared to the current project-by-project process of mitigation, which often results in small and isolated preserves. The SSHCP will help ensure the creation of large, interconnected preserves that are sustained in perpetuity by an adequately funded management program.

The project site is located within the SSHCP boundaries, but is located outside of the Urban Development Area. The project would not be a covered activity under the SSHCP.

Significance Criteria

Based on Appendix G of the State CEQA Guidelines, the project could have a significant adverse effect on biological resources if it would:

- have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;
- have a substantial adverse effect on federally protected waters of the United States, including wetlands, as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan; or

- substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

ISSUES NOT DISCUSSED FURTHER

Implementation of the project is not likely to adversely affect important wildlife corridors. The project site is surrounded on three sides by existing residential development and agricultural fields to the east and does not connect any important habitat areas. Therefore, any potential impacts to wildlife movement and wildlife corridors are not considered significant and are not further addressed in this EIR. Additionally, areas that would be affected by construction on the project site are not known to contain native wildlife nursery sites, such as colonial bird rookeries or bat roosts. Therefore, this issue is not discussed further in this EIR.

Implementation of the project is not likely to adversely affect special-status plant species. Three special-status plant species (Ahart's dwarf rush, Bogg's Lake hedge-hyssop, and Sanford's arrowhead) were identified as having potential to occur on the project site based on the presence of suitable habitat. Focused surveys for listed vernal pool plant species were conducted in May and August of 2018 (blooming period for these species) by Bargas Environmental Consulting, did not detect any vernal pool plant species, and further did not detect any special-status plant species. The project construction will not take place in the ponded area of the parcel and therefore does not have the potential to impact any special-status plant species. Therefore, this issue is not discussed further in this EIR.

While the ponded area could potentially be considered waters of the US and/or state, the project will not result in the loss of these waters as the proposed project site is located over 150 feet from the pond. Therefore this issue is not discussed further in the EIR.

IMPACTS AND ANALYSIS

METHODOLOGY

The following analysis is based on site conditions documented in the biological reports provided by Bargas Environmental (May and August, 2018).

IMPACT: DISTURBANCE OF MIGRATORY BIRDS NESTS

Implementation of the project could adversely affect common migratory birds through disturbance during the breeding season. Loss of active nests of common species would be inconsistent with the MBTA; however, the list of migratory birds includes many common species not otherwise protected under federal, state, or local laws. Loss of active nests of common species during project construction would not substantially reduce the abundance of any species, nor cause the abundance of any species to decline below self-sustaining levels.

Impacts to migratory birds are generally considered less than significant. However if the species is discovered during pre-construction surveys, with the recommended mitigation measures (BR-1), impacts to nesting migratory birds will be ***less than significant***.

IMPACT: DISTURBANCE OF NESTING BIRDS OF PREY

This section addresses raptors which are not listed as endangered, threatened, or of special concern, but are nonetheless afforded general protections by the Fish and Game Code. Raptors and their active nests are protected by the California Fish and Game Code Section 3503.5, which states: It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey, or raptors) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. Section 3(18) of FESA defines the term “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Causing a bird to abandon an active nest may cause harm to egg(s) or chick(s) and is therefore considered “take.” Thus, take may occur both as a result of cutting down a tree or as a result of activities nearby an active nest which cause nest abandonment.

Raptors within the Sacramento region include tree-nesting species such as the red-tailed hawk and red-shouldered hawk, as well as ground-nesting species such as the northern harrier. The following raptor species are identified as “special animals” due to concerns over nest disturbance: Cooper’s hawk, sharp-shinned hawk, golden eagle, northern harrier, and white-tailed kite.

Although there are no CNDDB records of these species on the project site or within 5 miles of the project site, suitable habitat for nesting birds of prey is present. If construction will occur during the nesting season of March 1 to September 15, preconstruction surveys will be required to ensure that construction activities do not agitate nesting birds of prey, potentially resulting in nest abandonment or other harm to nesting success (Mitigation Measure BR-2). If nests are found, the developer is required to contact CDFW to determine what measures need to be implemented in order to ensure that nesting raptors remain undisturbed. The measures selected will depend on many variables, including the distance of activities from the nest, the types of activities, and whether the landform between the nest and activities provides any kind of natural screening. If no active nests are found during the focused survey, no further mitigation will be required.

Impacts to nesting birds of prey are generally considered less than significant. However if the species is discovered during pre-construction surveys, with the recommended mitigation measures (BR-2), impacts to nesting birds of prey will be ***less than significant***.

IMPACT: DISTURBANCE OF SWAINSON’S HAWK NESTS

Swainson’s hawk is listed as threatened under CESA and has the potential to nest on the project site. Trees located around the project site provide potential habitat for Swainson’s hawk. Reconnaissance surveys of the site did not detect the species or its

nests and there are no records of these species nesting on the site; however, CNDDB records indicate that 19 sightings of Swainson's hawk have been sighted within 5 miles of the project site. Preconstruction surveys will be required to ensure that construction activities do not agitate nesting hawks, potentially resulting in nest abandonment or other harm to nesting success (Mitigation Measure BR-3).

If Swainson's hawk nests are found, the developer is required to contact CDFW to determine what measures need to be implemented in order to ensure that nesting hawks remain undisturbed. The measures selected will depend on many variables, including the distance of activities from the nest, the types of activities, and whether the landform between the nest and activities provides any kind of natural screening. According to the Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California (November 1, 1994), the mitigation described above will ensure that impacts to nesting Swainson's hawk will be less than significant.

Impacts to Swainson's hawk are generally considered less than significant. However if the species is discovered during pre-construction surveys, with the recommended mitigation measures (BR-3), impacts to nesting Swainson's hawk will be ***less than significant***.

IMPACT: SWAINSON'S FORAGING HABITAT

As described in the Regulatory Section, properties with zoning of AG-40 and larger are assumed to maintain 100%of their foraging habitat value and properties with AR-5 zoning and smaller are assumed to have lost all foraging habitat value. Per the methodology, the subject parcel contains no foraging habitat value and impacts to Swainson's hawk foraging habitat are considered ***less than significant.***

IMPACT: DISTURBANCE OF TRICOLORED BLACKBIRD NESTS

Tricolored blackbird are listed as a CDFW Species of Special Concern. The ponded area of the property contains suitable habitat for the species and noise generated by construction activity could potentially agitate nesting tricolored blackbirds, potentially resulting in nest abandonment. Focused surveys for the species did not detect tricolored blackbirds or any special-status bird species. The biological report, dated September 17, 2018, found that while the pond contained the appropriate wetland vegetation, its small size (0.07 acres) would make it highly unlikely to support a tricolored blackbird breeding colony.

Tricolored blackbirds are colonial nesting birds, generally nesting very close to one another and often in large groups (UC Davis, 2018). Colonies have been found to vary in size from a minimum of 50 nests to more than 20,000 in one colony (Zeiner et al., 1988-1990).

Survey Results

The study area contains the appropriate wetland vegetation required to support nesting tricolored blackbirds, however, the pond and its freshwater emergent wetland habitat are only 0.07 acres (3,049 square feet) in size making it highly unlikely to support a tricolored blackbird breeding colony. According to Audubon California's web page on tricolored blackbirds, their nesting habitat occurs in, "marsh with cattails or bulrushes, or in willows at water's edge" (UC Davis, 2018). Tricolored blackbirds are colonially nesting birds, generally nesting very close to one another and often in large groups (UC Davis, 2018). Colonies have been found to vary in size from a minimum of 50 nests to more than 20,000 in one colony (Zeiner et al., 1988-1990). Typically, there is one nest per every 21.5 square feet, but additional dense vegetation is needed as a protective buffer against predators (Kyle, 2011). Current research suggests that tricolored blackbirds in some areas of the Central Valley are trending towards more numerous small colonies, where in the past they tended towards very large single colonies (UC Davis, 2018). There are ten CNDDB occurrences for tricolored blackbird colonies located within three miles of this study area, most having been recorded in 2014 and 2015 and concentrated along Twin Cities Rd approximately 1.5 to 3 miles to the southeast. This means that the study area pond could potentially be colonized by birds dispersing from those locations. However, the habitats present at the locations of the CNDDB records are larger continuous freshwater emergent wetlands than what is present in the study area, making these areas more preferable to this species. Further, a colony of red-winged blackbirds (A. phoeniceus) was observed within the pond habitat actively displaying and singing during the 01 May 2018 site survey; none were observed during the August 22, 2018 site survey. The red-winged blackbirds were displaying mating behaviors including singing, wing displays and general territoriality. The presence of the more aggressive and territorial red-winged blackbirds in a pond of this size suggests that colonization and nesting by tricolored blackbirds is highly unlikely.

CNDDB records indicate that there are 10, recorded occurrences within three miles of the project site. Ten of the records were concentrated along Twin Cities Road, approximately 1.5 to 3 miles to the southeast at habitats locations containing much larger continuous freshwater emergent wetlands than what is present at the site, making these larger bodies of water more preferable for the species.

Impacts to tricolored blackbird are generally considered less than significant. However if the species is discovered during pre-construction surveys, with the recommended mitigation measures (BR-4), impacts to nesting tricolored blackbirds will be ***less than significant***.

Impact: Loss of special-status vernal pool invertebrates and California Tiger Salamander

Vernal pool fairy shrimp (*Branchinecta lynchi*) and vernal pool tadpole shrimp (*Lepidurus packardi*) are both federally protected species. Biological surveys for the species were conducted after members of the public voiced concern that the pond could potentially support vernal pool invertebrates and that the project could impact them.

California tiger salamander (*Ambystoma californiense*) are listed as a federally endangered species. The nearest documented occurrence is 4.4 miles northeast of the project site. Biological surveys for the species were conducted after members of the public and a biologist hired by a neighbor to the project site voiced concern that the pond and surrounding upland area was suitable habitat for the species.

Survey Results

The biological report, dated May 7, 2018, found that the study area does not provide suitable habitat for vernal pool invertebrates or California Tiger Salamander. The aquatic wildlife within the pond is dominated by invasive American bullfrogs and planted mosquito fish. The nearest CNDDB occurrence for California tiger salamander is more than three miles east of the study area. The presence of American bullfrogs makes it highly unlikely that a viable California tiger salamander population could successfully breed in this pond. Moreover, the lack of rodent burrows in the surrounding upland habitat means that summer and fall sheltering habitat for California tiger salamanders in minimal.

The wetlands present within the study area do not provide suitable habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp. The nearest CNDDB occurrence for vernal pool fairy shrimp is approximately 0.5 miles west of the study area. The amount of perennial freshwater emergent vegetation present in the pond implies that the pond is likely perennially-inundated, thus providing poor habitat for vernal pool invertebrates. . Impacts to vernal pool invertebrates and California tiger salamander are ***less than significant.***

Mitigation Measures

Mitigation Measure BR-1: Nesting Migratory Birds

If construction activity (which includes clearing, grubbing, or grading) is to commence within 50 feet of nesting habitat between February 1 and August 31, a survey for active migratory bird nests shall be conducted no more than 14 day prior to construction by a qualified biologist. If active nest(s) are found in the survey area, a non-disturbance buffer, the size of which has been determined by a qualified biologist, shall be established and maintained around the nest to prevent nest failure. All construction activities shall be avoided within this buffer area until a qualified biologist determines that nestlings have fledged, or until September 1.

Mitigation Measure BR-2: Nesting birds of prey surveys

If construction activity (which includes clearing, grubbing, or grading) is to commence within 500 feet of suitable nesting habitat between March 1 and September 15, a survey for raptor nests shall be conducted by a qualified biologist. The survey shall cover all potential tree and ground nesting habitat on-site and off-site up to a distance of 500 feet from the project boundary. The survey shall occur within 30 days of the date that construction will encroach within 500 feet of suitable habitat. The biologist shall supply a

brief written report (including date, time of survey, survey method, name of surveyor and survey results) to the Environmental Coordinator prior to ground disturbing activity. If no active nests are found during the survey, no further mitigation will be required. If any active nests are found, the Environmental Coordinator and CDFW shall be contacted to determine appropriate avoidance/protective measures. The avoidance/protective measures shall be implemented prior to the commencement of construction within 500 feet of an identified nest. If no active nests are found during the focused survey, no further mitigation will be required.

MITIGATION MEASURE BR-3: SWAINSON'S HAWK NEST SURVEYS

If construction, grading, or project-related improvements are to commence between March 1 and September 15, a focused survey, pursuant to CDFW guidelines, for Swainson's hawk nests on the site and within 1/2 mile of the site shall be conducted by a qualified biologist no later than 30 days prior to the start of construction work (including clearing and grubbing). If active nests are found, CDFW shall be contacted to determine appropriate protective measures, and these measures shall be implemented prior to the start of any ground-disturbing activities. If no active nests are found during the focused survey, no further mitigation will be required.

MITIGATION MEASURE BR-4: TRICOLORED BLACKBIRD NEST SURVEYS

If construction activity (which includes clearing, grubbing, or grading) is to commence within 300 feet of the project site between March 1 and July 31, a survey for nesting tricolored blackbirds shall be conducted by a qualified biologist. The survey shall cover all potential nesting habitat on-site and off-site up to a distance of 300 feet from the project boundary. The survey shall occur within 30 days of the date that construction will encroach within 300 feet of suitable habitat. The biologist shall supply a brief written report (including date, time of survey, survey method, name of surveyor and survey results) to the Environmental Coordinator prior to ground disturbing activity. If no tricolored blackbird were found during the pre-construction survey, no further mitigation would be required. If an active tricolored blackbird colony is found on-site or within 300 feet of the project site the project proponent shall do the following:

1. Consult with CDFW to determine if project activity will impact the tricolored blackbird colony(s). Implement all protective measures recommended by CDFW. Provide the Environmental Coordinator with written evidence of the consultation or a contact name and number from CDFW.

If no active nests are found during the focused survey, no further mitigation will be required.

12 SUMMARY OF IMPACTS & AND THEIR DISPOSITION

SIGNIFICANT EFFECTS WHICH CANNOT BE AVOIDED

A “significant and unavoidable impact” is an impact that exceeds the defined standards of significance and cannot be eliminated or reduced to a less-than-significant level through the implementation of mitigation measures. **There were no project related impacts determined to be significant and unavoidable.**

POTENTIALLY SIGNIFICANT EFFECTS WHICH COULD BE AVOIDED WITH IMPLEMENTATION OF MITIGATION MEASURES

BIOLOGICAL RESOURCES

The following impacts are potentially significant depending on the presence or absence of the species which will be determined during pre-construction surveys. If present, mitigation is proposed to reduce the impact to less than significant. If absent, there would be no impact.

NESTING MIGRATORY BIRDS

Implementation of the project could adversely affect common migratory birds through disturbance during the breeding season. Loss of active nests of common species would be inconsistent with the MBTA; however, the list of migratory birds includes many common species not otherwise protected under federal, state, or local laws. Loss of active nests of common species during project construction would not substantially reduce the abundance of any species, nor cause the abundance of any species to decline below self-sustaining levels.

Impacts to migratory birds are generally considered less than significant. However if the species is discovered during pre-construction surveys, with the recommended mitigation measures (BR-1), impacts to nesting migratory birds will be ***less than significant***.

NESTING BIRDS OF PREY

Although there are no CNDDB records of these species on the project site or within 5 miles of the project site, suitable habitat for nesting birds of prey is present. If construction will occur during the nesting season of March 1 to September 15, preconstruction surveys will be required to ensure that construction activities do not agitate nesting birds of prey, potentially resulting in nest abandonment or other harm to nesting success (Mitigation Measure BR-1). If nests are found, the developer is required to contact CDFW to determine what measures need to be implemented in order to ensure that nesting raptors remain undisturbed. The measures selected will depend on many variables, including the distance of activities from the nest, the types of activities, and whether the landform between the nest and activities provides any kind of natural

screening. If no active nests are found during the focused survey, no further mitigation will be required.

Impacts to nesting birds of prey are generally considered less than significant. However if the species is discovered during pre-construction surveys, with the recommended mitigation measures (BR-2), impacts to nesting tricolored blackbirds will be ***less than significant***.

Disturbance of Swainson's hawk nests

If any Swainson's hawk nests are found on the project site before construction commences, construction-related disturbance of the nests may result in nest abandonment and mortality of chicks or eggs of these species. Implementation of Mitigation Measure BR-2 would reduce this impact by requiring pre-construction surveys and avoidance of pre-existing, active nests during construction using non-disturbance buffers.

Impacts to Swainson's hawk are generally considered less than significant. However if the species is discovered during pre-construction surveys, with the recommended mitigation measures (BR-3), impacts to nesting tricolored blackbirds will be ***less than significant***.

Disturbance of tricolored blackbird nests

No tricolored blackbirds were observed during biological surveys of the site and no suitable nesting habitat was found on-site. CNDDB records did indicate occurrences of the species within a five mile radius of the project site. While it is considered unlikely to find this species nesting on the project parcel, mitigation has been proposed If construction activities are proposed during the breeding season (March 1 through July 31). Pre-construction surveys shall be conducted within 300 feet of the Project site. If tricolored blackbirds are found nesting within 300 feet of the survey area, the CDFW shall be contacted and appropriate avoidance and impact minimization measures shall be implemented. This may include establishing a buffer or postponing construction until fledging of all nestlings (about July 31). Specific measures cannot be outlined at this time, because the extent and type of measures required are highly situational, depending on distance to the nest, the number of nesting individuals, the type of nesting substrate, and other factors. If no tricolored blackbirds are found during the pre-construction survey, no further mitigation would be required.

Impacts to tricolored blackbird are generally considered less than significant. However if the species is discovered during pre-construction surveys, with the recommended mitigation measures (BR-4), impacts to nesting tricolored blackbirds will be ***less than significant***.

Cultural Resources

Adverse Effects on Important Cultural Resources

Although no National Register of Historic Places- or California Register of Historical Resources-listed or eligible resources, unique archaeological resources, tribal cultural resources, or traditional cultural properties have been documented in the project site, the project is located in a region where significant prehistoric and historic-era cultural resources have been recorded and there remains a potential that undocumented cultural resources could be unearthed or otherwise discovered during ground-disturbing and construction activities. Implementation of Mitigation Measure CR-1 would reduce this impact by ensuring that any undocumented cultural resources or inadvertent discoveries of cultural resources made during construction or ground-disturbing activities would be properly recorded and the historical significance of the resources documented.

Effects Found Not to be Significant

Impacts associated with land use, hydrology and water quality, public services, traffic and circulation, noise, air quality, biological resources, and greenhouse gases and climate change **are considered less than significant**.

Irreversible Environmental Changes

CEQA requires that EIRs assess whether a project would result in significant irreversible changes to the physical environment. The State CEQA Guidelines discuss three categories of significant irreversible changes that should be considered. Each is addressed below. Although the project would require commitment of resources, these environmental changes are not considered significant for the purposes of this analysis.

Growth Inducing Impact

As required by Section 15126.2(d) of the State CEQA Guidelines, an EIR must discuss ways in which a project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Growth can be induced in a number of ways, such as through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through the establishment of policies or other precedents that directly or indirectly encourage additional growth. Although growth inducement itself is not considered an environmental effect, it could potentially lead to adverse environmental effects.

The proposed project does not involve the construction of housing, nor will it generate economic growth as the proposed facility will not increase employment by any substantial amount as a result of the project. The surrounding properties are

agricultural-residential and agricultural in nature and are not intended to develop to a high density.

The project would utilize an existing private well, private septic system, existing electrical and gas utility connections, and would not require an expansion of public utilities or services. Access to the property is provided by a private road. The facility would not be open to the public and therefore, daily estimate of 10 total trips would not significantly contribute to roadway congestion or significantly impact existing transit facilities.

Based on the foregoing discussion, the project will not induce growth and impacts are considered less than significant.

Areas of Known Controversy

Several residents near the proposed project site have expressed concern over the project. Concerns expressed are related to noise, water quality, endangered species, disease transmission, waste disposal, odor, and traffic. Disagreement with the Planning Director's determination that the proposed project is similar in nature to a kennel, as defined in the Zoning Code, has also been expressed.

Cumulative Impacts

The CEQA Guidelines Section 15355 defines a cumulative impact as "two or more individual effects which, when considered together, are considerable". An individual effect need not itself be significant to result in significant cumulative effects; the impact is the result of the incremental effects of the Project combined with the effects of "other closely related past, present, and reasonably foreseeable probable future projects." CEQA does not define "closely related", but the Code of Federal Regulations (40 CFR 1508.25) indicates that a "closely related" project is one which is automatically triggered by the Project; one which cannot proceed without the Project first proceeding (mutual dependency); one which requires the Project for justification or is an interdependent part of the same action; or one which is a similar action with common timing, geography, and other features.

The requirements for a cumulative analysis are described in CEQA Guidelines Section 15130. A cumulative analysis "need not provide as great detail as is provided for the effects attributable to the project alone." The analysis should focus on analyzing the effects of the project to which other projects contribute, to the extent practical and reasonable. These other projects may be identified either through the provision of a list of cumulative projects, or via a summary of projections contained in an adopted General Plan or an adopted EIR. This EIR uses the latter approach as the project area is outside the Urban Services Boundary, and the general area is rural in nature and not proposed for development within the General Plan.

Land Use

As discussed in the Land Use chapter, the project will not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to a general plan, specific plan or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect, and no cumulative impacts related to land use have been identified.

Hydrology, Drainage, and Water Quality

Drainage from the proposed facility will be directed toward a dedicated septic system that appears to be able meet all setback requirements. The project would not cause violation of a water quality standard or waste discharge requirement and would not result in substantial increases to polluted runoff. The project will not contribute to a cumulatively considerable impact.

Public Services

The project site is located in an existing Agricultural-Residential community that has existing electricity, solid waste, police, and fire services. The proposed facility is similar to other facilities in the surrounding area (e.g. barns and agricultural outbuildings) that are typical of rural agricultural uses. Service providers have reviewed the proposed project and generally had no comment on its impact to service levels. The Public Services chapter concluded that there were no significant impacts to these services and no cumulative impacts related to public services have been identified.

Traffic

DOT typically requires a traffic study when a project will result in more than 100 peak hour trips, or more than 1,000 daily trips. DOT staff (Kamal Atwal, P.E.) provided a trip generation table on September 29, 2017. The project was shown to generate 10 daily trips and one additional truck trip per week, and a traffic study was not required. The Traffic chapter, therefore, concluded that there were no significant impacts, and no cumulative impacts related to traffic were identified.

Air Quality

Project construction and operation of the foreseeable development projects in the County and surrounding areas will result in the generation of ozone precursors and particulate matter. Due to past, present, and future development within the Sacramento Valley Air Basin (SVAB), the SVAB is in nonattainment for ozone and particulate matter. This is considered a significant cumulative impact and all projects in the region would contribute to this impact. Because of this, SMAQMD thresholds are relevant to whether a project has a cumulatively considerable contribution to the existing condition. According to the SMAQMD methodology, if a project's singular contribution can be considered less than significant, than the project's cumulative contribution is not considered cumulatively considerable and therefore, cumulative impacts are less than significant.

The proposed project's construction emissions showed that the proposed project would not exceed SMAQMD's significance thresholds for ozone precursors and PM_{10} during construction and operation. Based on SMAQMD's approach to cumulative impacts, the proposed project would have a less than significant cumulative contribution to construction emissions and operational emissions.

NOISE

As discussed in the Noise chapter, the project will not generate noise levels in exceedance of Sacramento County standards and are, therefore, less than significant. Only projects within the direct vicinity would contribute to noise from the project thereby resulting in a cumulative noise impact. The area surrounding the project site is is agricultural in nature and typical sounds include noise from farm equipment as well as animals. The noise analysis prepared for the project included the noise generated from this surrounding development. There are no known reasonably foreseeable projects included in this cumulative analysis near vicinity of the project site, and the proposed project is not expected to combine with noise from the surroundings to create a cumulative impact. The proposed project would have a less than significant cumulative contribution to noise impacts.

CULTURAL RESOURCES

Cumulative development in Sacramento County could significantly impact historic, archaeological, paleontological, geologic, or human resources. The archaeology of prehistoric resources in their original contexts is crucial in developing an understanding of the social, economic, and technological character of the resources. The boundaries of an archaeologically important site could extend beyond property boundaries. As a result, a meaningful approach to preserving and managing cultural research should focus on the likely distribution of cultural resources, rather than on Project or parcel boundaries. The cultural system is represented archaeologically by the total inventory of all sites and other cultural remains. However, proper planning and appropriate mitigation can help to capture and preserve knowledge of such resources and can provide opportunities for increasing understanding of the past environmental conditions and cultures by recording data about any sites discovered and preserving artifacts found. Based on the findings of the records and literature search and field survey, mitigation has been proposed that attempts to document and preserve cultural resources that may be encountered during construction of this project as well as other cumulative projects. This mitigation limits the cumulative contribution of impacts to cultural resources within the County. The project would have a less than significant cumulative contribution to cultural resources impacts.

GREENHOUSE GASSES AND CLIMATE CHANGE

Climate change is by nature a cumulative impact, and the significance threshold is based on cumulative growth projections and the limits which must be set in order to meet reduction targets by the year 2020. To that extent, the cumulative analysis has already been completed. The GHG emissions from the proposed project would not exceed the County's thresholds for energy and mobile source GHG emissions,

therefore the singular impacts from the project were found to be less than significant. The project's contribution to climate change, therefore, is not considered cumulatively considerable.

BIOLOGICAL RESOURCES

The project site was found to have suitable habitat for nesting Swainson's hawk, nesting raptors, and nesting migratory birds. Habitat was found to be unsuitable for vernal pool crustaceans, California tiger salamander, and tricolored blackbird. Surveys of the site did not detect any special-status species on the project site. Mitigation has been included to perform pre-construction surveys for Swainson's hawk, raptors, and migratory birds to ensure they have not nested on-site prior to any ground disturbance or construction activity. Despite concluding that there is no suitable habitat for tricolored blackbird it was noted that occurrences of these species have been documented within five miles of the project site. Mitigation has, therefore, been included to conduct pre-construction surveys for nesting tricolored blackbird.

Singularly, projects are required to mitigate their biological impacts and generally it is determined that such mitigation reduces individual impacts to less than significant. The project will be required to implement protective measures should the aforementioned species be discovered during pre-construction surveys. Therefore, the project is considered to have a less than significant cumulative impact.

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14 GLOSSARY OF ACRONYMS/ABBREVIATIONS

AB	Assembly Bill
ADA	American with Disabilities Act
ARB	California Air Resources Board
BMPs	Best Management Practices
CalEEMod	California Emissions Estimator Model
CalFire	California Department of Forestry and Fire Protection
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CAAQS	California ambient air quality standards
CAP	Climate Action Plan
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish & Wildlife
CDWR	California Department of Water Resources
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFCs	chlorofluorocarbons
CFR	Code of Federal Regulations
CH_4	methane
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent level
CNPS	California Native Plant Society Inventory
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2E	carbon dioxide equivalent
CPAC	Community Planning Advisory Council
CRHR	California Register of Historic Resources
CRPR	California Rare Plant Rank
CWA	Clean Water Act
dB	decibels
dBA	A-weighted sound levels
DOT	County of Sacramento Department of Transportation
DWR	County of Sacramento Department of Water Resources
EIR	Environmental Impact Report
EMD	County of Sacramento Environmental Management Department
EMFAC	Emission Factors Model
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	federal Endangered Species Act
FEMA	Federal Emergency Management Agency

GFAS	Global Federation of Animal Sanctuaries
GHG	greenhouse gases
GWP	global warming potential
HAPs	hazardous air pollutants
HFCs	fluorinated gases hyrofluorocarbons
HFPD	Herald Fire Protection District
IPaC	Information for Planning and Consultation
IPCC	Intergovernmental Panel on Climate Change
L_{50}	noise level that is exceeded 50% of a given period
L_{eq}	Equivalent Noise Level
L_{dn}	Day-Night Noise Level
L_{min}	Minimum Noise Level
L_{max}	Maximum Noise Level
L_v	the root mean square velocity expressed in vibration decibels
LDSIR	Land Division and Site Improvement Review
LID	Low Impact Development
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MT	metric tons
MMT	millions metric tons
MPO	Metropolitan Planning Organization
MTP/SCS	Metropolitan Transportation Plan/Sustainable Communities Strategy
N_2O	nitrous oxide
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NESHAP	National Emissions Standards for hazardous air pollutants
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OEHHA	Office of Environmental Health Hazard Assessment
PER	County of Sacramento Office of Planning & Environmental Review
PFCs	perfluorocarbons
PG&E	Pacific Gas and Electric
$PM_{2.5}$	respirable particulate matter with an aerodynamic diameter of 2.5 micrometers
PM_{10}	respirable particulate matter with an aerodynamic diameter of 10 micrometers
PPV	peak particle velocity
PRC	Public Resources Code
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board

SACOG	Sacramento Area Council of Governments
SB	Senate Bill
SEL	Sound Exposure Level
SF_6	sulfur hexafluoride
SIP	State implementation plan
SMAQD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Metropolitan Utility District
SO_2	sulfur dioxide
SSHCP	South Sacramento Habitat Conservation Plan
SSQP	Sacramento Stormwater Quality Partnership
SVAB	Sacramento Valley Air Basin
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
USB	Urban Service Boundary
USFWS	United States Fish & Wildlife Service
UPZ	Conditional Use Permit
VdB	vibration decibels
VMT	vehicle miles traveled
VTE	Vehicle Trips Ends

INITIAL STUDY CHECKLIST

Appendix G of the California Environmental Quality Act (CEQA) provides guidance for assessing the significance of potential environmental impacts. Based on this guidance, Sacramento County has developed the following Initial Study Checklist. The Checklist identifies a range of potential significant effects by topical area. The words "significant" and "significance" used throughout the following checklist are related to impacts as defined by the California Environmental Quality Act as follows:

1 Potentially Significant indicates there is substantial evidence that an effect MAY be significant. If there are one or more “Potentially Significant” entries an Environmental Impact Report (EIR) is required. Further research of a potentially significant impact may reveal that the impact is actually less than significant or less than significant with mitigation.

2 Less than Significant with Mitigation applies where an impact could be significant but specific mitigation has been identified that reduces the impact to a less than significant level.

3 Less than Significant or No Impact indicates that either a project will have an impact but the impact is considered minor or that a project does not impact the particular resource.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
1. **LAND USE** - Would the project:					
a. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to a general plan, specific plan or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X		The project is consistent with environmental policies of the Sacramento County General Plan, Southeast Area Community Plan, and Sacramento County Zoning Code.
b. Physically disrupt or divide an established community?				X	The project will not create physical barriers that substantially limit movement within or through the community.
2. **POPULATION/HOUSING -** Would the project:					
a. Induce substantial unplanned population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of infrastructure)?				X	The project consists of the construction of a squirrel monkey sanctuary for the keeping of retired research monkeys, and therefore will neither directly nor indirectly induce substantial unplanned population growth.
b. Displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere?				X	The project will not result in the removal of existing housing, and thus will not displace substantial amounts of existing housing.
3. **AGRICULTURAL RESOURCES** - Would the project:					
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance or areas containing prime soils to uses not conducive to agricultural production?				X	The project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance on the current Sacramento County Important Farmland Map published by the California Department of Conservation.
b. Conflict with any existing Williamson Act contract?				X	No Williamson Act contracts apply to the project site.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
c. Introduce incompatible uses in the vicinity of existing agricultural uses?			X		Though in an area where agricultural uses occur, the project will not substantially interfere with agricultural operations, because kennels are considered a generally compatible use within agricultural and agricultural/residential areas. Assuming compliance with the standards of Animal Care and Regulation, no significant impacts are expected.Please refer to Chapter 3 "Land Use."
4. **AESTHETICS -** Would the project:					
a. Substantially alter existing viewsheds such as scenic highways, corridors or vistas?			X		The project does not occur in the vicinity of any scenic highways, corridors, or vistas. Furthermore, the facility is a prefacbricated metal structure, akin to many agricultural accessory structures in the area.
b. Substantially degrade the existing visual character or quality of the site and its surroundings?			X		Construction will not substantially degrade the visual character or quality of the project site. Furthermore, the facility is a prefacbricated metal structure, akin to many agricultural accessory structures in the area.
c. Create a new source of substantial light, glare, or shadow that would result in safety hazards or adversely affect day or nighttime views in the area?			X		The project will not result in a new source of substantial light, glare or shadow that would result in safety hazards or adversely affect day or nighttime views in the area.
5. **AIRPORTS -** Would the project:					
a. Result in a safety hazard for people residing or working in the vicinity of an airport/airstrip?				X	The project occurs outside of any identified public or private airport/airstrip safety zones.
b. Expose people residing or working in the project area to aircraft noise levels in excess of applicable standards?				X	The project occurs outside of any identified public or private airport/airstrip noise zones or contours.
c. Result in a substantial adverse effect upon the safe and efficient use of navigable airspace by aircraft?				X	The project does not affect navigable airspace.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
d. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X	The project does not involve or affect air traffic movement.
6. **PUBLIC SERVICES -** Would the project:					
a. Have an adequate water supply for full buildout of the project?			X		Private wells would be required to provide water to for facility operations. The project is proposing to use the existing private well. The proposed facility plan estimates 41,000 gallons of water will be used annually (112 gallons per day) for facility needs including monkey drinking water, cleaning, and landscaping. On average, each person in a household uses about 100 gallons of water a day. The project would add incrementally to a documented decline in the groundwater table in the County but it would not in itself constitute a significant environmental impact. Please refer to Chapter 5 "Public Services" of the EIR.
b. Have adequate wastewater treatment and disposal facilities for full buildout of the project?			X		Septic systems would be required. Refer to Chapter 5 "Public Services" for further discussion.
c. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X		The Kiefer Landfill has capacity to accommodate solid waste until the year 2050. Please refer to Chapter 5 "Public Services" for further discussion.
d. Result in substantial adverse physical impacts associated with the construction of new water supply or wastewater treatment and disposal facilities or expansion of existing facilities?				X	The project is located outside of the Urban Service Boundaries and would not rely upon public water or public sewage facilities. The project will not require construction or expansion of new water supply, wastewater treatment, or wastewater disposal facilities.
e. Result in substantial adverse physical impacts associated with the provision of storm water drainage facilities?			X		Project construction would not require the addition of new stormwater drainage facilities. Please refer to Chapter 4 "Hydrology, Drainage, & Water Quality" of the EIR.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
f. Result in substantial adverse physical impacts associated with the provision of electric or natural gas service?			X		Electricity and natural gas services for the project would be provided by SMUD and PG&E, respectively. The project would increase electricity and natural gas consumption and require new utility connections. These utilities would likely be installed underground, and no offsite extensions would be needed. No significant new impacts would result from utility extension. Please refer to Chapter 5 "Public Services" for further discussion.
g. Result in substantial adverse physical impacts associated with the provision of emergency services?				X	The project is not proposing any new residential construction and would not result in the need for additional demand in fire protection or police protection.
h. Result in substantial adverse physical impacts associated with the provision of public school services?				X	The project will not require the use of public school services.
i. Result in substantial adverse physical impacts associated with the provision of park and recreation services?				X	The project will not require park and recreation services.
7. **TRANSPORTATION/TRAFFIC** - Would the project:					
a. Result in a substantial increase in vehicle trips that would exceed, either individually or cumulatively, a level of service standard established by the County?			X		The project will result in minor increases in vehicle trips, but this increase will not cause, either individually or cumulatively, a level of service standard established by the County to be exceeded. Please refer to Chapter 6 "Traffic/Circulation".
b. Result in a substantial adverse impact to access and/or circulation?			X		No changes to existing access and/or circulation patterns would occur as a result of the project. Please refer to Chapter 6 "Traffic/Circulation".
c. Result in a substantial adverse impact to public safety on area roadways?			X		No changes to existing access and/or circulation patterns would occur as a result of the project; therefore no impacts to public safety on area roadways will result. Please refer to Chapter 6 "Traffic/Circulation".

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
d. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X	The project does not conflict with alternative transportation policies of the Sacramento County General Plan, with the Sacramento Regional Transit Master Plan, or other adopted policies, plans or programs supporting alternative transportation.
8. **AIR QUALITY** - Would the project:					
a. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?			X		The project does not exceed the screening thresholds established by the Sacramento Metropolitan Air Quality Management District and will not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment. Compliance with existing dust abatement rules and standard construction mitigation for vehicle particulates will ensure that construction air quality impacts are less than significant. The California Emissions Estimator Model (CalEEMod) was used to analyze ozone precursor emissions; the project will not result in emissions that exceed standards. Please refer to Chapter 7 “Air Quailty” & Chapter 10 “Greenhouse Gases & Climate Change” for further discussions.
b. Expose sensitive receptors to pollutant concentrations in excess of standards?			X		There are no sensitive receptors (i.e., schools, nursing homes, hospitals, daycare centers, etc.) adjacent to the project site. See Response 8.a.
c. Create objectionable odors affecting a substantial number of people?			X		The project will not generate objectionable odors. Please refer to Chapter 7 “Air Quality” of the EIR.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
9. **NOISE -** Would the project:					
a. Result in exposure of persons to, or generation of, noise levels in excess of standards established by the local general plan, noise ordinance or applicable standards of other agencies?			X		The project is not in the vicinity of any uses that generate substantial noise, nor will the completed project generate substantial noise. The project will not result in exposure of persons to, or generation of, noise levels in excess of applicable standards. Please refer to Chapter 8 “Noise” of the EIR.
b. Result in a substantial temporary increase in ambient noise levels in the project vicinity?			X		Project construction will result in a temporary increase in ambient noise levels in the project vicinity. This impact is less than significant due to the temporary nature of the these activities, limits on the duration of noise, and evening and nighttime restrictions imposed by the County Noise Ordinance (Chapter 6.68 of the County Code). Please refer to Chapter 8 “Noise” of the EIR.
10. **HYDROLOGY AND WATER QUALITY** - Would the project:					
a. Substantially deplete groundwater supplies or substantially interfere with groundwater recharge?					Private wells would be required to provide water to for facility operations. The project is proposing to use the existing private well. The proposed facility plan estimates 41,000 gallons of water will be used annually (112 gallons per day) for facility needs including monkey drinking water, cleaning, and landscaping. On average, each person in a household uses about 100 gallons of water a day. The project would add incrementally to a documented decline in the groundwater table in the County but it would not in itself constitute a significant environmental impact. The project will not substantially increase water demand over the existing use. Please refer to Chapter 5 “Public Services” of the EIR.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
b. Substantially alter the existing drainage pattern of the project area and/or increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?			X		The project does not involve any modifications that would substantially alter the existing drainage pattern and or/increase the rate or amount of surface runoff in a manner that would lead to flooding. Compliance with applicable requirements of the Sacramento County Floodplain Management Ordinance, Sacramento County Water Agency Code, and Sacramento County Improvement Standards will ensure that impacts are less than significant. Please refer to Chapter 4 “Hydrology, Drainage, & Water Quality” of the EIR.
c. Develop within a 100-year floodplain as mapped on a federal Flood Insurance Rate Map or within a local flood hazard area?				X	The project site is located within a FEMA “Zone X” area and will not place housing in a FEMA designated floodplain or flood hazard area. Furthermore, the project will not impede or redirect flood flows by placing structures within a 100-year flood hazard area. Please refer to Chapter 4 “Hydrology, Drainage, & Water Quality” of the EIR.
d. Place structures that would impede or redirect flood flows within a 100-year floodplain?				X	The project site is not within a 100-year floodplain.
e. Develop in an area that is subject to 200 year urban levels of flood protection (ULOP)?				X	The project is not located in an area subject to 200-year urban levels of flood protection (ULOP).
f. Expose people or structures to a substantial risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X	The project will not expose people or structures to a substantial risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
g. Create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems?			X		Sacramento County Department of Water Resources placed a condition of approval upon the project, that minimum pad/floor elevations would be required pursuant to the Sacramento County Floodplain Management Ordinance. Compliance with the Floodplain Management Ordinance, Sacramento County Water Agency Code, and the Sacramento County Improvement Standards will minimize any off-site impacts due to drainage from the project site
h. Create substantial sources of polluted runoff or otherwise substantially degrade ground or surface water quality?			X		Compliance with the Stormwater Ordinance and Land Grading and Erosion Control Ordinance (Chapters 15.12 and 14.44 of the County Code respectively) will ensure that the project will not create substantial sources of polluted runoff or otherwise substantially degrade ground or surface water quality. All underground storage tanks are subject to federal and State regulations pertaining to operating standards, leak reporting requirements, and corrective action requirements. The County Environmental Management Department enforces these regulations. Existing regulations will ensure that impacts are less than significant. Sacramento County Code Chapters 6.28 and 6.32 provide rules and regulations for water wells and septic systems that are designed to protect water quality. The Environmental Health Division of the County Environmental Management Department has permit approval authority for any new water wells and septic systems on the site. Compliance with existing regulations will ensure that impacts are less than significant. Please refer to Chapter 4 “Hydrology, Drainage, & Water Quality” for a full discussion.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
11. **GEOLOGY AND SOILS** - Would the project:					
a. Expose people or structures to substantial risk of loss, injury or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?				X	Sacramento County is not within an Alquist-Priolo Earthquake Fault Zone. Although there are no known active earthquake faults in the project area, the site could be subject to some ground shaking from regional faults. The Uniform Building Code contains applicable construction regulations for earthquake safety that will ensure less than significant impacts.
b. Result in substantial soil erosion, siltation or loss of topsoil?			X		Compliance with the County's Land Grading and Erosion Control Ordinance will reduce the amount of construction site erosion and minimize water quality degradation by providing stabilization and protection of disturbed areas, and by controlling the runoff of sediment and other pollutants during the course of construction.
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, soil expansion, liquefaction or collapse?				X	The project is not located on an unstable geologic or soil unit.
d. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available?			X		All septic systems must comply with the requirements of the County Environmental Management Department, Environmental Health Division, as set forth in Chapter 6.32 of the County Code. Compliance with County standards will ensure impacts are less than significant.
e. Result in a substantial loss of an important mineral resource?				X	The project is not located within an Aggregate Resource Area as identified by the Sacramento County General Plan Land Use Diagram, nor are any important mineral resources known to be located on the project site.
f. Directly or indirectly destroy a unique paleontological resource or site?				X	No known paleontological resources (e.g. fossil remains) or sites occur at the project location.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
12. **BIOLOGICAL RESOURCES** - Would the project:					
a. Have a substantial adverse effect on any special status species, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, or threaten to eliminate a plant or animal community?		X			Refer to Chapter 11 “Biological Resources” for a full discussion of project impacts.
b. Have a substantial adverse effect on riparian habitat or other sensitive natural communities?			X		Refer to Chapter 11 “Biological Resources” for a full discussion of project impacts.
c. Have a substantial adverse effect on streams, wetlands, or other surface waters that are protected by federal, state, or local regulations and policies?			X		Refer to Chapter 11 “Biological Resources” for a full discussion of project impacts.
d. Have a substantial adverse effect on the movement of any native resident or migratory fish or wildlife species?		X			Refer to Chapter 11 “Biological Resources” for a full discussion of project impacts.
e. Adversely affect or result in the removal of native or landmark trees?				X	No native and/or landmark trees occur on the project site, nor is it anticipated that any native and/or landmark trees would be affected by off-site improvement required as a result of the project.
f. Conflict with any local policies or ordinances protecting biological resources?				X	The project is consistent with local policies/ordinances protecting biological resources. Refer to Chapter 11 “Biological Resources” for a full discussion of project impacts.
g. Conflict with the provisions of an adopted Habitat Conservation Plan or other approved local, regional, state or federal plan for the conservation of habitat?				X	There are no known conflicts with any approved plan for the conservation of habitat.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
13. **CULTURAL RESOURCES -** Would the project:					
a. Cause a substantial adverse change in the significance of a historical resource?				X	No historical resources would be affected by the proposed project.
b. Have a substantial adverse effect on an archaeological resource?			X		No known archaeological resources occur on-site. The Northern California Information Center was contacted regarding the proposed project. A record search indicated that the project site is not considered sensitive for archaeological resources. An archaeological survey was conducted on the project site.
c. Disturb any human remains, including those interred outside of formal cemeteries?			X		The project site is located outside any area considered sensitive for the existence of undiscovered human remains. No known human remains exist on the project site. Nonetheless, mitigation has been recommended to ensure appropriate treatment should remains be uncovered during project implementation.
d. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074?			X		No requests for tribal notification or consultation were received from California Native American Tribes pursuant to Public Resources Code 21080.3.1(b)(1). Tribal cultural resources were not identified in the project area.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
14. **HAZARDS AND HAZARDOUS MATERIALS** - Would the project:					
a. Create a substantial hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X		The project does not involve the transport, use, and/or disposal of hazardous material. Correspondence from the Global Federation of Animal Sanctuaries (GFAS) states that primate waste is not classified as biohazardous and can be disposed as regular waste by typical commercial waste management contractors. An exception to this would be if a monkey were diagnosed with a zoonotic disease or was involved in biomedical research involving zoonotic diseases, in which case, their veterinarian would determine if the waste should be handled as biohazardous medical waste. GFAS deemed the project's Zoonotic Disease Prevention Plan as "comprehensive and outlines appropriate means to safely dispose of primate waste" (Please refer to Appendix B).
b. Expose the public or the environment to a substantial hazard through reasonably foreseeable upset conditions involving the release of hazardous materials?				X	The project does not involve the transport, use, and/or disposal of hazardous material.
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?				X	The project does not involve the use or handling of hazardous material.
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, resulting in a substantial hazard to the public or the environment?				X	The project is not located on a known hazardous materials site.
e. Impair implementation of or physically interfere with an adopted emergency response or emergency evacuation plan?				X	The project would not interfere with any known emergency response or evacuation plan.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
f. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to or intermixed with urbanized areas?			X		The project is within a rural agricultural area of the unincorporated County and is located within a Local Responsibility Area and is not located within a Fire Hazard Severity Zone according to CalFire. Compliance with local Fire District standards and requirements ensures impacts are less than significant.
15. GREENHOUSE GAS EMISSIONS – Would the project:					
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X		The California Emissions Estimator Model (CalEEMod) was used to estimate the greenhouse gas emissions associated with the project. Based on the unique characteristics of the proposed monkey sanctuary; PER staff consulted with SMAQMD staff regarding the appropriate land use classification and variables to use in the model. In addition, the defaults in CalEEMod were changed to reflect the emission anticipated for operation in 2019, and carbon intensity forecasts for the Sacramento Municipal Utility District (SMUD) based on SMUD's 2009 reporting year. The estimated GHG emissions for both facility construction and annual operation are significantly below SMAQMD's thresholds of 1,100 annual metric tons. Please refer to Chapter 10 "Greenhouse Gases & Climate Change" and/or Appendix E for the CalEEMod reports).

SUPPLEMENTAL INFORMATION

LAND USE CONSISTENCY	Current Land Use Designation	Consistent	Not Consistent	Comments
General Plan	Agricultural Residential (AG-RES)	X		

Community Plan	Agricultural-Residential (AR-5)	X		Southeast Area Community Plan
Land Use Zone	General Agriculture (A-5)	X		With approval of the use permit the project is consistent.

INITIAL STUDY PREPARERS

Environmental Coordinator: Tim Hawkins

Section Manager: Chris Pahule

Project Manager: Wendy Hartman

EIR Preparation: Josh Greetan

Initial Review: Josh Greetan

Office Manager: Brlinda-Wekesa Batts

Administrative Support: Justin Maulit

Summary Operating Procedures of Squirrel Monkey Haven

Governance: Squirrel Monkey Haven (SMH) is a tax-exempt 501(c)(3) organization. Christine Buckmaster is Founder-CEO; Paul Buckmaster DVM is Senior Veterinarian.

Operations: SMH must fulfill regulations set forth by California Department of Fish and Wildlife and the United States Department of Agriculture Animal Welfare Act as well as accreditation standards of the Global Federation of Animal Sanctuaries. These agencies would inspect SMH regularly (CFDW and USDA annually; GFAS tri-annually).

Health: SMH monkeys were born in California and are healthy. None are a health risk to people or other animals. Veterinarians provide health care to all of SMH monkeys. Monkeys are monitored daily for wellness. Law requires Veterinarians to report any animal (dog, cat, horse, rabbit, chicken, monkey, etc.) diseases that could be a risk to human health. None of the SMH monkeys have ever had a disease that was a risk to humans or other animals. A certificate of health from a licensed Veterinarian is required before monkeys can be released from research or transferred between zoos or sanctuaries.

Design (see Exhibits A through E). The property is at the end of N Valensin. The site for the monkey housing is set back from the property boundary and has some existing trees and bushes for visual barrier. Indoor shelter for the monkeys would be a neutral colored steel Ag building typical for the area. Habitats are wire mesh mandated by regulations. Indoor cages connect to outdoor habitats by aerial runway-tunnels. Habitat interiors have monkey-safe plantings. Habitat perimeters would have more water conserving landscaping for aesthetics. Plants would be maintained by water-conserving drip irrigation.

Emergency Preparedness: Escape would be a greater hazard to monkeys' welfare than it would be for humans or other animals. Significant preventative efforts and protocols are in place to prevent them, including double-door entries with locks (see Exhibit D). However, as required by regulatory agencies, in the unlikely event of an escape there is a protocol. See *Emergency Prevention and Action Plan* (Exhibit G).

Odor & Waste Removal: Regulations require daily cleaning and weekly sanitation of monkey housing to prevent odor and maintain a healthy environment for monkeys and staff.

- Absorbent bedding (e.g. wood shavings) would be used indoors on the cement floor of each cage to trap and deodorize feces and urine. Soiled bedding would be removed daily and all bedding would be removed weekly and refreshed after cages are sanitized.
- Indoor caging, floors, and walls would be cleaned and deodorized weekly with a sanitizing solution (e.g. Rescue).
- Outdoor habitats would be mulched and soiled areas cleaned and refreshed twice weekly.
- Aisles in the building would be swept and mopped daily with 1:32 bleach solution to keep area clean and prevent odors.
- Soiled bedding/mulch and animal waste would be put in heavy-duty plastic bags and disposed of in a commercial waste bin that has a heavy securable cover to prevent animal entry and odor escape. The bin will be stored next to the monkey housing area and will be picked up weekly by Cal-Waste Recover of Galt. Cal-waste has confirmed that they will schedule weekly pick-up to coordinate with building cleaning days such that waste will be picked-up within 24 hours of cleaning days. No special handling of the waste is required.
- All effluent from the facility would be directed to the dedicated septic system for the facility.

Noise: We do not expect the monkeys to be a noise nuisance in this active agricultural zone but preventative strategies have been investigated and would include 1) On-site analysis by an acoustical engineer to prescribe noise control mitigations 2) The indoor shelter for the monkeys would be insulated to provide acoustical attenuation and 3) Monkeys access to outdoor enclosures would be restricted to 7AM-8PM weekdays and 9AM-8PM on weekends.

Water Use: The property is serviced by a private well that is not shared with any other property. An estimated 41,000 gallons of water would be used annually for all water needs including; monkey drinking water; cleaning; and water conserving landscaping maintenance.

Well Contamination: The well servicing the property is more than 200 ft from the monkey housing. Neighboring wells are far more than 300 ft. from the monkey housing. Per Sacramento County ordinance a septic system could be placed 100 ft from a drinking water well. Given monkey housing is a far greater distance from wells, and waste is carefully handled, it is unlikely to contaminate wells.

Traffic: The residence would be home to the Buckmaster family (4). One or two staff members would drive to SMH daily (full-time 5-days/week). Guest visits to SMH would be by appointment and restricted to 2 passenger cars per day, on 5 days of the week (five weekdays, or four weekdays and one weekend day). Parking is available on property. No street parking would be necessary. North Valensin is a private road with a binding agreement by neighbors to share the cost of maintaining it.

ZONING ADMINISTRATOR
APPROVED
Staff: Surinder Singh
Date: 3/21/2018
County of Sacramento
Planning and Environmental Review

Squirrel Monkey Haven

EMERGENCY PREVENTION AND ACTION PLAN

ZONING ADMINISTRATOR APPROVED
Staff: Gurinder Singh
Date: 3/21/2018
County of Sacramento
Planning and Environmental Review

TYPES OF EMERGENCIES COVERED:

- Monkey escape
- Human medical
- Environmental (e.g., Fire, Security breach)

GUIDING PRINCIPLES:

- Personnel prioritize emergency prevention but can competently deal with emergencies.
- Monkey housing is designed and maintained to prevent escapes.
- Personnel are on site 24/7/365 to monitor operations.
- A security system with alarms and video monitoring is on site.
- Emergency drills are performed at least every 6-months.
- Emergency services (Police and Fire) are invited annually to perform a facility inspection.

MONKEY ESCAPE

➢ **PREVENTION**

- ENCLOSURE SECURITY
  - All monkey housing (indoor and outdoor cages) have double entries that are kept locked at all times.
  - Only SENIOR STAFF hold keys to monkey housing areas and access housing areas for shifting, cleaning, maintenance, or to aid monkey(s).
  - Monkeys are shifted from, and locked out of, housing areas before accessing them.
  - Slides, doors, and gates securing monkeys in housing areas are kept closed and locked at all times. NOTE: ALL DOORS, SLIDES, AND GATES ARE KEPT CLOSED AND SECURED WHILE STAFF IS WORKING IN A HOUSING AREA THAT MONKEYS ARE LOCKED OUT OF.
  - Indoor/outdoor enclosures that are not housing monkeys are kept locked at all times.
  - Personnel maintain verbal contact when servicing monkey housing.
  - When possible, enclosures are serviced from the outside to avoid unnecessary enclosure entry.
  - Routine standard operating procedures are used when servicing enclosures to prevent human error.

- ENCLOSURE STRUCTURAL INTEGRITY
  - Indoor and outdoor enclosures, runways, service doors, gates, gate latches, hinges, and sliding doors are manually and visually double-checked for function by SENIOR STAFF at opening in the AM and closing in the PM daily, during each visit to the housing area, and after each use to ensure proper functioning.

EXHIBIT G

- **ESCAPE ACTION PLAN**

  - **Perform these ESSENTIAL ACTIONS during an escape:**

    - Maintain visual contact with escapee(s) at all times.
    - Alert all other personnel for assistance.
    - Assess how escape occurred and secure breach to prevent additional escapes while maintaining an open securable area that the escapee(s) can to return too and be locked into.
    - Begin recapture protocol.
    - During an escape event the preferred outcome is that the monkey(s) voluntarily return to the enclosure without human contact.
    - **DARTING WITH SEDATIVE <u>IS NOT</u> STANDARD SOP WITH THIS SMALL SPECIES.**

- **RECAPTURE PROTOCOL**

  - **Non-contact method for voluntary return (preferred):**

Squirrel monkeys do not like to be away from their social group and may return quickly

- Neutral technique (when movement causes retreat from group)
  - Watch and wait silently for voluntary return.

- Positive reinforcement technique (PR) (when movement creates interest)
  - Coax back to enclosure with high value treats.

- Negative reinforcement technique (NR) (when PR is working but need extra encouragement)
  - Guide toward and pressure into cage using gloves as visual NR.

NOTE: A combination of the above can be used. Judgment during an episode must guide specific actions. Generally follow this order: neutral --> positive reinforcement --> negative reinforcement.

- **Contact method (specific procedure described during personnel training sessions):**

  - Manual
  - Net

NOTE: Detailed SOPs for various escape-recapture scenarios are provided during training sessions with personnel and during emergency drills.

- **PERFORM THESE ACTIONS AFTER THE MONKEY(S) ARE RECAPTURED**

  - Observe for injury.
  - Report incident to Attending Veterinarian and make arrangements for treatment as needed.

- **ESCAPE INCIDENT RECORDING, REPORTING, AND INVESTGATION**

  - Record details of the escape and recapture in the INCIDENT LOG BOOK.
  - Circumstances enabling an escape are investigated and remedies are put in place immediately.
  - Report of escape is made to appropriate authorities as required.
  - Organization-wide meeting is held to discuss the incident to refresh prevention methods.

HUMAN MEDICAL EMERGENCY

- CALL **911** IMMEDIATELY
- Alert other personnel for assistance.
- Perform first aid as appropriate until First Responders arrive.

Note: SMH personnel receive first aid training with annual refresher.

ENVIRONMENTAL EMERGENCY

FIRE

- **ACTION PLAN**
  - CALL **911** IMMEDIATELY
  - Alert other personnel for assistance.
  - Without endangering personal safety, apply fire extinguisher and/or water to reduce fire spread until First Responders arrive.
  - SENIOR STAFF REMAIN PRESENT TO AID FIRST RESPONDERS BY PROVIDING INFORMATION ABOUT THE FACILITY AND TO KEEP MONKEYS SECURED.
- **PREVENTION**
  - Monkey housing and operations buildings are steel.
  - SMH personnel receive annual fire prevention training from the local Fire Authorities.
  - Fire extinguishers (inspected annually) are posted at all buildings.
  - Fire prevention includes management of natural landscape hazards, e.g., grasses.

FACILITY SECURITY

- **ACTION PLAN**
  - Call 911 Immediately
  - Alert other personnel
  - Tell intruders to leave the premises- do not approach intruders
  - Maintain visual
  - Retreat to safety of locked area personal threat is present
- **PREVENTION**
  - Personnel are on site 24/7/365 to monitor facility security.
  - Alarm and video security systems (ADT) are in place.
  - Personnel accompany any guests, contractors, vendors, etc., when on the grounds.
  - Police authority is invited annually for security overview.

EXHIBIT H

Emergency Succession Plan

For

SQUIRREL MONKEY HAVEN

December 2017

The Board of Directors of SQUIRREL MONKEY HAVEN (SMH) recognizes that this is a plan for contingencies due to the disability, death or departure of the EXECUTIVE DIRECTOR. If the organization is faced with the unlikely event of an untimely vacancy, SQUIRREL MONKEY HAVEN has in place the following emergency succession plan to facilitate the transition to both interim and longer-term leadership.

Succession Plan in Event of a Temporary, Unplanned Absence: Short-Term

The Board of Directors is authorized to implement the terms of this emergency plan in the event of the unplanned absence of the Executive Director. A temporary absence is one of less than three months in which it is expected that the Executive Director will return to his/her position once the events precipitating the absence are resolved.

At the time that this plan was approved, the position of Acting Executive Director would be:

Paul Buckmaster DVM
SMH Attending Veterinarian

Should the standing appointee to the position of Acting Executive Director be unable to serve, the first and second back-up appointees for the position of Acting Executive Director will be:

(1) C. Dell
Business Owner
(2) J. HARDY
SMH Sanctuary Manager

The Board may consider the option of splitting executive duties among the designated appointees.

Authority and Compensation of the Acting Executive Director

The person appointed as Acting Executive Director shall have the full authority for decision-making and independent action as the regular Executive Director. The Acting Executive Director may be offered a temporary salary increase to the entry-level salary of the executive director position. Note: P. Buckmaster and C. Dell would not be compensated; J. Hardy would be compensated

Board Oversight

The board shall be responsible for monitoring the work of the Acting Executive Director and will be sensitive to the special support needs of the Acting Executive Director in this temporary leadership role.

Communications plan

As soon as possible after the Acting Executive Director has begun covering the unplanned absence, Board members and the Acting Executive Director shall communicate the temporary leadership structure to the following key external accreditation of SQUIRREL MONKEY HAVEN.

1) Young, Craig & Co., LLP
2) GFAS
3) NAPSA

ZONING ADMINISTRATOR
APPROVED
Staff: Gunder Singh
Date: 3/21/2018
County of Sacramento
Planning and Environmental Review

Completion of Short-Term Emergency Succession Period
The decision about when the absent Executive Director returns to lead SQUIRREL MONKEY HAVEN should be determined by the Executive Director and the Board. They will decide upon a mutually agreed schedule and start date. A reduced schedule for a set period of time can be allowed, by approval of the Board, with the intention of working their way back up to a full-time commitment.

Succession Plan in Event of a Temporary, Unplanned Absence: Long-Term
A long-term absence is one that is expected to last more than three months. The procedures and conditions to be followed should be the same as for a short-term absence with one addition:
The Board of Directors will give immediate consideration, in consultation with the Acting Executive Director, to **temporarily** filling the management position left vacant by the Acting Executive Director. This is in recognition of the fact that for a term of more than three months, it may not be reasonable to expect the Acting Executive Director to carry the duties of both positions. The position description of a temporary manager would focus on covering the priority areas in which the Acting Executive Director needs assistance.

Completion of Long-Term Emergency Succession Period
The decision about when the absent Executive Director returns to lead SQUIRREL MONKEY HAVEN should be determined by the Executive Director and the Board. They will decide upon a mutually agreed upon schedule and start date. A reduced schedule for a set period of time can be allowed, by approval of the Board, with the intention of working the way up to a full-time commitment

Succession Plan in Event of a Permanent Change in Executive Director
A permanent change is one in which it is firmly determined that the Executive Director will not be returning to the position. The procedures and conditions should be the same as for the a long-term temporary absence with one addition:

The Board will consider the need for outside consulting assistance depending on the circumstances of the transition and the board's capacity to plan and manage the transition and search. The Board will also determine the need for an Interim Executive Director, and plan for the recruitment and selection of an Interim Executive Director and/or permanent Executive Director.

As Executive Director Christine Buckmaster does not receive compensation. Life insurance policy in the amount of $100,000 is in place to fund the salary for two years (current market rate for similar positions) of a new Executive Director in the event of Christine Buckmaster's death.

Temporary, unplanned absence of critical staff
Other paid staff with direct and daily responsibility for monkey care will be evaluated every 6 months of employment to determine readiness to move into leadership positions should the need arise. In the event of a sudden, unplanned absence of the Executive Director, the Board and the appointed Acting Executive Director (if present) will determine candidates to fill positions that have a direct and daily responsibility for monkey care: Sanctuary Manager, Monkey Caregiver, Veterinary staff.

This Emergency Succession Plan will be reviewed and updated annually.

Founder-Executive Director: Christine Buckmaster _____

Cc: Board Secretary: W. Baumgardner, RVT

Squirrel Monkey Haven

Zoonotic Disease Prevention Plan

SMH Veterinarians and staff implement policies and procedures to prevent zoonotic disease risk by implementing standards set by Global Federation of Animal Sanctuaries, Association of Zoos and Aquariums, and the American Veterinary Medical Association.

It is important to note that the National Research Council considers squirrel monkeys a low-risk species for zoonotic transmission. "Cebids are not known to pose any special bacterial- or viral-disease hazards to the humans that interact with them. Therefore, personnel bitten or scratched by a New World monkey can be treated in a similar way as bites and scratches from a dog or cat. " In *Psychological Well-being of Nonhuman Primates*, pg. 89. **Note:** squirrel monkeys are New Word Monkeys and are Cebids (https://www.aaalac.org/accreditation/RefResources/SS_NHP_Psychological.pdf)

SMH Policies and procedures implemented to prevent zoonotic disease risk.

1) Comprehensive veterinary care minimizes risk of zoonotic disease through preventative measures and early detection and reporting.

   - The health and wellbeing of each monkey is assessed daily during rounds. If a monkey is found ill a clinical assessment is performed immediately. SMH Veterinarians formulate and implement a diagnostic plan.
     - If a condition is treatable, a treatment plan is implemented.
     - If a condition is terminal, euthanasia is performed at an appropriate stage.
     - Deceased monkeys are submitted to an independent pathology lab to confirm cause of death.
     - In the unlikely event of a diagnosis of a reportable zoonotic disease, as listed by the California Departmen of Public Health or California Department of Food and Agriculture, SMH Veterinarians contact these agencies to formulate a plan of action.
   - SMH Veterinarians give all monkeys annual health exams that include standard screenings (tuberculin tests) and vaccinations (tetanus and rabies).
   - SMH Veterinarians consult regularly with other local primate veterinary experts at universities and zoos to remain informed of significant disease incidences or changes in vaccination recommendations.

2) Veterinarians and staff use universal precautions when administering medical care to the monkeys that involve exposure to bodily fluids such as blood.

   - Disposable gloves are used when touching monkeys during and exam.
   - Surfaces and equipment are kept sanitized before and after each use.
   - Disposal of medical waste: needles and syringes are placed into a sharps container, other waste is disposed in general trash or in biohazard bags when Veterinarians deem appropriate.

3) Veterinarians and staff use standard precautions when in the monkey housing area.

   - Dedicated shoes are worn in monkey housing areas.
   - Hand sanitizing stations and disposable gloves are in the monkey housing area- hands must be sanitized before entering and leaving the monkey housing area, disposable gloves must be worn in the monkey housing area and removed before exiting.

4) Environmental cleaning and sanitation of monkey housing and care equipment further reduces risk of zoonoses.

   - All care staging areas, e.g., food prep area, is kept sanitized after each use. Food is stored in refrigeration or in pest proof containers.
   - Monkey indoor housing is swept and moped daily, and power-washed and sanitized weekly with bleach solution and other standard animal shelter sanitation solutions, e.g. Rescue. Outdoor habitats are cleaned and sanitized weekly.
   - A licensed pest control contractor provides preventative pest control services regularly.

5) Staff receives zoonotic disease awareness and prevention training annually.

   - Staff is required to have tuberculin screening annually and current vaccinations (tetanus, MMR, influenza).

Appendix E

Chapter 8.26 PERMITS

8.26.005 Purpose.

The purpose of this chapter is to establish special regulations applicable to the following:

1. The operation of kennels as defined in Section 8.04.210 of this Title;
2. The keeping of wild animals as defined in Section 8.04.280 of this Title; and
3. The operation of catteries as defined in Section 8.04.080 of this Title.

The operation of kennels or catteries and the keeping of wild animals constitute types of activity which require special investigation, review and regulation to ensure that both public and animal health, safety, and welfare are protected. The necessity to conduct such investigation, review and regulation arises for reasons which include, but are not necessarily limited to, the following: (i) the fact that such activities create health or safety risks which require special regulation and (ii) the tendency of such activities to create, whether intentionally or unintentionally, a public nuisance. (SCC 0815 § 2, 1990.)

8.26.010 Permits.

Within the context of this chapter and unless otherwise stated, “Permits” shall include licenses issued by the Chief of Animal Control pursuant to the provisions of this

Chapter which authorize either the maintaining and operating of a kennel or cattery (a Kennel/Cattery Permit) or the keeping of a wild animal (a Wild Animal Permit) but shall not include licenses issued by the Chief of Animal Control pursuant to the provisions of Chapter 8.24 which authorize the keeping of a dog. (SCC 0815 § 2, 1990.)

8.26.015 Permit Required.

a. No person shall maintain or operate a kennel or cattery or keep, harbor, or maintain a wild animal within the geographic area of the County governed by this Title without first, being appropriately zoned for such activity and second, applying to and receiving from the Chief of Animal Control an annual permit to do so.

b. A person shall be deemed to maintain or operate a kennel if the person, without an applicable General Business License in effect, keeps, harbors, or maintains more than four (4) dogs over four (4) months of age.

c. A person shall be deemed to maintain or operate a cattery if the person, without an applicable General Business License in effect, keep, harbors, or maintains more than four (4) cats over six (6) months of age.

d. The following shall be exempt from the requirements of this chapter:

1. Catteries when the cats are physically restrained or confined to the place of keeping and when no founded complaints by the public or observations by Animal Control of a violation of any provisions of this Title are made;

2. Enterprises maintained or operated solely and exclusively as animal facilities pursuant to a General Business License;

3. Persons keeping wild animals solely and exclusively as part of a bona fide rehabilitation or educational activity sanctioned by the State of California Department of Fish and Game; and

4. Non-profit enterprises recognized by the State of California as animal shelters or humane societies which shelter animals.

e. If a person operates more than one kennel or cattery or maintains wild animals at more than one address, a separate permit shall be required for each location where the person maintains a kennel or cattery or keeps a wild animal. (SCC 0815 § 2, 1990.)

8.26.020 Special Regulations.

The operation of kennels or catteries in appropriately zoned areas and the keeping of wild animals are subject to special regulations governing their operations as set forth in Chapter 8.26 of this Title. Any such regulations not specifically set forth herein shall be promulgated by the appropriate officer and shall be effective when filed with the Clerk of the Board of Supervisors.

The issuance of a permit shall not be deemed to relieve or excuse the owner from the provisions and requirements of Title 8 in its entirety; nor from a requirement, under Chapter 4.06 of the County Code, that a General Business License be obtained as required; nor from any other applicable requirement as set forth in existing Federal, State, or local zoning codes, health and safety codes, business codes or other laws, ordinances, or requirements governing the operation of such a kennel or cattery enterprise or the keeping of such wild animals. (SCC 0815 § 2, 1990.)

8.26.025 Application Filing.

All applications for a permit shall be filed, with the required fees, with the Chief of Animal Control. Applications for a Kennel/Cattery Permit shall be accompanied by copies of the rabies vaccination certificates for all dogs or cats to be kept pursuant to the Kennel/Cattery Permit. The Chief of Animal Control shall receive any fee required for the application, assure that the application is complete, and conduct such investigation and review as is necessary for action. (SCC 0815 § 2, 1990.)

8.26.030 Application Contents.

The application for a permit shall contain such information and be filed on a form as is prescribed by the Chief of Animal Control and shall include the following:

1. A complete description of either the type, nature, and extent of the kennel or cattery to be operated and for which the Kennel/Cattery Permit application is made or the type, nature, and place of keeping of the animal for which the Wild Animal Permit application is being made;

2. The street address of the location of the kennel or cattery or place of keeping;

3. A copy of the plot map of the property where the kennel or cattery is to be located;

4. The number and description of the animals to be kept therein;

5. The name, street address, and business and home telephone numbers of the person who owns the kennel or cattery or wild animal for which permit application is made;

6. The name, street address, and business and home telephone numbers of the applicant;

7. A history of the animal including any information, record, or citation which indicates that the animal is or has been dangerous or vicious within the meaning of this Title or an affidavit affirming that the animal, if of a type capable of transmitting rabies, has no history of having attacked or bitten a human being; and

8. Such other and further information as is deemed necessary to administer the provisions of this chapter. (SCC 0815 § 2, 1990.)

8.26.035 Fees.

a. The fee for the issuance of a permit shall be due and payable by the owner within thirty (30) calendar days of the establishment of the kennel or cattery or the keeping of the wild animal within the County and thereafter on the same date each calendar year, the amount of which shall be established pursuant to Section 8.08.090 of this Title.

b. The fee for a permit becomes delinquent fourteen (14) calendar days after it becomes due and payable, and upon delinquency, an additional delinquent fee as established pursuant to Section 8.08.090 of this Title shall be added to the regular fee. (SCC 0815 § 2, 1990.)

8.26.040 Investigation.

The Chief of Animal Control shall conduct such investigation of the background of the owner and the applicant and the history and physical condition of the kennel or cattery or the keeping of wild animal, including physical inspection of the premises, as is deemed appropriate. The Chief of Animal Control shall evaluate each application to determine whether the operation of the kennel or cattery or the keeping of the wild animal will involve a risk to the health, safety, or welfare of the public or the animal to be kept. The Chief of Animal Control shall consider as evidence of disregard for the purposes of this chapter any revocation of prior permits or applicable General Business Licenses, or conviction on charges directly related to animal cruelty involving the applicant or owner. Such character evidence may be used as cause for denying the application for a permit. (SCC 0815 § 2, 1990.)

8.26.045 Public Notice.

Within fourteen (14) calendar days of receipt of an application for a permit, the Chief of Animal Control shall make public notice of said application by conspicuously posting such notice in the immediate vicinity of the location for which the permit is sought. Such notice shall give the name of the applicant, the address of the kennel or cattery or the place of keeping of the wild animal, and direction to interested parties that information applicable to the issuance of the permit should be made in writing and mailed to the Chief of Animal Control at the address of the Animal Control Center as indicated in the notice within fourteen (14) calendar days of the making of public notice. (SCC 0815 § 2, 1990.)

8.26.050 Issuance.

The Chief of Animal Control shall issue the permit within ninety (90) calendar days after the date of application unless either:

1. The Chief of Animal Control finds in writing that applicant fails to provide information requested with the application which is essential to making a determination;

2. The Chief of Animal Control finds in writing that any of the statements made in the application or supplementary information submitted are incorrect or untrue;

3. The Chief of Animal Control finds in writing an authorized basis for denial of the permit;

4. The Chief of Animal Control finds in writing that the applicant does not satisfy any requirement applicable to the permit; or

5. The Chief of Animal Control finds in writing that the applicant or enterprise does not conform to existing Federal, State, or local zoning codes, health and safety codes, business codes, or other laws, ordinances or requirements governing operation of such a kennel or cattery enterprise or the keeping of such wild animal. (SCC 0815 § 2, 1990.)

8.26.055 Conditions.

The Chief of Animal Control may issue a permit upon such conditions relating to the method or manner of operation of the kennel or cattery or the keeping of wild animal as he or she deems necessary to protect the health and safety of the public or the animals kept.

Any condition imposed pursuant to the provisions of this section, whether established at the time of issuance, at the time of renewal or during the term of a permit, shall be embodied, together with the reasons therefore, in a written notice which is served upon the applicant or holder. The condition shall become effective fourteen (14) calendar day following the date of service of the notice thereof; provided that in the event an appeal therefrom is filed within the time and in the manner prescribed, the condition shall not become effective until the appeal is finally determined. (SCC 0815 § 2, 1990.)

8.26.060 Contents of Permits.

The permit shall contain a complete description of the kennel or cattery or place of keeping authorized by the permit; the business name (if applicable), address, and telephone number of the location so permitted; the name, address, and business and home telephone numbers of the owner of the kennel or cattery or the keeper of the wild animal, the number of animals to be kept pursuant to the permit, and any conditions upon which the permit is issued. The Kennel/Cattery Permit or the Wild Animal Permit or a copy thereof shall be made available for inspection upon demand by any public or peace officer acting within the scope and course of his or her employment. (SCC 0815 § 2, 1990.)

8.26.065 Changes in Status.

During the term of any permit issued pursuant to this chapter, the holder of the permit shall immediately file, in writing with the Chief of Animal Control, notice of any changes in the kennel or cattery or the location of keeping of the animal which relate to changes in the information given in the application for the permit. The Chief of Animal Control shall issue an amended permit which shows any changes in the permit. (SCC 0815 § 2, 1990.)

8.26.070 Renewal of Permits.

Approximately forty-five (45) calendar days prior to the expiration of the term of a permit, the Chief of Animal Control shall transmit to the permit holder by mail an application for renewal. The application for renewal shall be on such a form and include such information as is required by the Chief of Animal Control and as is consistent with the information required in Section 8.26.030 of this chapter.

The application for renewal shall be subject to the same provisions and shall be processed in the same manner as is specified in Sections 8.26.025, 8.26.030 and 8.26.040 of this chapter, with the exception that the Chief of Animal Control shall act upon the application for renewal not later than thirty (30) calendar days after the date a valid application for renewal is filed.

The Chief of Animal Control shall extend the term of the immediately preceding permit during the period of any investigation or examination required to determine whether the permit should be renewed. (SCC 0815 § 2, 1990.)

8.26.075 Standards.

The Chief of Animal Control shall, with the approval of the Director, set minimum standards for the proper care and maintenance both of a kennel or cattery or a place of keeping of wild animals and of the animals kept therein which are, at a minimum, consistent with applicable State and Federal standards. A copy of such Standards shall be provided in writing to the applicant with each initial application for or application for renewal of permit.

The Chief of Animal Control shall notify each permit holder no less than ninety (90) calendar days in advance of any proposed change in the Standards and shall advise the permit holder that comments regarding any change may be submitted to the Director for review and consideration within thirty (30) calendar days of notification. No change in the Standards may be put in force without authorization of the Director given at least thirty (30) calendar days in advance of the proposed effective date of the change. No such standard or change shall become effective until filed with the Clerk of the Board of Supervisors. (SCC 0815 § 2, 1990.)

8.26.080 Compliance with Standards.

Each applicant or permit holder must demonstrate that the premises, facilities, cages, vivariums, aquariums and equipment addressed in the permit comply with the Standards on an ongoing basis. Upon request of the Chief of Animal Control, and during normal business hours or by a mutually agreed time for appointment, the applicant or permit holder must make the premises, facilities, cages, vivariums, aquariums and equipment available for inspection by the Chief of Animal Control.

All animals to be kept or kept pursuant to the permit shall be subject to visual inspection on the designated premises by the Chief of Animal Control. Failure to allow visual inspection as required shall be deemed failure to comply with the requirements of this chapter and shall be considered cause for denial of application or for revocation of the permit. (SCC 0815 § 2, 1990.)

8.26.085 Failure to Comply with Standards.

If the applicant or permit holder fails to meet the requirements set in the Standards, the Chief of Animal Control shall so notify the applicant or permit holder in writing within three (3) calendar days of discovery of the failure to comply with the Standards. The written notice shall advise the applicant or permit holder of any existing deficiency and the corrective measures that must be taken and completed to bring the premises, facilities, cages, vivariums, aquariums and equipment into compliance with the Standards.

The applicant or permit holder shall be given no more than thirty (30) calendar days and no less than fourteen (14) calendar days to complete the corrective measures, except that if any deficiency threatens the health or welfare of the animals kept or of the public, such corrective measures shall be made immediately or no later than one day after the discovery of the deficiency.

Failure to correct the noted deficiencies as required shall be deemed failure to comply with the Standards and shall be considered cause for denial of application or for revocation of the permit and may be considered cause for animal nuisance abatement. (SCC 0815 § 2, 1990.)

8.26.100 Grounds for Denial or Revocation.

The Chief of Animal Control may deny an initial application for or application for renewal of a permit or may revoke a permit during its term if written findings described by Section 8.26.050 or Section 8.26.085 of this Title are made. (SCC 0815 § 2, 1990.)

8.26.105 Method of Denial or Revocation.

A denial of an initial application for or application for renewal of a permit or revocation of an existing permit made by the Chief of Animal Control shall be in writing, with the reasons for denial or revocation stated. Written notice of the denial or revocation, together with a copy of the provisions of this chapter and the Standards and any other provisions of Title 8 which are applicable to the permit, shall be served either in person or by mail to the applicant or permit holder.

Denial of an initial application for or application for renewal of a permit or revocation of an existing permit shall prohibit operation of the kennel or cattery or keeping of the wild animal at any location within the unincorporated area of the County which is governed by this Title.

With respect to denial of an application for renewal of a permit or revocation of an existing permit, the immediately preceding permit shall be deemed to be in full force and effect for a period of fourteen (14) calendar days following the date of service upon the applicant or permit holder of the notice of denial or revocation. In the event the applicant files an appeal from the denial or revocation in the manner and within the time prescribed by Section 8.26.110, the immediately preceding permit shall continue in full force and effect during the pendency of the appeal, until the date of final decision by the appellate authority. (SCC 0815 § 2, 1990.)

8.26.110 Appeals.

The holder of a permit or applicant therefor may file an appeal from the following:

1. The denial of an initial application for or application for renewal of a permit pursuant to the provisions of Section 8.26.105 of this chapter;

2. The imposition of conditions at the time of issuance of an initial or renewed permit, pursuant to the provisions of Section 8.26.055 of this chapter; or

3. The revocation of an existing permit pursuant to the provisions of Section 8.26.105 of this chapter.

Any such appeal shall be in writing in the form of an affidavit, shall state the specific reasons therefor and grounds asserted for relief, shall be signed under penalty of perjury, and shall be filed with the Chief of Animal Control no later than fourteen (14) calendar days after the date of service of the notices prescribed by Sections 8.26.055 and 8.26.105 of this chapter, as may be applicable. If an appeal is not filed within the time or in the manner prescribed above, the right to review the denial, conditions, or revocation shall be deemed to have been waived.

Upon receipt of the appeal a hearing shall be set in accordance with the provisions of Chapter 8.36 of this Title. (SCC 0815 § 2, 1990.)

8.26.115 Effect of Revocation.

The revocation of a permit shall terminate the right of the holder of the permit to engage in the enterprise or activity authorized by the permit for a period specified in the order of the Hearing Officer.

In the event of revocation of a permit, no other person shall be entitled to any rights or interests under the revoked permit, nor shall any such person be entitled to issuance of a permit for the enterprise except upon

written application filed with the Chief of Animal Control in accordance with the provisions of this chapter. (SCC 0815 § 2, 1990.)

8.26.120 Removal of Animals.

Upon revocation of the permit the permit holder shall have fourteen (14) calendar days in which to remove from the County or otherwise dispose of the animal kept pursuant to the permit or to appeal the decision of the Hearing Officer. Should the owner fail to take such action, the Chief of Animal Control shall have the authority to seize the animal in a manner provided by law and dispose of it in accordance with the provisions of this Title. (SCC 0815 § 2, 1990.)

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RESTRICTED SPECIES LAWS AND REGULATIONS

IMPORTATION, TRANSPORTATION AND POSSESSION OF WILD ANIMALS – MANUAL 671

This document is designed to provide essential information about live restricted animals. It does not provide complete coverage of all restricted animal laws and regulations.

Although this document contains excerpts from the Fish and Game Code and Title 14, of the California Code of Regulations, it is the restricted species permittee's responsibility to know and obey all laws and regulations in effect while he/she is participating in restricted species activity. Changes to any code may occur at any time during the year.

Any discrepancies between this document and the code(s) from which it was prepared will be enforced and adjudicated according to the official code(s) in effect on the date the activity takes place.

Fish and Game Code Excerpts

§2116. Wild Animal
As used in this chapter, "wild animal" means any animal of the class Aves (birds), class Mammalia (mammals), class Amphibia (frogs, toads, salamanders), class Osteichtyes (bony fishes), class Monorhina (lampreys), class Reptilia (reptiles), class Crustacea (crayfish), or class Gastropoda (slugs, snails) which is not normally domesticated in this state as determined by the commission.

§2116.5. Findings and Declarations
The Legislature finds and declares that wild animals are being captured for importation and resale in California; that some populations of wild animals are being depleted; that many animals die in captivity or transit; that some keepers of wild animals lack sufficient knowledge or facilities for the proper care of wild animals; that some wild animals are a threat to the native wildlife or agricultural interests of this state; and that some wild animals are a threat to public health and safety. It is the intention of the Legislature that the importation, transportation, and possession of wild animals shall be regulated to protect the health and welfare of wild animals captured, imported, transported, or possessed, to reduce the depletion of wildlife populations, to protect the native wildlife and agricultural interest of this state against damage from the existence at large of certain wild animals, and to protect the public health and safety in this state.

§2117. Enforcing Officers
As used in this chapter, "enforcing officers" means the department, the state plant quarantine officers, the local law enforcement agents, the county sheriffs, and the county agricultural commissioners. These enforcing officers are authorized and empowered to enforce the provisions of this chapter or any regulation implementing this chapter.

§2118. Unlawful To Import, Etc. Specified Animals; Exceptions
It is unlawful to import, transport, possess, or release alive into this state, except under a revocable, nontransferable permit as provided in this chapter and the regulations pertaining thereto, any wild animal of the following species:

(a) Class Aves (birds):
Family Cuculidae (cuckoos) All Species.
Family Alaudidae (larks) Skylark, Alauda arvensis
Family Corvidae (crows, jays, magpies) All species.
Family Turdidae (thrushes) European blackbird, Turdus merula Missel (or mistle), thrush, Turdus viscivorus
Family Sturnidae (starlings and mynas or mynahs) All species of the family, except hill myna (or hill mynah), Gracula religiosa (sometimes referred to as Eulabes religiosa)
Family Ploceidae (weavers) The following species: Spanish sparrow, Passer hispaniolensis Italian sparrow, Passer italiae European tree sparrow, Passer montanus Cape sparrow, Passer capensis Madagascar weaver, Foudia madagascariensis Baya weaver, Ploceus baya Hawaiian rice bird, Munia nisoria Red-billed quelea, Quelea quelea Red-headed quelea, Quelea erythrops
Family Fringillidae (sparrows, finches, buntings) Yellowhammer, Emberiza citronella

(b) Class Mammalia (mammals):
Order Primates: All species except those in family Hominidae
Order Edentata (sloths, anteaters, armadillos, etc.): All species.
Order Marsupialia (marsupials or pouched mammals): All species.
Order Insectivora (shrews, moles, hedgehogs, etc.): All species.

Order Dermoptera (gliding lemurs): All species.
Order Chiroptera (bats): All species.
Order Monotremata (spiny anteaters, platypuses): All species.
Order Pholidota (pangolins, scaly anteaters): All species.
Order Lagomorpha (pikas, rabbits, hares): All species, except domesticated races of rabbits.
Order Rodentia (rodents): All species, except domesticated golden hamsters, also known as Syrian hamster, Mesocricetus auratus; domesticated races of rats or mice (white or albino; trained, dancing or spinning, laboratory-reared); and domestic strains of guinea pig (Cavia porcellus).
Order Carnivora (carnivores): All species, except domestic dogs (Canis familiaris) and domestic cats (Felis catus).
Order Tubulidentata (aardvarks): All species.
Order Proboscidea (elephants): All species.
Order Hyracoidea (hyraxes): All species.
Order Sirenia (dugongs, manatees): All species.
Order Perissodactyla (horses, zebras, tapirs, rhinoceroses, etc.): All species except those of the family Equidae.
Order Artiodactyla (swine, peccaries, camels, deer, elk, except elk (genus Cervus) which are subject to Section 2118.2, moose, antelopes, cattle, goats, sheep, etc.): All species except: domestic swine of the family Suidae; American bison, and domestic cattle, sheep and goats of the family Bovidae; races of big-horned sheep (Ovis canadensis) now or formerly indigenous to this state.
Mammals of the orders Primates, Edentata, Dermoptera, Monotremata, Pholidota, Tubulidentata, Proboscidea, Perissodactyla, Hyracoidea, Sirenia and Carnivora are restricted for the welfare of the animals, except animals of the families Viverridae and Mustelidae in the order Carnivora are restricted because such animals are undesirable and a menace to native wildlife, the agricultural interests of the state, or to the public health or safety.

(c) **Class Amphibia (frogs, toads, salamanders):**
Family Bufonidae (toads): Giant toad or marine toad, Bufo marinus

(d) **Class Monorhina (lampreys): All species.**

(e) **Class Osteichthyes (bony fishes):**
Family Serranidae (bass): White perch, Morone or Roccus Americana
Family Clupeidae (herring): Gizzard shad, Dorosoma cepedianum
Family Sciaenidae (croakers): Freshwater sheepshead, Aplodinotus grunniens
Family Characidae (characins): Banded tetra, Astyanax fasciatus, All species of piranhas
Family Lepisosteidae (gars): All species.
Family Amiidae (bowfins): All species.

(f) **Class Reptilia (snakes, lizards, turtles, alligators):**
Family Crocodilidae: All species.

(g) **Class Crustacea (crustaceans):**
Genus Cambarus (crayfishes): All species.
Genus Astacus (crayfishes): All species.
Genus Astacopsis (crayfishes): All species.

(h) **Class Gastropoda (slugs, snails, clams): All species of slugs. All species of land snails.**

(i) **Other classes, orders, families, genera, and species of wild animals which may be designated by the commission in cooperation with the Department of Food and Agriculture, when the class, order, family, genus, or species is proven to be undesirable and a menace to native wildlife or the agricultural interests of the state, or to provide for the welfare of wild animals.**

(j) **Except as expressly authorized in this code, any live nonindigenous Atlantic salmon or the roe thereof into the Smith River watershed.**

(k) **Classes, families, genera, and species in addition to those listed in this section may be added to or deleted from the above lists from time to time by commission regulations in cooperation with the Department of Food and Agriculture.**

§2118.2. Unlawful To Import Elk - Exceptions
Except as provided in Section 1007, it is unlawful to import any elk (genus Cervus) into this state. The department may import elk pursuant to Section 1007, if prior to such importation, the department issues written findings justifying the need for and explaining the purpose of the importation.
This section shall not apply to zoos certified by the United States Department of Agriculture.

§2118.3. Elk Horn or Antler – Removal for Commercial Purposes Unlawful
No part of any elk horn or antler shall be removed from any live elk for commercial purposes.

§2118.4. Seizure of Imported Elk
The department shall seize any elk imported in violation of Section 2118.2.

§2118.5. Designation of Wild Animal Possession
The commission may designate wild animals which may be possessed without a permit.

§2119. Restricted Animals – Publication of List
The Department of Fish and Wildlife shall publish from time to time as changes arise, a list of animals which may not be imported or transported into this State.

§2120. Regulations Governing Wild Animals
(a) The commission, in cooperation with the Department of Food and Agriculture, shall adopt regulations governing both (1) the entry, importation, possession, transportation, keeping, confinement, or release of any and all wild animals that will be or that have been imported into this state pursuant to this chapter, and (2) the possession of all other wild animals. The regulations shall be designed to prevent damage to the native wildlife or agricultural interests of this state resulting from the existence at large of these wild animals, and to provide for the welfare of wild animals and the safety of the public.
(b) The regulations shall also include criteria for all of the following:
(1) The receiving, processing, and issuing of a permit and conducting inspections.
(2) Contracting out inspection activities.
(3) Responding to public reports and complaints.
(4) The notification of the revocation, termination, or denial of permits, and related appeals. The method by which the department determines that the breeding of wild animals pursuant to a single event breeding permit for exhibitor or a breeding permit is necessary and will not result in unneeded or uncared for animals, and the means by which the criteria will be implemented and enforced.
(5) How a responding agency will respond to an escape of a wild animal.
(6) This shall include, but not be limited to, the establishment of guidelines for the safe recapture of the wild animal and procedures outlining when lethal force would be used to recapture the wild animal.
(c) These regulations shall be developed and adopted by the commission on or before January 1, 2007.

§2121. Escape or Release of Wild Animals
No person having possession or control over any wild animal under this chapter shall intentionally free, or knowingly permit the escape, or release of such an animal, except in accordance with the regulations of the commission.

§2122. Regulations for Guidance of Enforcement Officers
The commission shall promulgate regulations in cooperation with the State Department of Food and Agriculture for the guidance of enforcing officers. Such regulations shall include a list of the wild animals for which permits that may be issued under this chapter will be refused, and the disposition of such wild animals illegally imported into this state.

§2123. Materials Describing and Illustrating Wild Animals
The department in cooperation with the State Department of Food and Agriculture shall furnish descriptive and illustrative material concerning the wild animals enumerated in or designated pursuant to Section 2118, as well as explanatory material setting forth the reasons for designating such animals as undesirable and a menace to native wildlife or to the agricultural interests of this state for the information and guidance of the enforcing officers.

§2124. Handling Mammals; Exceptions and Restrictions
(a) Except as otherwise authorized by this code or regulations adopted pursuant thereto, including, but not limited to, those provisions that authorize raising deer to produce venison for market it is unlawful for any person to possess, transport, import, export, propagate, purchase, sell, or transfer any live mammal listed under Section 2118 for the purposes of maiming, injuring, or killing the mammal for gain, amusement, or sport. Except as otherwise authorized by this code or regulations adopted pursuant thereto, the buyer of a live mammal listed in Section 2118 shall not resell the live mammal to another buyer who has the intent to maim, injure, or kill that mammal for purposes of gain, amusement, or sport.
(b) This section does not apply to the meat, hide, or parts of a dead mammal.

§2125. Violation of Article 1; Penalties
(a) In addition to any other penalty provided by law, any person who violates this chapter or any regulations implementing this chapter, is subject to a civil penalty of not less than five hundred dollars ($500) nor more than ten thousand dollars ($10,000) for each violation. Except as otherwise provided, any violation of this chapter or of any regulations implementing this chapter is a misdemeanor punishable by imprisonment in the county jail for not more than six months, or by a fine of not more than one thousand dollars ($1,000).
(b) The Attorney General, or the city attorney of the city or the district attorney or county counsel of the county in which a violation of this article occurs, may bring a civil action to recover the civil penalty in subdivision (a) and the costs of seizing and holding the animal listed in Section 2118, except to the extent that those costs have already been collected as provided by subdivision (d). The civil action shall be brought in the county in which the violation occurs and any penalty imposed shall be transferred to the Controller for deposit in the Fish and Wildlife Preservation Fund in accordance with Section 13001.
(c) In an action brought under this section, in addition to the penalty specified in subdivision (a), the reasonable costs of investigation, reasonable attorney's fees, and reasonable expert witness' fees may also be recovered and those

amounts shall be credited to the same operating funds as that from which the expenditures for those purposes were derived.

(d)

(1) If an animal is confiscated because the animal was kept in contravention of this chapter or any implementing regulations, the person claiming the animal shall pay to the department or the new custodian of the animal an amount sufficient to cover all reasonable expenses expected to be incurred in caring for and providing for the animal for at least 30 days, including, but not limited to, the estimated cost of food, medical care, and housing.

(2) If the person claiming the animal fails to comply with the terms of his or her permit and to regain possession of the animal by the expiration of the first 30-day period, the department may euthanize or place the animal with an appropriate wild animal facility at the end of the 30 days, unless the person claiming the animal pays all reasonable costs of caring for the animal for a second 30-day period before the expiration of the first 30-day period. If the permittee is still not in compliance with the terms of the permit at the end of the second 30-day period, the department may euthanize the animal or place the animal in an appropriate wild animal facility.

(3) The amount of the payments described in paragraphs (1) and (2) of this subdivision shall be determined by the department, and shall be based on the current reasonable costs to feed, provide medical care for, and house the animal. If the person claiming the animal complies with the terms of his or her permit and regains possession of the animal, any unused portion of the payments required pursuant to paragraphs (1) and (2) of this subdivision shall be returned to the person claiming the animal no later than 90 days after the date on which the person regains possession of the animal.

§2126. Unauthorized Taking of Mammals

(a) Except as otherwise authorized by this code or regulations made pursuant thereto, it is unlawful for any person to take any mammal as identified by Section 2118.

(b) This section does not prohibit the euthanasia of a mammal as appropriately directed by a licensed veterinarian or animal health technician.

§2127. Eligible Local Entities

(a) The department may reimburse eligible local entities, pursuant to a memorandum of understanding entered into pursuant to this section, for costs incurred by the eligible local entities in the administration and enforcement of any provision concerning the possession of, handling of, care for, or holding facilities provided for, a wild animal designated pursuant to Section 2118.

(b) The department may enter into memorandums of understanding with eligible local entities for the administration and enforcement of any provision concerning the possession of, handling of, care for, or holding facilities provided for, a wild animal designated pursuant to Section 2118.

(c) The commission shall adopt regulations that establish specific criteria an eligible local entity shall meet in order to qualify as an eligible local entity.

(d) For the purposes of this division, "eligible local entity" means a county, local animal control officer, local humane society official, educational institution, or trained private individual that enters into a memorandum of understanding with the department pursuant to this section.

§2150. Wild Animals; Permit to Import, Possess, or Transport; Fees; Applications; Exemptions, Etc.

(a) The commission or the department shall deny a permit and the commission shall revoke a permit if it finds that a permittee or applicant has failed to meet, or is unable to meet, the requirements for importing, transporting, possessing, or confining any wild animal as established pursuant to Section 2120.

(1) The department, in cooperation with the Department of Food and Agriculture, may, upon application, issue a written permit to import into, possess, or transport within this state any wild animal enumerated in, or designated pursuant to, Section 671 of Title 14 of the California Code of Regulations, upon a determination that the animal is not detrimental or that no damage or detriment can be caused to agriculture, native wildlife, the public health or safety, or the welfare of the animal, as a result of the importation, transportation, or possession.

(2) A permit may be issued to any person only upon application and payment of a nonrefundable application fee in an amount determined by the department pursuant to Section 2150.2. Application forms shall be provided by the department and shall be designed to ascertain the applicant's ability to properly care for the wild animal or animals the applicant seeks to import, transport, or possess. Proper care includes providing adequate food, shelter, and veterinary care, and other requirements the commission may designate.

(b) A zoo is exempt from any permit requirement pursuant to this chapter except for animals whose importation, transportation, or possession is determined by the department, in cooperation with the Department of Food and Agriculture, to be detrimental or cause damage to agriculture, native wildlife, or the public health or safety. For purposes of this section, "zoo" means any organization which is accredited as meeting the standards and requirements of the American Zoo and Aquarium Association (AZA). Any California organization which is not accredited by the AZA may apply to the department for a waiver of specified permit requirements of this chapter. The department may grant or deny the request for a waiver for justified reasons. Foreign zoos outside this state are not subject to the permit requirements of this chapter beyond those specific permit requirements affecting California zoos or organizations with which they are collaborating. Any organization may appeal the determination of the department to the commission.

(c) An exhibitor licensed by the United States Department of Agriculture or a dealer who is so licensed who buys any animal specified in subdivision (c) from a zoo within the state, may sell or transfer it only to a private individual who has a permit issued pursuant to this section prior to the receipt of the animal or to a public or private organization that has a permit issued pursuant to this section prior to the receipt of the animal. The exhibitor or dealer who sells or transfers that animal shall pay a fee pursuant to Section 2150.2 to the department.

(d) Any university, college, governmental research agency, or other bona fide scientific institution, as defined in regulations adopted by the commission, engaging in scientific or public health research is exempt from any permit requirement pursuant to this chapter except for animals whose importation, transportation, or possession is determined by the department, in cooperation with the Department of Food and Agriculture, to be detrimental or cause damage to agriculture, native wildlife, or the public health or safety.

(e) Notwithstanding the provisions of this section, every zoo, university, college, governmental research agency, or other bona fide scientific institution shall comply with the requirements of subdivision (a) of Section 2193 for all animals the zoo, university, college, governmental research agency, or other bona fide scientific institution possesses that are enumerated in, or designated pursuant to, Section 671 of Title 14 of the California Code of Regulations.

§2150.1. Fees Collected; Application and Accounting

Fees collected pursuant to this chapter for permits, permit applications, and facility inspections shall be deposited in the Fish and Wildlife Preservation Fund. The department shall annually identify the amount collected for each type of permit, permit application, or inspection for which a fee is collected.

§2150.2. Establishment of Fees

The department shall establish fees for permits, permit applications, and facility inspections in amounts sufficient to cover the costs of administering, implementing, and enforcing this chapter.

§2150.3. Committee on Care and Treatment of Wild Animals

(a) The director shall appoint a committee to advise the director on the humane care and treatment of wild animals.

(b) The committee shall make recommendations to the director for the establishment of standards of performance for administration and enforcement, which shall include, but are not limited to, requiring that the eligible local entity possess a knowledge of humane wild animal training methods.

(c) The committee shall make recommendations to the director as to the frequency of inspections necessary for the enforcement and administration of any provision concerning the possession of, handling of, care for, or holding facilities provided for, a wild animal designated pursuant to Section 2118.

(d) The committee shall advise and assist the director in entering into memorandums of understanding with eligible local entities and in determining whether the memorandums of understanding meet the requirements of this chapter.

§2150.4. Inspection of Wild Animal Facilities

(a) The department or an eligible local entity shall inspect the wild animal facilities, as determined by the director's advisory committee, of each person holding a permit issued pursuant to Section 2150 authorizing the possession of a wild animal.

(b) In addition to the inspections specified in subdivision (a), the department or an eligible local entity, pursuant to the regulations of the commission, may inspect the facilities and care provided for the wild animal of any person holding a permit issued pursuant to Section 2150 for the purpose of determining whether the animal is being cared for in accordance with all applicable statutes and regulations. The department shall collect an inspection fee, in an amount determined by the department pursuant to Section 2150.2.

(c) No later than January 1, 2009, the department, in cooperation with the committee created pursuant to Section 2150.3, shall develop, implement, and enter into memorandums of understanding with eligible local entities if the department elects not to inspect every wild animal facility pursuant to subdivisions (a) and (b). Eligible local entities shall meet the criteria established in regulations adopted pursuant to subdivision (b) of Section 2157.

§2150.5. Wild Animals Acquired or Possessed Prior to Effective Date of this Section; Restrictions on Animal Transfers

Classes, orders, families, genera, and species which may not be imported, transported, possessed, or released alive in this state solely because of concern for the welfare of the animal may be possessed under permit when the owner can demonstrate that such animal was legally acquired and possessed in California before the effective date of this section. The department may require the owner of an animal which may be possessed under this section to mark or otherwise identify such animal and progeny, so as not to endanger the welfare of that animal, to the satisfaction of the department. The owner shall not transfer such animal or progeny to any other person without prior approval of the department.

§2151. Permit to Import or Transport; Required Contents

A permit shall be issued only upon written application from the person desiring to import or transport the species, enumerating all of the following:

(a) The approximate number and true scientific name of each species of wild animal for which a permit is requested.

(b) The carrier and probable point of first arrival in this State of each shipment of such species.

(c) The purpose for which they are to be imported or transported.

(d) The name and address of the consignee.
(e) The name and address of the consignor.

§2152. Additional Permit Information
Each permit issued shall set forth all of the following:
(a) The number and true scientific name of the species of wild animal for which the permit is granted.
(b) A statement of the manner and conditions under which the entry of such species is permitted.
(c) A statement of the conditions under which the species shall be kept after importation or during transportation.

§2153. Copies; Where to Send
Whenever any permit is issued under the provisions of this article, one copy shall be sent by the department to the State Department of Food and Agriculture, one copy to the county agricultural commissioner or to the state plant quarantine officer having jurisdiction at the place designated in the application as the probable point of first arrival in the state of such species, and one copy shall accompany each shipment of wild animals involved.

§2155. Offspring of Wild Animals; Application of Chapter
The provisions of this chapter and regulations adopted pursuant thereto shall apply to the progeny of any wild animal imported or possessed under such laws and regulations, except that no permit shall be required for the possession of progeny if a permit has already been obtained by the owner for the parent, and the progeny are kept at the same site.

§2156. City and County Ordinances for Possession or Care
Neither the provisions of this chapter nor the regulations of the commission shall prevent any city or county from enacting ordinances relating to the possession or care of wild animals provided such ordinances are more restrictive.

§2157. Unique Identification of Mammals
(a) Every person holding a permit issued pursuant to Section 2150 shall uniquely identify each wild mammal that poses a risk to the health and safety of the public and report this identification to the department to maintain in a registry.
(b) The commission shall adopt regulations that address the following:
  (1) Identify the mammals that pose a risk to the health and safety of the public and are subject to subdivision (a). This identification shall include the following species of mammals: wild cats, elephants, nonhuman primates, bears, and wolves.
  (4) Acceptable forms of identification.
  (5) How and when a permittee must notify the department of the unique identifier required in subdivision (a).
(c) The department shall establish a registry listing the permit number, type, expiration date, the name and address of the permittee, and an inventory of each mammal and to the identification assigned or affixed to the mammal pursuant to subdivision (a) that is covered by the permit.
(d) These regulations shall be developed and adopted by the commission, on or before January 1, 2007.

§2185. Confinement for Inspection and Notification of Arrival
(a) Any person who transports, receives, or imports into the State, or transports within the State, any live wild animal enumerated in or designated pursuant to Section 2118, shall hold said animal in confinement for inspection and immediately notify the nearest enforcing officer of the arrival thereof. If there is found in any shipment any species not specified in the permit issued under this chapter, or more than the number of any species specified, said animals shall be refused admittance as provided in Section 2188 of this chapter.
(b) Notwithstanding Section 2117, for the purposes of this section, "enforcing officer" means the enforcement personnel of the department, the state plant quarantine officers, and county agricultural commissioners.

§2186. Diseased Animal; Actions
(a) If during inspection upon arrival any wild animal is found to be diseased, or there is reason to suspect the presence of disease, or there is reason to suspect the presence of disease that is or may be detrimental to agriculture, to native wildlife, or to the public health or safety, the diseased animal, and if necessary, the entire shipment shall be destroyed by, or under the supervision of, the enforcing officer, unless no detriment can be caused by its detention in quarantine for a time and under conditions satisfactory to the enforcing officer for disinfection, treatment, or diagnosis, or no detriment can be caused by its return to its point of origin at the option and expense of the owner or possessor.
(b) Notwithstanding Section 2117, for the purposes of this section, "enforcing officer" means the enforcement personnel of the department, the state plant quarantine officers, and county agricultural commissioners.

§2187. Examination of Conditions Kept; Report of Disease; Transfer or Destruction
(a) Whenever any wild animal is brought into this state under permit, as provided in this chapter, the enforcing officers may, from time to time, examine the conditions under which that species is kept, and report to the department any suspicion or knowledge of any disease or violations of the conditions of the permit or of the regulations promulgated under this chapter. The enforcing officer may order the transfer of the animal to new owners or the correction of the conditions under which the species is being kept if not in conformance with the terms of the permit, at the expense of

the owner or possessor. If neither transfer or improvement of conditions is accomplished, the officer may order destruction of the animal.

(b) Notwithstanding Section 2117, for the purposes of this section, "enforcing officer" means the enforcement personnel of the department, the state plant quarantine officers, and county agricultural commissioners.

§2189. Importation of Nonnative Wild Animals; Regulations

(a) As used in this section "nonnative wild animal" means any nonnative animal species, or hybrid thereof, that is not normally domesticated pursuant to this code or regulations adopted pursuant thereto and that is not designated as a furbearing, game, nongame, threatened, or endangered animal.

(b) No person shall import into this state any live nonnative wild animal except pursuant to this chapter or regulations adopted pursuant thereto.

(c) Any live nonnative wild animal that is possessed or transported within this state in violation of this chapter or regulations adopted pursuant thereto shall be disposed of in accordance with regulations adopted pursuant to Section 2122, at the expense of the owner or possessor. The owner or possessor shall pay the costs associated with the seizure, care, holding, transfer, and destruction of the animal.

(d) Any live, nonnative wild animal found at large within this state shall be either summarily destroyed or, if captured, shall be confined for not less than 72 hours following notification of the local humane society. Any local, state, or federal governmental agency that has public safety responsibilities is authorized to implement this subdivision.

(e) If, during the 72-hour holding period, any person claims ownership of the animal, that person shall only be allowed to dispose of the animal pursuant to subdivision (c).

(f) After the 72-hour holding period, if the animal is unclaimed, it shall be disposed of in accordance with regulations adopted pursuant to Section 2122 unless the animal is listed as a threatened or endangered species by either state or federal regulation. Notwithstanding subdivision (c), if the animal is listed as a threatened or endangered species in either regulation, the department shall be notified of the animal's location and the department shall be responsible for proper disposition.

§2190. Liberate, Ship, or Transport; Permit Required

It is unlawful for any person who keeps in confinement, with or without a permit, any wild animal of a species enumerated in or designated pursuant to Section 2118, to liberate, ship, or transport the animal except in accordance with the conditions of a permit first obtained from the department.

§2192. Caging Standards

Notwithstanding Part 2.5 (commencing with Section 18900) of Division 13 of the Health and Safety Code, Section 11356 of the Government Code, or any other provision of law, regulations of the commission relating to the construction, fixtures, and other minimum caging standards adopted by the commission for the confinement of live wild animals pursuant to this chapter are not building standards subject to the approval of the State Building Standards Commission.

§2193. Reporting an Escape or Release

(a) Every person who holds a permit issued pursuant to Section 2150 shall immediately report by telephone the intentional or unintentional escape or release of the wild animal, to the department and the nearest enforcing officer of the city or county in which the wild animal was released or escaped. The permit holder shall be liable for all expenses associated with efforts to recapture the wild animal. For the purposes of this subdivision, the exhibition of a wild animal on a movie set, film set, television set, still photography set, or any other professional activity allowable under a permit issued pursuant to Section 2150, does not constitute an intentional or unintentional escape or release of the wild animal unless the person exhibiting the wild animal has lost control of the wild animal.

(b) The commission shall promulgate regulations establishing the criteria for permit holders to notify the department prior to taking possession of or transferring an animal and upon the death of an animal.

(c) These regulations shall be developed and adopted by the commission on or before January 1, 2007.

§2195. Recovering Costs

When a wild animal enumerated in, or designated pursuant to, Section 671 of Title 14 of the California Code of Regulations is properly confiscated by the department, the new custodian with whom the animal is placed by the department may bring a civil action to recover the reasonable costs incurred by the custodian for any necessary relocation of the animal to a new facility, any actual and necessary costs to construct new caging to house the animal, and any actual and necessary costs to return the animal to a healthy state, to the extent that the department or new custodian has not already collected the costs pursuant to paragraphs (1) and (2) of subdivision (d) of Section 2125. The prior owner or possessor from whom the animal was confiscated shall be liable for these costs only if the conditions that led to the animal's confiscation were the result of acts or omissions of the prior owner or possessor.

§671. Importation, Transportation and Possession of Live Restricted Animals.

(a) It shall be unlawful to import, transport, or possess live animals restricted in subsection (c) below except under permit issued by the department. Permits may be issued by the department as specified herein and for purposes designated in Section 671.1 subject to the conditions and restrictions designated by the department. Except for mammals listed in Fish and Game Code Section 3950 or live aquatic animals requiring a permit pursuant to Fish and Game Code Section 2271, no permit is required by this section for any animal being imported, transported, or possessed pursuant to any other permit issued by the department. Cities and counties may also prohibit possession or require a permit for these and other species not requiring a state permit.

(b) The commission has determined the below listed animals are not normally domesticated in this state. Mammals listed to prevent the depletion of wild populations and to provide for animal welfare are termed "welfare animals", and are designated by the letter "W". Those species listed because they pose a threat to native wildlife, the agriculture interests of the state or to public health or safety are termed "detrimental animals" and are designated by the letter "D". The department shall include the list of welfare and detrimental wild animals as part of CDFW MANUAL NO. 671 (2/25/92) IMPORTATION, TRANSPORTATION AND POSSESSION OF RESTRICTED SPECIES, to be made available to all permittees and other interested individuals.

(c) Restricted species include:

(1) Class Aves -Birds

(A) Family Alaudidae -Larks: Alauda arvensis (Skylark) (D).
(B) Family Cuculidae -Cuckoos: All species (D).
(C) Family Corvidae -Crows, Ravens, Rooks, Jackdaws: All species (D).
(D) Family Turdidae -Thrushes, Blackbirds, Fieldfare
1. Turdus merula (European blackbird) (D).
2. Turdus viscivorus (Missel thrush) (D).
3. Turdus pilaris (Fieldfare) (D).
4. Turdus musicus (Song thrush) (D).
(E) Family Sturnidae -Starlings, Mynahs: All species (D), except Sturnus vulgaris (Starling), Gracula religiosa or Eulabes religiosa (Hill mynahs), and Leucopsar rothschildi (Rothchild's mynah) are not restricted.
(F) Family Ploceidae -Sparrows, Weavers, Queleas
1. Genus Passer (Sparrow): All species (D), except Passer domesticus (English house sparrow) is not restricted.
2. Foudia madagascariensis (Madagascar weaver) (D).
3. Ploceus baya (Baya weaver) (D).
4. Genus Quelea (Queleas) -All species (D).
(G) Family Estrildidae -Waxbills, Munias, Ricebirds
1. Padda oryzivora (Java sparrow) (D).
(H) Family Emberizidae -Yellowhammer: Emberiza citrinella (Yellowhammer) (D).
(I) Order Falconiformes -Falcons, Eagles, Hawks, Vultures: All species (D).
(J) Order Strigiformes -Owls: All species (D).
(K) Family Pyconotidae -Bulbuls or Fruit Thrushes: Pycnonotus jocosus (Red-whiskered bulbul) (D).
(L) Family Zosteropidae -Whiteeyes: Genus Zosterops (Whiteeyes) (D).
(M) Family Psittacidae -Parrots, Parakeets: Myiopsitta monachus (Monk or Quaker parakeet) (D).
(N) Family Anatidae - Duck, Geese, Swans
1. Cygnus olor (Mute Swan) (D).

(6) Class Mammalia -Mammals

(A) Order Primates -Monkeys, Apes: All species (W), except humans in the Family Hominidae are not restricted.
(B) Order Xenarthra - Sloths, Anteaters, Armadillos, etc.: All species:
1. Family Dasypodidae -Armadillos -All Species (D).
2. Family Bradypodidae -Sloths -(W).
3. Family Myrmecophagidae -Anteaters -(W).
(C) Order Marsupialia -Marsupials or Pouched Animals: All species (W).
(D) Order Insectivora -Shrews, Moles, Hedgehogs, etc.: All species (D).
(E) Order Dermoptera -Gliding Lemurs: All species (D).
(F) Order Chiroptera -Bats:All species (D).
(G) Order Monotremata -Spiny Anteaters, Platypuses: All Species (W).
(H) Order Pholidota -Pangolins or Scaly Anteaters: All species (W).
(I) Order Lagomorpha -Pikas, Rabbits, and Hares: All species, (D), except domesticated races of rabbits and hares of the Family Leporidae are not restricted.
(J) Order Rodentia -Hamsters, Field Mice, Voles, Muskrats, Gerbils, Squirrels, Chipmunks, Woodchucks, and Prairie Dogs:
1. All species (D), except:

a. Ondatra zibethica (Muskrats) are not restricted under conditions set forth in Fish and Game Code Section 2250;
b. Domesticated races of golden hamsters of the species Mesocricetus auratus and domesticated races of dwarf hamsters of the Genus Phodopus are not restricted;
c. Domesticated races of rats or mice (white or albino; trained, dancing or spinning, laboratory-reared) are not restricted;
d. Domesticated races of guinea pigs of the species Cavia porcellus are not restricted; and e. Domesticated races of chinchillas of the species Chinchilla laniger are not restricted.

(K) Order Carnivora -Raccoons, Ringtailed Cats, Kinkajous, Coatis, Cacomistles, Weasels, Ferrets, Skunks, Polecats, Stoats, Mongoose, Civets, Wolves, Foxes, Coyotes, Lions, Tigers, Ocelots, Bobcats, Servals, Leopards, Jaguars, Cheetahs, Bears, etc.:
1. Family Felidae -All species (W) except:
   a. Acinonyx jubatus (cheetahs) -(D).
   b. Domestic cats and hybrids of domestic cats are not restricted.
2. Family Canidae -All species (W).
   a. Wolf hybrids Canis familiaris (domestic dog) x Canis lupus (wolf) are considered F1 generation wolf hybrids and are restricted (W).
      (i) No state permit is required to possess the progeny of F1 generation wolf hybrids, but cities and counties may prohibit possession or require a permit.
   b. Domesticated dogs are not restricted.
3. Family Viverridae -All species (D).
4. Family Procyonidae -All species -(D), except:
   a. Ailuris fulgens (Lesser panda) -(W).
   b. Aiuropoda melanoleuca (Giant panda) -(W).
   c. Bassariscus astutus (Ringtail or Ringtailed cat) -(W).
   d. Jentinkia sumichrasti (Mexican and Central American cacomistle) -(W).
5. Family Mustelidae -All species (D), except:
   a. Ambloynx cinerea (Oriental small-clawed otter) -(W). b.
   Aonyx capensis (African clawless otter) -(W).
   c. Pteronura brasiliensis (Giant otter) -(W). d.
   Genus Lutra (River otters) -(W).
6. All other Families -(W).

(L) Order Tubulidentata -Aardvarks: All species -(W). (M)
Order Proboscidae -Elephants: All species -(W). (N) Order
Hyracoidae -Hyraxes: All species -(W).

(O) Order Sirenia -Dugongs, Manatees: All species -(W).

(P) Order Perissodactyla -Horses, Zebras, Tapirs, Rhinoceroses, etc.: All species (W), except Family Equidae are not restricted.

(Q) Order Artiodactyla -Swine, Peccaries, Camels, Deer, Elk, Moose, Antelopes, Cattle, Goats, Sheep, etc.: All species (D) except:
1. Bos taurus and Bos indicus (Domestic cattle); Bos grunniens (Yak); Bubalus bulalis (Asian water buffalo); Ovis aries (Domestic sheep); Capra hircus (Domestic goat); Sus scrofa domestica (Domestic swine); Llama glama (Llama); Llama pacos (Alpaca); Llama guanicoe (Guanaco); Hybrids of llama, alpaca and guanacos; Camelus bactrianus and Camelus dromedarius (Camels); and Bison bison (American bison), are not restricted.
2. Permits may be issued for species of Elk (Genus Cervus) which are already maintained within California; and
3. Permits may be issued pursuant to Section 676 for importing, breeding, slaughter and sale of the meat and other parts of fallow deer (Dama dama) for commercial purposes.

(7) Class Amphibia -Frogs, Toads, Salamanders

(A) Family Bufonidae -Toads: Bufo marinus, Bufo paracnemis, Bufo horribilis (Giant toad or marine toad group) and all other large toads from Mexico and Central and South America-(D).

(B) Family Pipidae -Tongueless Toads:
1. Genus Xenopus (Clawed frog)-(D). (C)

Family Ambystomatidae-Mole Salamanders:
1. Genus Ambystoma (tiger salamanders) (D). (D)

Family Leptodactylidae -Neotropical Frogs:
1. Eleutherodactylus coqui -Commom Coqui or Coqui frog (D).

(8) Class Agnatha -Jawless Fishes

(A) Family Petromyzontidae -Lampreys: All nonnative species (D).

(9) Class Osteichthyes -Bony Fishes

(A) Family Percichthyidae -Temperate Basses:
1. Morone americana (White perch) (D).
2. Morone chrysops (White bass) (D).

(B) Family Clupeidae -Herrings: Dorosoma cepedianum (Gizzard shad) (D). (C)
Family Sciaenidae -Drums: Aplodinotus grunniens (freshwater drum) (D). (D)
Family Characidae -Characins:

1. Astyanax fasciatus (Banded tetra) (D).
2. All species of the genera Serrasalmus, Serrasalmo, Pygocentrus, Taddyella, Rooseveltiella, and Pygopristis (Piranhas) (D).
3. Hoplias malabaricus (Tiger fish) (D).

(E) Family Salmonidae -Trouts: Salmo salar (Atlantic salmon) -Restricted in the Smith River watershed (D). (F)
Family Lepisosteidae -Gars: All species (D).
(G) Family Amiidae -Bowfins: All species (D).
(H) Family Poeciliidae -Livebearers: Belonesox belizanus (Pike killifish) (D). (I)
Family Channidae -Snakeheads: All species (D).
(J) Family Cyprinidae -Carps and Minnows:

1. Leuciscus idus (ide) (D).
2. Ctenopharyngodon idella (Grass carp) (D), except that permits may be issued to a person, organization or agency for possession of triploid grass carp, under conditions set forth in Section 238.6.
3. Hypophthalmichthys molitrix (Silver carp) (D).
4. Aristichthys nobilis (Bighead carp) (D).
5. Hypophthalmichthys harmandi (Largescale Silver carp) (D).
6. Mylopharyngodon piceus (Black carp) (D).

(K) Family Trichomycteridae (Pygidiidae) -Parasitic Catfishes: All species (D). (L)
Family Cetopsidae -Whalelike Catfishes: All species (D).
(M) Family Clariidae -Labyrinth Catfishes: All species of the genera Clarias, Dinotopterus, and Heterobranchus(D). (N)
Family Heteropneustidae (Saccobranchidae) -Airsac Catfishes: All species (D).
(O) Family Cichlidae -Cichlids:

1. Tilapia sparrmani (Banded Tilapia) (D).
2. Tilapia zillii (Redbelly tilapia) (D), except permits may be issued to a person or agency for importation, transportation, or possession in the counties of San Bernardino, Los Angeles, Orange, Riverside, San Diego, and Imperial.
3. Oreochromis aureus (Blue tilapia) (D).
4. Oreochromis niloticus (Nile tilapia) (D).

(P) Family Anguillidae -Freshwater Eels: All species of genus Anguilla (D). (Q)
Family Esocidae -Pikes: All species (D).
(R) Family Percidae -Perches:

1. Perca flavescens (Yellow perch) (D).
2. Sander vitreus (Walleye) (D).

(S) Family Catostomidae -Suckers: All members of the genus Ictiobus (Buffaloes) (D).
(T) Family Cyprinodontidae-Killifishes: Cyprinodon variegatus (Sheepshead minnow) (D).
(U) Family Latidea -Lates perches: Lates calcarifer (Barramundi also know as Barramundi perch or Silver barramundi) (D), except permits may be issued to a person or organization for importation, transportation, possession, or sales of barramundi under the following conditions:

1. All live importation, possession, transportation and sales must also adhere to the conditions set forth in Section 671.7.
2. Live retail sales for human consumption are allowed for barramundi that range from one to three pounds in weight or 300 mm (11.8 inches) to 500 mm (19.6 inches) in total length.

(10) Class Elasmobranchiomorphi -Cartilaginous Fishes
(A) Family Carcharhinidae -Requiem Sharks: All species of genus Carcharhinus (Freshwater sharks) (D). (B)
Family Potamotrygonidae -River stingrays: All species (D).
(11) Class Reptilia -Reptiles
(A) Order Crocodilia -Crocodiles, Caimans, Alligators and Gavials: All species (D). (B)
Family Chelyridae -Snapping Turtles: All species (D).
(C) Family Elapidae -Cobras, Coral Snakes, Mambas, Kraits, etc.: All species (D). (D)
Family Viperidae -Adders and Vipers: All species (D).
(E) Family Crotalidae -Pit Vipers: All species (D), except Crotalus viridis (Western rattlesnake), Crotalus atrox (Western diamondback rattlesnake), Crotalus ruber (red diamondback rattlesnake), Crotalus scutulatus (Mojave rattlesnake), Crotalus mitchelli (speckled rattlesnake) and Crotalus cerastes (Sidewinder) not restricted.
(F) Family Colubridae -Colubrids:

1. Dispholidus typus (Boomslang) (D).
2. Theoltornis kitlandii (Bird or vine snake) (D).
3. All species of genus Nerodia (watersnakes) (D). (G)

Family Helodermatidae:

1. Heloderma suspectum suspectum (reticulate Gila monster) (D).

(12) Class Crustacea -Crustaceans
(A) All species of Family Cambaridae -Crayfish, etc. (D), except Procambarus clarkii and Orconectes virilis not restricted.

(B) All species of genus Eriocheir (D).

(13) Class Gastropoda -Slugs, Snails

(A) Potamopyrgus antipodarum (New Zealand mudsnail) (D).

(B) All nonnative species of slugs and land snails (D), except:

1. Rumina decollata (decollate snail) in the counties of San Bernardino, Riverside, Imperial, Orange, San Diego, Los Angeles, Ventura, Kern, Fresno, Madera, Tulare and Santa Barbara not restricted with the concurrence of the appropriate county agricultural commissioners.
2. Helix aspersa (brown garden snail) not prohibited.

(C) Pomacea canaliculata (Channel Apple Snail) (D).

(D) All species of genus Haliotis (Abalone) (D), except Haliotis rufescens (Red abalone), Haliotis sorenseni (White abalone), Haliotis corrugata (Pink abalone), Haliotis fulgens (Green abalone), Haliotis cracherodii (Black abalone), Haliotis kamtschatkana (Pinto abalone), Haliotis walallensis (Flat abalone) and Haliotis assimilis (Threaded abalone) are not restricted. 1. Note: Unpermitted nonnative abalone are determined to be detrimental to native populations, therefore the exemptions provided in Fish and Game Code subsection 2271(b) and subsection 236(b) of these regulations are not applicable.

(14) Class Bivalvia -Bivalves: All members of the genus Dreissena (zebra and quagga mussels) (D).

(15) Transgenic Aquatic Animals -Includes freshwater and marine fishes, invertebrates, amphibians, and reptiles (D). Note: Unpermitted transgenic aquatic animals are determined to be detrimental to native wildlife, therefore the exemption provided for in Fish and Game Code Section 2150(e) is not applicable.

§671.1. Permits for Restricted Species.

(a) General. It is unlawful for any person to import, export, transport, maintain, sell, dispose of, or use for any purpose any animal restricted by Section 671 except as authorized in a permit issued by the department.

(1) Limited Scope. A permit issued pursuant to this Section 671.1 does not supersede any federal, state, or local law regulating or prohibiting the animals or the activities authorized in the permit.

(2) Change of Address or Name. The permittee shall notify the department's License and Revenue Branch, in writing of any change of address or name related to the permit within five days of the change.

(3) Records. Any record, log, invoice, or other document required by this Section 671.1 shall be maintained at the facility by the permittee for at least three years from the date issued, and be made available to the department immediately upon demand. All required records shall be legible and in the English language.

(4) Transportation Records Required of Broker/Dealer and Importers. The permittee shall prepare and sign an invoice in duplicate prior to any animals leaving or being imported into their facility. The invoice shall contain the name and address of the Broker/Dealer or Importers, a phone number where the Broker/Dealer or Importers and the consignee can be reached, the name and address of the consignee, the date of the shipment, and the number or poundage, sex (if available) and scientific name of each animal. The invoice shall accompany the animals being shipped. The consignee shall sign and date the invoice receipt of the shipment and retain a copy.

(5) Permits for Business. Any person (as defined in Fish and Game Code Section 67) can qualify for and be issued a permit, if the applicant or the applicant's full time employee possesses the qualifications for an applicant specified in subsections 671.1(c)(1), 671.1(c)(3)(B) and 671.1(c)(3)(D). Where a full time employee provides the qualifications, the applicant must continue to employ such qualified person as long as the animals are possessed in California. The applicant who owns the business shall submit annual proof of continued employment for a full time employee if the applicant continues not to meet the qualifications specified in subsection 671.1(c)(1).

(6) Financial Responsibility. The department may require an applicant for a nonresident permit to provide proof he/she will immediately cover all expenses incurred by the department for personnel, equipment, and facilities used to locate, capture, house, care for, and transport animals that escape or that are released or abandoned. The written proof must be in the form of a department approved financial guarantee payable to the department, local government agency, or entity contracting for the animals.

(7) Health Certificates. The department may require as a condition on any permit that restricted animals be approved for interstate shipment pursuant to applicable federal or state agency standards for diseases such as but not limited to tuberculosis, brucellosis, and pseudo rabies. Permit conditions may be more restrictive than federal standards.

(8) Transgenic Aquatic Animals. The department may issue permits for importation, possession, transportation or rearing of, or research on, transgenic aquatic animals pursuant to the following terms and conditions:

(A) All transgenic aquatic animals shall be held, raised, and transported in a closed-water system or in a system which treats effluent discharge from the facility with a disinfection system adequate to ensure against the inadvertent release of live animals. A closed-water system means that there is no discharge to waters of the state. For purposes of this section, municipal treated sewage systems are not considered waters of the state. The commission may grant an exception to this subsection if it is determined that doing so shall not pose a significant risk to the waters or wildlife of the state.

(B) Access to facilities containing transgenic aquatic animals shall be restricted through means determined to be adequate by the department to assure against unauthorized removal of animals.

(C) Movement of live transgenic aquatic animals from facilities is prohibited unless specifically permitted by the department.

(D) Release of transgenic aquatic animals or their progeny into waters of the state is prohibited.

(E) If transgenic aquatic animals are held with non-transgenic animals of the same species, all such animals that commingle with transgenic animals shall be treated as transgenic for the purposes of regulation and may not be introduced into waters of the state. Nontransgenic animals that can be individually identified as nontransgenic may be exempt from this provision with prior department approval.

(F) In addition to any other penalty provided by law, any unauthorized release of transgenic aquatic animals or their progeny into the waters of the state may be subject to the penalties provided for under Fish and Game Code Sections 2125, 12007, and/or 12023.

(G) Any university, college, governmental research agency or other bona fide scientific institution, as determined by the department, may apply for an expedited permit review under subsection 671.1(b)(9) by demonstrating that they meet or exceed the requirements stipulated in subsections (A) through (F) as part of a federal program or permit, for example, National Institute of Health (NIH) guidelines administered by an Institutional Animal Care and Use Committee (IACUC).

(H) The department shall provide written notice of the filing of all permit applications to any interested party who submits a written request for such notice. The department shall consider all written comments regarding a permit application that are received from any interested party prior to approval of that application. All approved applications shall be reviewed by the commission during a regularly scheduled public meeting; and the commission, following public comment, may deny the issuance of a permit if it finds that an applicant is or will be unable to meet all regulatory requirements for importation, transportation, possession, and confinement of transgenic aquatic animals.

(9) Conferring. In addition to the departments of Food and Agriculture and Public Health, the department may confer with other state and federal agencies or any other person or entity in order to verify information on the application or to determine if the importation, transportation, or possession of any animal requested will be in the best interest of the state and animal.

(b) Permits and Fees. The following permits have fees specified in Section 703 that shall be adjusted annually. The department may issue permits and amend existing permits with the conditions it determines are necessary to protect native wildlife, agriculture interests, animal welfare, and/or human health and safety for:

(1) Animal Care. Issued to any person who is a resident and who has the demonstrated experience and ability to care for and house an animal, and who legally possessed the animal in California prior to January 1992. The permittee may only possess and provide care for the animal(s) specified on the department approved permit. No other activity is authorized except that which is medically necessary for the care of the animal. Additional requirements are specified in subsection 671.1(c)(3).

(2) Aquaculture. Issued to any person who is a registered aquaculturist, pursuant to Section 235. The permittee may import, transport, possess and sell only those species listed on the restricted species permit for aquaculture purposes. Additional requirements are specified in subsection 671.1(c)(3) and Section 671.7.

(3) AZA. Issued to any person accredited by the Association of Zoos and Aquariums (AZA) and who is in the business of exhibiting and breeding animals. The permittee may import, transport, breed, exhibit and possess for bona fide scientific or public health research only those species specified on the department approved permit. Additional requirements are specified in subsection 671.1(c)(3).

(4) Breeding. Issued to any person who is a resident who is in the business of breeding animals and possesses the qualifications listed in subsection 671.1(c)(1), and provides a breeding plan as specified in subsection 671.1(c)(3)(E). The permittee may import, transport, possess, and sell only those species specified on the department approved permit. Additional requirements are specified in subsection 671.1(c)(3).

(5) Broker/Dealer. Issued to any person who is a resident or nonresident and acts as a broker or dealer in a transaction involving the buying and/or selling of restricted species, or who is in the business of transporting restricted species within the state between permittees, but who does not have any other permit issued pursuant to this section for the animal being purchased or sold. Additional requirements are specified in subsection 671.1(c)(3).

(A) Special Restrictions.

1. Maximum Caging Period. Animals may be kept in transport caging for a period not to exceed 48 hours. One additional 48 hour extension may be approved by an enforcing officer in writing and attached to the transportation invoice and only after a United States Department of Agriculture (USDA) accredited veterinarian certifies in writing that the extension will not be detrimental to the health or welfare of the animals.
2. Nonresident Restriction. Nonresident permittees shall only transport animals between permittees authorized by this section or between AZA accredited institutions and permittees or ship them out of state in compliance with Federal guidelines.

(6) Exhibiting. Issued to any person who is a resident or nonresident who is in the business of exhibiting animals at least half-time, for commercial and/or educational purposes, and who possesses the qualifications listed in subsection 671.1(c)(1). The permittee may import, transport, and possess only those species specified on the department approved permit. Additional requirements are specified in subsection 671.1(c)(3).

(7) Native Species Exhibiting. Issued to any person who is a resident, is in the business of exhibiting animals, and possesses the qualifications listed in subsection 671.1(c)(1) to transport and possess only those species specified on the department approved permit. For the purposes of this permit, native species are defined as the restricted birds and mammals that are found injured and/or orphaned in the wild in California and are not suitable for release into the wild, but are suitable for educational purposes. Native species shall only be acquired from the

department or, upon approval by the department, from a California Wildlife Rehabilitation Facility that is permitted with the department. The department shall receive written documentation for each animal from a permitted California Wildlife Rehabilitation Facility's licensed veterinarian stating why the animal to be acquired is unsuitable for wildlife rehabilitation and release, but suitable for education purposes (USDA certification of veterinarian is not required to determine non-releasable status). The permit fee may be waived only if the AZA or exhibiting fee is paid and a permit specified in subsection 671.1(b)(3) or 671.1(b)(6) is issued. Additional requirements are specified in subsection 671.1(c)(3).

(8) **Nuisance Bird Abatement.** Issued to any person who is a resident or nonresident, is in the business of using raptors to abate nuisance birds, and possesses the qualifications listed in subsection 671.1(c)(1) to import, transport, and possess only those species specified on the department approved permit and under the conditions that follow. Additional requirements are specified in subsection 671.1(c)(3).

(A) The permit only authorizes the harassing of nuisance birds. Harassment is defined in Section 251.1.

(B) The permit does not authorize the use for abatement purposes or intentional take of any bird protected by federal or state law, which includes but is not limited to the Federal Migratory Bird Treaty Act and Fish and Game Code Section 3500.

(C) All birds imported into California shall be accompanied by a current interstate health certificate issued by a USDA accredited veterinarian stating that the veterinarian has examined the bird(s) and has found that they are not exhibiting any signs or symptoms of any infectious or contagious disease.

(D) The permittee shall notify the department regional manager where abatement activities are to occur at least five days prior to the activity taking place. The notification shall include the following information:

1. copy of the permit;
2. name(s) and address where the activity will be conducted;
3. date(s) the abatement will take place;
4. the temporary housing location in California for the birds listed on the permit.
5. The information shall also be provided to the department's License and Revenue Branch and attached to the permit.

(E) A department regional manager, or regional manager designee, may restrict activities authorized by this permit at any time to address the biological issues occurring within his/her region.

(F) Every effort shall be made to keep birds used for abatement from escaping into the wild and every effort shall be made to retrieve any that escape into the wild. The permittee must notify the department regional manager, or regional manager designee, and the department's License and Revenue Branch within 48 hours if a bird escapes and is not retrieved.

(G) Birds used for abatement shall be housed in facilities that meet or exceed the permanent caging standards described in Section 671.3.

(9) **Research.** Issued to any university, college, governmental research agency, or other bona fide scientific institution, as determined by the department, who engages in scientific or public health research and meets the requirement as specified in subsection 671.1(c)(3)(L). The permittee may import, transport, breed, and possess only those species specified on the department approved permit. Only persons asking for department determination as a bona fide scientific institution are required to meet the requirements specified in subsection 671.1(c)(3)(K). Additional requirements are specified in subsection 671.1(c)(3).

(10) **Shelter.** Issued to any person who is a resident, who possesses the qualifications listed in subsection 671.1(c)(1), and who has a statement in writing signed by the department's regional manager with jurisdiction over the proposed facility verifying the need for a shelter or similar facility in the area, to transport and possess restricted species for humane purposes only. The permit fee may be waived upon recommendation of the regional manager when he/she determines it is in the best interest of the public, the animal, or the department to do so. Additional requirements are specified in subsection 671.1(c)(3).

(A) Special Authorizations.

1. A permittee may exhibit animals at its facility for fund-raising purposes.
2. The department may authorize a permittee to import restricted species upon receipt of written verification that appropriate facilities outside of California were contacted and no housing was available, and that these specific animals would be euthanized if they cannot be imported into California.

(11) **Single Event Breeding for Exhibitor.** Issued to any person who is a resident and permitted pursuant to subsection 671.1(b)(6), possesses the qualifications listed in subsection 671.1(c)(1), and provides a breeding plan as specified in subsection 671.1(c)(3)(E) to conduct a one time, single breeding of an animal specified on the department approved permit. The permit may be renewed annually, but only upon submitting written verification by a veterinarian accredited by the USDA that the breeding previously authorized was not successful. Additional requirements are specified in subsection 671.1(c)(3).

(12) **Fish.** Issued to any person who is a resident and is in the retail, wholesale or importation business of selling fish or aquaculture products. The permittee may import, transport, possess and offer for sale only those species listed on the department approved restricted species permit. Additional requirements are specified in subsection 671.1(c)(3) and Section 671.7.

(c) **Qualifications, Application Fees, and Permit Information.**

(1) **Qualifications.** Applicants or the applicant's full-time employee shall be at least 18 years of age and possess the equivalent of at least two years, full-time, paid or volunteer, hands-on experience caring for restricted species at facilities engaged in a similar or directly related activity to the permit requested. Applicants or the applicant's full-

time employee shall have at least one year full-time hands-on professional experience working with restricted species in the same family or closely related taxonomic family as each species being requested. Experience will be considered only for the periods the applicant or the applicant's full-time employee was directly involved in and responsible for the animals while engaged in the activity requested on the permit and only when acquired within five years of the date of the initial permit application. Any person who applies for an Animal Care, Aquaculture, AZA, Broker/Dealer, Fish or Research permit is exempt from this experience requirement. Applicants shall be residents of California, except that AZA, Exhibiting, Broker/Dealer and Nuisance Bird Abatement permits may be issued to nonresidents.

(2) Fees. The following application and inspection fees specified in Section 703 are required and shall be adjusted annually.

(A) Application. The applicant shall pay a nonrefundable application fee when submitting an application for a new permit, amending an existing permit, or renewing a permit.

(B) Inspection. The applicant shall pay an inspection fee for the type of inspection as required in Section 671.8. Applicants for Aquaculture permits may have the inspection fee waived if a fish pathologist as defined in subsection 245(b)(5) has inspected the applicant's facilities within the last six months, determines that the facility's housing meets the minimum applicable requirements in Section 671.7 and no fish health issues have been identified in the past year. If not waived, the applicant for an Aquaculture permit shall pay an aquaculture inspection fee.

(3) Application. The applicant for a new permit, amendment to an existing permit, or permit renewal shall submit the completed application or document, and fee, as specified in Section 703, to the address listed on the application. Persons who apply for an Aquaculture or Fish permit are exempt from the application requirements (B) through (M) and shall instead follow the requirements in Section 671.7.

The following information and documents shall accompany an application for each permit, amendment, renewal, or upon change or expiration unless specified as exempt or as specifically required.

(A) An inventory of each animal requested including the common and scientific name, sex, and age of each animal. Any person who applies for an Aquaculture or Fish permit shall also provide the actual number of animals specified by either the weight, volume or count.

(B) A resume which provides the dates and description of an applicant or their full-time employee's experience. The resume is required only when applying for the initial permit, an amendment, or when applying to add new species to the inventory upon renewing a permit. Any person who applies for an Animal Care, AZA, Broker/Dealer or Research permit is exempt from this requirement.

(C) A copy of current license or registration document required by the USDA (for mammals only) and a copy of the most recent USDA facility inspection form completed for the facility shall be on file with the department at all times. The department may waive compliance for initial applications by California residents. However, a copy of the issued USDA license or registration document shall be provided to the department within 10 business days of receipt. Any person who applies for an Animal Care, Nuisance Bird Abatement or Shelter (non-exhibiting) permit is exempt from this requirement.

(D) A letter of recommendation, written in the previous five years, on letterhead stationary with an original signature signed in ink by the owner or operator of a facility where the applicant or their employee gained his/her experience. The letter shall provide the printed name of the owner or operator and detailed information regarding the quality and extent of the applicant's or their employee's, knowledge and experience related to the permit requested. Any person who applies for an Animal Care, AZA, Broker/Dealer or Research permit is exempt from this requirement.

(E) Breeding Plan. Only persons who apply for a Breeding or Single Event Breeding for an Exhibitor permit are required to comply with these requirements. A breeding plan shall include the items listed below and allow the department to determine that the breeding of the species will not result in risk to animal welfare, wildlife populations, livestock and poultry health, public health and safety; and there is an authentic and legitimate scientific, conservation, exhibition, or educational use certified by a recognized scientific, conservation or educational institution, or licensed professional in breeding or exhibition of restricted species. Breeding of restricted species is prohibited unless specifically authorized by the department. The breeding plan is required with the original application annually and when applying to add a new species to the breeding plan. The breeding plan shall include all of the following in order to be considered complete:

1. An official signed document on letterhead from a bona fide scientific, conservation or educational institution, or licensed professional in the breeding or exhibition of restricted species, confirming that there is a legitimate scientific, conservation, exhibition, or educational need for the breeding in the coming year. The person confirming the need for the breeding shall demonstrate that they have at least five years experience working with the species identified in the breeding plan. The statement shall contain the printed name and original signature and be signed in ink by an official representative of the organization providing the statement.
2. A plan of operation that includes the anticipated number of progeny produced in the coming year, caging availability, and veterinarian care.
3. A description of how the progeny will be uniquely identified if required under subsection 671.1(c)(3)(J).
4. The department may deny the renewal of a breeding permit if it determines that the use of a permitted animal was inconsistent with the breeding plan. The department may require a permittee seeking to

renew a breeding permit to provide documents, including but not limited to client lists with contact information or contracts with clients, demonstrating that the use of a permitted animal was consistent with the breeding plan.

(F) Nonresident Exhibitors. Applicants shall submit a copy of a current and valid contract or other written confirmation that specifies each place and length of time where the exhibition will take place in California. If no contract is in effect at the time of application, copies of past contracts and/or written descriptions of anticipated performances being negotiated shall be substituted. Applicants shall submit a complete exhibiting itinerary using the Restricted Species Nonresident Exhibiting Permit Itinerary form specified in Section 703 with their initial or renewal application or upon change to its current itinerary. The department shall receive itinerary changes at least 72 hours prior to entry into California. The itinerary shall provide the location(s) and date(s) where the nonresident applicant or permittee intends to perform within this state. Only persons who apply for a Nonresident Exhibiting permit are required to comply with this requirement.

(G) A statement of purpose describing in detail the planned use for each animal. Applicants shall include relevant materials including, as appropriate, any lists of prospective clients with their contact information or contracts with clients or websites, scripts, brochures or flyers promoting or describing the planned use of the animals. If the animals will be used in an educational program, the applicant shall provide an explanation why live restricted species are necessary and samples of the educational material and message that will be distributed. The department may deny the issuance of a permit if it determines that the statement of purpose for the animal(s) does not sufficiently describe the planned use for each animal or is not supported by the permit application materials. The department may deny the renewal of a permit if it determines that the use of a permitted animal was inconsistent with the statement of purpose. The department may require a permittee seeking to renew a permit to provide documents, including but not limited to client lists with contact information or contracts with clients, demonstrating that the use of a permitted animal was consistent with the statement of purpose. Any person who applies for an Animal Care, AZA, Breeding, Research or Single Event Breeding For Exhibitor permit is exempt from this requirement.

(H) A copy of all current permits required by the United States Fish and Wildlife Service (USFWS) shall be on file with the department at all times. The department may waive compliance for initial applications by California residents. A copy of the issued USFWS license or registration document shall be provided to the department within 10 business days of receipt. Any person who is required to possess a USFWS permit for the restricted species applied for or listed on a department-approved permit is required to comply with these requirements.

(I) Emergency Action Plan.

1. Every restricted species permittee shall have a written Emergency Action Plan readily available and posted in a conspicuous place in the event of an escape, an attack or an emergency evacuation, and shall submit a copy to the department upon initial application, renewal of a permit and addition of species. The Emergency Action Plan shall be titled, with a revision date, updated annually and include, but is not limited to the following:
   a. List of the re-capture equipment available, including but not limited to darting equipment, nets, traps, and chemical immobilization drugs;
   b. Description of humane lethal dispatch methods for various animals and a list of qualified personnel who are trained to carry out the methods;
   c. List of medical supplies/first aid kits and where they are located;
   d. Description of mobile transport cages and equipment on hand;
   e. List of emergency telephone numbers that includes the local department regional office, 911, and animal control agencies; and
   f. Written plan of action for emergencies.
2. Permittees are responsible for the capture, and for the costs incurred by the department related to capture or elimination of the threat, of an escaped animal or the use of humane lethal force required to capture an animal that escapes. If an escaped animal becomes a public safety threat, state, federal, or local law enforcement personnel have the authority to use appropriate lethal force required to end the threat.
3. Any incident involving an animal held under a restricted species permit that results in serious injury or death to a person shall be reported immediately to the department's regional office having jurisdiction over the area in which the serious injury and death has occurred. If the department determines that serious injury or death has occurred as a result of contact with an animal held under the authority of a restricted species permit, the authorizations and conditions of the permit may be reviewed and subject to change by the department. Additional conditions to the permit may be added at anytime to provide for human health and safety.
4. Permittees shall immediately report by telephone the intentional or unintentional escape or release of a wild animal to the department regional office and the nearest law enforcement agency of the city or county in which the wild animal was released or escaped.

(J) Unique Identification.

1. Every elephant, non-human primate, bear, wolf, gila monster, and animal in the Family Felidae that is possessed under a restricted species permit shall be identifiable by an approved unique identifying method and reported to the department for inclusion in a registry. Approved methods include microchips,

tattoos or any other alternative method that is approved by the department. The department may approve an alternative method if the permittee provides written verification from a veterinarian accredited by the USDA explaining why it would be detrimental to the health of the animal to microchip or tattoo the animal and what alternative method of unique identification would be suitable.

2. Every permittee who possesses an animal that requires unique identifiers shall conform to the provisions of this section and provide documentation of an animal's unique identifier or proposed alternative method to the department on or before December 31, 2011. Each permittee shall provide an animal's unique identification to the department within 10 business days of receipt or transfer of an animal, the birth or death of an animal, or change in unique identification for an animal.
3. The department shall continue to maintain a record of the unique identification for each animal until it is transferred out of state or until the death of the animal.

(K) Bona fide scientific research institutions, as identified in subsection 671.1(b)(9), shall submit the following with the initial application and for each additional new species (only required from persons who are not a university, college or governmental research agency and are asking for department determination as a bona fide scientific research institution):

1. At least one letter of recommendation from a university, college, governmental research agency or other bona fide scientific research institution, as recognized by the department, with expertise with the species and in the field of the proposed project. The letter shall contain specific reasons for the support and a statement verifying that the anticipated results are reasonably achievable using the species and techniques described.
2. A description of the proposed project stating the objectives, and if experimental or manipulative, a study plan based on the "Scientific Method".
3. The estimated completion date of the project.
4. The anticipated benefits of this research.

(L) Applicants for a research permit shall include proof that the applicant is part of a federal program or have a permit meeting or exceeding Federal Requirements such as those under the NIH guidelines administered by an IACUC. Only persons who apply for a Research permit are required to comply with these requirements.

(M) Each permittee shall keep accurate written records at the facility of all acquisitions, births, transfers and deaths of restricted species that are covered by their permit. Permittees shall retain all such records for a minimum of three years from the date of acquisition, birth, transfer or death and make such records available to the department for inspection at all times.

(4) Term of Permit. Permits issued under the provisions of this Section 671.1 shall be valid for a term of one year from the date of issuance.

(5) Denial.

(A) The department may deny the issuance of a permit or amendment of an existing permit if:

1. the applicant or permittee has failed to comply with terms and conditions of a permit or any provision of the Fish and Game Code or regulations adopted pursuant thereto;
2. the applicant or permittee has failed to comply with any provision of any statute, regulation, rule or ordinance existing in any other state or in any city, county, or other local governing entity in any other state, that is related to the care and permitting of restricted species listed in Section 671, so long as the failure to comply would constitute a violation of the Fish and Game Code or regulations adopted pursuant thereto if it had occurred in this state or
3. the applicant or permittee has failed to comply with any provision of any federal statute, regulation, or rule that is related to the care and permitting of restricted species listed in Section 671, so long as the failure to comply would constitute a violation of the Fish and Game Code or regulations adopted pursuant thereto if it had occurred in this state; or
4. the department determines that the application or other documents submitted do not support the statement of purpose/use for the animal(s).

(B) The department shall deny the issuance of a permit or amendment of an existing permit if the applicant or permittee fails to demonstrate compliance with the conditions of subsections 671.1 (b) and (c). Before denying an application for this reason, however, the department shall notify the applicant that it has not received sufficient materials or information pursuant to subsections 671.1 (b) and (c). The applicant may amend or supplement an application with additional information or materials, but these supplemental materials shall be postmarked no later than 30 days after the date of the proof of service accompanying the department's notification. If the 30 day deadline falls on a weekend or holiday, the submission of additional information or materials will be accepted until the close of business on the first state business day following the deadline to submit additional information or materials. New applications may be submitted at any time.

(C) All notifications, denials, or other correspondence sent from the department to an applicant or permittee under subsections 671.1(c)(5), (c)(6) and (c)(7) shall include a proof of service that consists of a declaration of mailing, under penalty of perjury, indicating the date of mailing the department's notification, denial, or other correspondence.

(6) Revocation. Any permit issued pursuant to these regulations may be suspended or revoked at any time by the department for failure to comply with the terms and conditions of the permit or for failure to comply with any provision of the Fish and Game Code or regulations adopted pursuant thereto. Unless the permittee has been

convicted in a court of competent jurisdiction of violating one of these provisions, the suspension or revocation shall not take effect until the time to request an appeal pursuant to subsection 671.1(c)(7) has expired. A timely request for an appeal will stay the department's suspension or revocation if the permittee was not convicted of violating the Fish and Game Code or regulations adopted pursuant thereto.

(7) Appeal. Any applicant or permittee who is denied a permit, an amendment to an existing permit or has a permit suspended or revoked by the department pursuant to these regulations may appeal that denial, suspension, or revocation by filing a written request for an appeal with the commission. The request for an appeal shall either be postmarked, if sent by the United States mail or overnight carrier, or received by the commission, if sent by electronic mail, or facsimile no later than 30 days after the date of the proof of service accompanying the department's notice of denial, suspension, or revocation. The commission shall not accept a request for an appeal that is submitted after the 30 day deadline to request an appeal. If the 30 day deadline falls on a weekend or holiday, the request for appeal will be accepted until the close of business on the first state business day following the deadline to submit a request for appeal.

(A) The Commission's president may appoint a commissioner, a current or former executive director of the commission, a current employee of the commission, or a member of the state bar of California in the active practice of law to serve as a hearing officer.

(B) No later than 30 days after filing an appeal request, a person requesting an appeal (appellant) shall submit a written statement to the commission that specifically identifies the legal and factual grounds for challenging the department's action. The appellant's written statement shall be signed by the appellant under penalty of perjury. Upon receipt, the commission shall forward to the department a copy of all appeal-related materials it receives from the appellant, including, a copy of the request for an appeal, and the appellant's written statement. The appellant may receive an additional 30 days to submit a written statement if no later than 30 days after filing a request for an appeal the appellant either: (i.) receives a written stipulation from the department agreeing to an additional 30 days to submit a written statement and submits a copy of the stipulation to the commission, or (ii.) submits a written request to the hearing officer for a determination that good cause exists to grant an additional 30 days to submit a written statement. The hearing officer shall provide the department with a copy of the request for additional time and an opportunity to submit a written objection to the request.

(C) No later than 30 days after receipt of the appellant's written statement, the department may submit a response to the commission, with a copy sent to the appellant, along with any supporting documentary evidence and/or declarations under penalty of perjury.

(D) No later than 15 days after receipt of the department's response, the appellant may submit a reply to the commission signed by the appellant under penalty of perjury, with a copy sent to the department that addresses arguments and evidence raised in the department's response. The appellant's reply shall not contain any new evidence or new factual or legal grounds for challenging the department's action.

(E) Following the appellant's and the department's submittals on the appeal, the hearing officer may request additional information, including testimony under oath, from either party, and may permit either party to present additional information or rebuttal if the hearing officer determines such to be helpful in reaching a correct decision.

(F) In any appeal of the department's denial of an application for a permit or to amend an existing permit, if the hearing officer determines the appeal is based upon new evidence or factual information that was not included in the application or otherwise submitted to the department prior to the department's denial, the hearing officer shall direct the applicant or permittee to file a new application or seek reconsideration by the department, and the request for appeal shall be closed.

(G) No later than 60 days after receipt of all submittals and any additional information or rebuttal permitted by the hearing officer under subsection 671.1(c)(7)(D), the hearing officer shall prepare and submit a proposed decision to the executive director of the commission. The decision shall contain proposed findings and reasons for the commission's action. Upon receipt, the executive director of the commission shall provide both parties a copy of the hearing officer's proposed decision. A cover letter accompanying the proposed decision shall indicate the date when the commission will consider the proposed decision and a deadline for the parties to comment on the proposed decision. Copies of the proposed decision shall include a proof of service indicating the date the proposed decision is mailed to the parties. Each party may submit written comments on the proposed decision to the commission, however, these comments shall not exceed two pages, and they shall not refer to or introduce any new factual information or evidence that was not previously submitted to the commission.

(H) At a meeting of the commission no later than 60 days after receipt of the hearing officer's proposed decision, the commission shall consider adoption of the proposed decision, unless good cause exists to delay consideration of the proposed decision. The commission may by order adopt, revise or reject the proposed decision. The commission shall serve both parties a copy of the commission's order and decision. The order is final.

(I) A party may request judicial review by filing a petition for writ of mandate in accordance with Section 1094.5 of the Code of Civil Procedure within 30 days from the date of service (postmark) of the order. The record of the proceedings as designated by the petitioner shall be prepared by the commission and delivered to petitioner's counsel or, if appearing pro se, the petitioner within 30 days after petitioner's request and upon payment of the fee specified in Section 69950 of the Government Code.

§671.2. Humane Care and Treatment Standards.

(a) **Care and Treatment.** Except as provided by subsection (c) below, every person who imports, transports, or possesses a restricted species shall comply with the following provisions:

(1) **Food.** Food shall be wholesome, palatable and free from contamination and shall be supplied in sufficient quantity and nutritive value to maintain the animal in good health. The diet shall be prepared with consideration for the age, species, condition, and size of each animal.

(2) **Feeding.** Animals not in hibernation shall be fed at least once a day. Food receptacles shall be clean and sanitary. Food shall be accessible to all animals in the enclosure and placed to prevent contamination. If self-feeders are used, adequate measures shall be taken to prevent mold, contamination, deterioration or caking of food.

(3) **Water.** Potable water must be accessible to the animals at all times or provided as often as necessary for the health and comfort of the animal as directed by a licensed veterinarian. All water receptacles shall be clean and sanitary.

(4) **Cleaning of enclosures.** Excrement shall be removed from enclosures at least once per day or in the case of large pasture areas, large flight cages, breeding chambers or large natural habitat enclosures, as often as necessary to maintain animals in a healthy condition. When enclosures are cleaned by hosing or flushing, adequate measures shall be taken to protect confined animals from the direct spray.

(5) **Disinfection of enclosures.** After an animal with an infectious or transmissible disease is removed from a cage, room, or pen/run, that enclosure shall be disinfected in compliance with the directions of a licensed veterinarian.

(6) **Pest control.** Programs of disease prevention and parasite control, euthanasia and adequate veterinary care shall be established and maintained under the supervision of a licensed veterinarian. The pest control program shall be reviewed annually by the veterinarian for the safe use of materials and methods.

(7) **Daily observation.** Animals shall be observed every day by the person in charge of the care of the animals or by someone working under his or her direct supervision. Sick or diseased, stressed, injured, or lame animals shall be provided with veterinary care or humanely destroyed.

(8) **Handling.** Animals shall be handled expeditiously and carefully so as not to cause unnecessary discomfort, behavioral stress, or physical harm to the animal. Except as provided below, an animal may be placed on a chain and collar only when being transported by an attendant between areas on a permittee's premises or between a mode of conveyance and a worksite or veterinarian's office, or when the handler is working or exercising the animal(s) within the compound. Care shall be exercised to avoid harm to the handler or the general public. Animals shall be kept under control at all times and shall not be allowed to roam free outside of a compound, except when under the control of the handler during filming or exhibition.
Exceptions: Elephants chained pursuant to subsection 671.3(b)(2)(M)4. (see Department of Fish and Wildlife Manual No. 671 - 2/25/92). Raptors may be jessed and tethered.

(9) **Chaining/staking.** Animal(s) shall not be chained or otherwise tethered to a stake, post, tree, building or other anchorage, except during filming, training or exhibition, in an emergency situation or when repairs are being made to the cage. The animal(s) shall be under the direct supervision of the handler or his designee at all times.
Exceptions: Elephants chained pursuant to subsection 671.3(b)(2)(M)4. (see Department of Fish and Wildlife Manual No. 671 - 2/25/92). Raptors may be jessed and tethered.

(10) **Public display.** Animals shall be publicly displayed only for periods of time and under conditions consistent with the animal's health and comfort. The animal must be handled so there is no perceived risk to the public in the judgment of the department's enforcement officer, with sufficient distance allowed between animal acts and the viewing public to assure safety to both the public and the animals. Animals on display shall be contained within an escape-proof area or enclosure at all times when not under the immediate control of a handler. Circus or traveling show animals shall be allowed a rest period of at least 4 hours per day within an enclosure as directed by a licensed veterinarian.

(b) **Log Requirement.** Permittees shall maintain a written log in the English language for each animal in their possession which documents each animal's health care. The log shall contain the following information: date of acquisition, name and address of person from whom the animal was acquired, identifying marks or characteristics, date and description of illness and/or injury, health care treatment provided, name and signature of the person treating the animal, if applicable. This log shall be made available to department officers or its authorized agent on demand.

(c) **Alternative Care and Treatment Authorized by Veterinarian.** When specifically directed in writing by a licensed veterinarian, a person may provide alternative care and treatment. The veterinarian's written instructions for long-term care of the animals held under the permit shall be presented to the inspector at the time of inspection. The implementation of any short-term exceptions to the veterinarian's long-term instructions or to the provisions of subsections 671.2(a)(1) through (10) above shall be verified in writing in the animal's log by the permittee within 10 working days from the date of the action. Such exception shall not exceed two weeks without written concurrence from a licensed veterinarian.

§671.3. Minimum Facility and Caging Standards for Wild Animals Housed at Permanent Facilities.

(a) General Housing Requirements and Specifications.

(1) All cages or enclosures shall be completely enclosed unless otherwise specified.

(2) Compatible animals may be held in the same enclosure if the required floor space is provided.

(3) Common walls between noncompatible animals shall be constructed so that animals cannot gain access to each

other.

(4) If the ambient air temperature falls below that necessary to maintain the animal in a healthy condition, an artificial heat source that is sufficient to maintain that minimum ambient air temperature shall be provided.

(5) If a pool of water is required, the floor space occupied by the pool shall be in addition to the minimum floor space requirement unless otherwise specified.

(6) Night quarters, holding pens and nesting boxes may not be used as primary housing.

(7) Except as provided in subsection (b) below, all animals listed shall be housed in facilities that have double doors or, if individual cages do not have double doors, then a perimeter fence shall enclose the entire facility to prevent escape.

(8) All enclosures shall be provided with sufficient drainage to prevent standing water from accumulating.

(9) Wherever a concrete floor is specified, either wood plank flooring or natural substrate may be used to cover the concrete floor.

(10) The following are minimum pen, cage or enclosure size requirements:

MINIMUM PEN, CAGE OF ENCLOSURE SIZE REQUIREMENTS

Type of Animal	Floor Space (Sq. Feet) One Animal	Two Animals	Each Additional Animal	Interior Ceiling or Outside Fence Height (Feet)
CLASS AVES - Birds				
Ploceidae, Estrildidae, Zosteropidae	4	4	+3/animal	2 Ceiling
More than 2 birds requires a cage height of 6 feet.				
Alaudidae, Cuculidae, Turdidae, Sturnidae	6	6	+4/animal	4 Ceiling
More than 2 birds requires a cage height of 6 feet.				
Corvidae	12	24	+12/animal	5 Ceiling
More than 2 birds requires a cage height of 6 feet.				
Falconiformes, Strigiformes				
Eagle, Hawkeagle, Vulture	100	150	+50/animal	7 Ceiling
Red-tailed hawk, Grt Horn owl	64	96	+32/animal	7 Ceiling
Peregrine falcon, Barn owl	48	72	+24/animal	7 Ceiling
Sparrow hawk, Screech owl, Burrowing owl	36	54	+18/animal	6 Ceiling
CLASS MAMMALIA - Mammals				
PRIMATA				
NOTE: THE CAGE SIZE REQUIREMENT FOR TWO PRIMATES ALSO MEETS THE CAGE SIZE REQUIREMENT FOR A PAIR AND THEIR PROGENY UNDER THE AGE OF 2 YEARS.				
Gorilla	300	500	+200/animal	8 Ceiling
Orangutans	200	400	+200/animal	10 Ceiling
Chimpanzees	200	300	+100/animal	8 Ceiling
Baboons	100	200	+100/animal	8 Ceiling
Gibbons, Langurs	100	200	+50/animal	9 Ceiling
Macaques	80	120	+40/animal	8 Ceiling
Woollys, Spiders, Howlers, Sakis, Capuchins	64	96	+32/animal	8 Ceiling
Marmosets	16	24	+8/animal	8 Ceiling
Squirrel, Titis, Owl	36	54	+18/animal	8 Ceiling
Tree Shrew	9	12	+3/animal	3 Ceiling
EDENTATA				
Sloth	30	40	+10/animal	8 Ceiling
Armadillo:				
(less than 15" length)	12	16	+3/animal	1.5 Ceiling
(15" to 36" length)	30	40	+10/animal	3 Ceiling
(greater than 36")	80	100	+20/animal	5 Ceiling
Tamandua	40	50	+10/animal	7 Ceiling
Giant Anteater	200	300	+100/animal	6 Ceiling
MARSUPIALIA				
Sm. Opossums	9	12	+3/animal	3 Ceiling
Lg. Opossums	20	30	+10/animal	5 Ceiling
Sm. Wallaby	60	90	+30/animal	5 Fence/Wall
Lg. Wallaby	200	300	+100/animal	6 Fence/Wall
Tree Kangaroo	80	100	+20/animal	8 Ceiling
Lg. Kangaroo	200	300	+100/animal	8 Fence/Wall
Wallaroo	200	300	+100/animal	6 Fence/Wall

MINIMUM PEN, CAGE OF ENCLOSURE SIZE REQUIREMENTS

Type of Animal	Floor Space (Sq. Feet) One Animal	Two Animals	Each Additional Animal	Interior Ceiling or Outside Fence Height (Feet)
INSECTIVORA				
Hedgehog, Shrew, Mole	3	6	+3/animal	1 Ceiling
DERMOPTERA				
Gliding Lemur	50	65	+15/animal	8 Ceiling
CHIROPTERA				
Bats	Use same cage dimensions as comparably sized finches, parrots, or hawks (see bird section).			
MONOTREMATA				
Spiny Anteater	25	35	+10/animal	5 Ceiling
Platypus	(See Monotremata details in subsection (b)(2)(G))			
PHOLIDOTA				
Scaly Anteater				
Terrestrial forms	Same as armadillos			
Arboreal forms	Same as sloth			
LAGOMORPHA				
Wild Rabbit or Hare	20	28	+8/animal	5 Ceiling
RODENTIA				
Squirrel, Flying	20	40	+10/animal	8 Ceiling
Squirrel, Tree	20	40	+10/animal	8 Ceiling
Squirrel, Ground	20	40	+10/animal	5 Ceiling
	(Up to 4 animals may be held in 40 sq. feet)			
Chipmunk	20	30	+10/animal	5 Ceiling
	(Up to 3 animals may be held in 30 sq. feet)			
Prairie Dog (males)	20	30	+10/animal	5 Ceiling
Acushi	20	30	+10/animal	5 Ceiling
Agouti	30	40	+10/animal	5 Ceiling
Paca	30	40	+10/animal	5 Ceiling
Crested Porcupine	40	80	+40/animal	6 Ceiling
N.A. Porcupine	30	40	+10/animal	7 Ceiling
S.A. Porcupine	20	30	+10/animal	7 Ceiling
Muskrat	30	40	+10/animal	6 Ceiling
Beaver	80	120	+40/animal	5 Ceiling
Capybara	100	150	+50/animal	5 Ceiling
CARNIVORA				
Canidae				
Fennec or Kit Fox	80	100	+40/animal	6 Ceiling
Bat-eared Fox/Arctic Fox	80	100	+40/animal	6 Ceiling
Gray Fox	80	100	+40/animal	8 Ceiling
Red Fox	80	100	+40/animal	6 Ceiling
Jackal	150	200	+100/animal	6 Ceiling
Coyote	150	200	+100/animal	6 Ceiling
Wolf	200	300	+200/animal	6 Ceiling
Cape Hunting Dog	200	300	+100/animal	6 Ceiling
Ursidae				
Sun Bear	200	300	+100/animal	8 Ceiling
American Black Bear	300	450	+150/animal	8 Ceiling
Asiatic Black Bear	300	450	+150/animal	8 Ceiling
Sloth Bear	300	450	+150/animal	8 Ceiling
Spectacled Bear	300	450	+150/animal	8 Ceiling
Polar Bear	400	600	+200/animal	10 Ceiling
Grizzly Bear	400	600	+200/animal	8 Ceiling
Russian Brown Bear	300	450	+150/animal	8 Ceiling
Kodiak Bear	400	600	+200/animal	10 Ceiling

MINIMUM PEN, CAGE OF ENCLOSURE SIZE REQUIREMENTS

Type of Animal	Floor Space (Sq. Feet) One Animal	Two Animals	Each Additional Animal	Interior Ceiling or Outside Fence Height (Feet)
Procyonidae				
Kinkajou	40	50	+10/animal	7 Ceiling
Coatimundi	50	60	+10/animal	7 Ceiling
Raccoon	60	80	+20/animal	8 Ceiling
Mustelidae				
Weasel/Mink/Ferret	30	(Up to 4 in 30 sq. feet)	+10/animal	6 Ceiling
Tayra	40	50	+10/animal	6 Ceiling
Grison	30	40	+10/animal	6 Ceiling
Marten	40	50	+10/animal	7 Ceiling
Wolverine	100	200	+100/animal	6 Ceiling
Spotted Skunk	20	(Up to 2 in 20 sq. feet)	+10/animal	6 Ceiling
Striped Skunk	30	(Up to 2 in 30 sq. feet)	+10/animal	6 Ceiling
Otter	100	200	+100/animal	6 Ceiling
Badger	60	80	+30/animal	6 Ceiling
Viverridae				
Genet, Civet	40	50	+10/animal	7 Ceiling
Binturong	100	150	+50/animal	8 Ceiling
Mongoose	80	100	+40/animal	6 Ceiling
Hyaenidae				
Hyena	200	300	+100/animal	6 Ceiling
Felidae				
Lion, Tiger, Cheetah, Snow Leopard, and hybrids thereof	300	450	+150/animal	8 Ceiling
Black & Spotted Leopard, Jaguar, Clouded Leopard, Mountain Lion, European Lynx and hybrids thereof	200	300	+100/animal	8 Ceiling
Caracal, Bobcat, Canada Lynx, Golden Cat, Ocelot, Serval, Jungle Cat, Fishing Cat and hybrids thereof	80	120	+40/animal	8 Ceiling
Margay, Leopard Cat, Pallas Cat, Marble Cat, Geoffroy's Cat, African Wild Cat, European Wild Cat, Jaguarundi, Little Spotted Cat, African Black Footed Cat, Sand Cat, Flatheaded Cat, Pampas Cat and hybrids thereof	60	90	+30/animal	8 Ceiling
TUBULIDENTATA				
Aardvark	200	300	+100/animal	6 Ceiling
PROBOSCIDEA				
Elephant	1500	3000	+1500/animal	12 Barn height
HYRACOIDEA				
Hyrax	16	20	+4/animal	4 Ceiling
PERISSODACTYLA				
Tapir	300	500	+300/animal	6 Fence/Wall
Rhinoceros	1500	3000	+1500/animal	5 Fence/Wall
Wild Ass	900	1300	+400/animal	6 Fence/Wall
ARTIODACTYLA				
Peccary	100	150	+50/animal	4 Fence/Wall
Wild Pig	150	200	+50/animal	4 Fence/Wall
Pigmy Hippopotamus	700	1000	+300/animal	6 Fence/Wall
Hippopotamus	1500	3000	+1500/animal	7 Fence/Wall
Giraffe	1500	3000	+1500/animal	18 Barn height

MINIMUM PEN, CAGE OF ENCLOSURE SIZE REQUIREMENTS

Type of Animal	Floor Space (Sq. Feet) One Animal	Two Animals	Each Additional Animal	Interior Ceiling or Outside Fence Height (Feet)
(The following Artiodactyla may have a 6 foot fence if the facility's perimeter fence is 8 foot)				
White-tailed Deer	600	800	+200/animal	8 Fence/Wall
Fallow Deer	600	800	+200/animal	8 Fence/Wall
Elk/Red Deer	1000	1400	+400/animal	8 Fence/Wall
Bison, European	1000	1400	+400/animal	6 Fence/Wall
Buffalo	1000	1400	+400/animal	6 Fence/Wall
Impala, Eland	1000	1400	+400/animal	8 Fence/Wall
Other Antelope	600	800	+200/animal	6 Fence/Wall
Aoudad	600	800	+200/animal	6 Fence/Wall
Wild Goats & Sheep	600	800	+200/animal	6 Fence/Wall

(b) Specific Housing Requirements. Permittees shall comply with the following provisions except that material or construction may be substituted upon approval of the inspecting officer if the permittee produces written certification from a licensed civil or structural engineer that the material and/or construction is of equivalent strength.

(1) Class Aves – Birds

All birds, except indigenous birds and birds in the Orders Falconiformes and Strigiformes, listed in Section 671 shall be housed in cages having double doors so constructed that the exterior door must be closed before the interior door can be opened. Each door or gate shall be secured by a lock. Perches shall be large enough in diameter so that the bird's claws do not meet the toe or pad on the underside of the perch.

(A) Orders Falconiformes and Strigiformes. Noncompatible raptors shall be housed separately unless tethered. Birds of these orders held pursuant to a falconry license shall be maintained in accordance with Section 670, Title 14, CCR. Tethered raptors shall be provided with a perch designed for individual species of raptors. Tethered raptors shall be protected from predators and shall be provided with water for drinking and bathing. Tethers shall be constructed to allow the bird freedom of normal movement without becoming tangled; such tethers shall be of equal length (one on each leg). Raptors shall not be tethered continuously unless they are being flown on a daily basis or they are incapable of flying.

(2) Class Mammalia – Mammals

(A) Order Primates

1. A shelter or a den box shall be provided. All primates shall be provided with natural or artificial sunlight.
2. Nocturnal primates shall be provided with privacy during their daytime hours.
3. Nest boxes shall be provided for species that use them (e.g., tamarins, marmosets, owl monkeys). Raised perches and roost sites shall be provided for arboreal or semi-arboreal species.
4. For brachiating species (gibbons and spider monkeys), sufficient vertical space must be provided for this activity which means perches shall be above the floor at a height that is at least equivalent to twice the length of an adult. The ceiling shall be high enough to allow room for the animal to stand erect on its perch with arms extended overhead.
5. Primates shall be provided with objects or exercise systems appropriate to the age and species to promote physical and psychological well-being. These may include sturdy ropes, bars, branches, and chains and rings.
6. New World Monkeys such as squirrel, titis, and owl, medium and large South American monkeys, such as spiders, woollys, howlers, capuchins, and sakis held prior to August 3, 1989 may be kept in the currently approved housing so that the prior social structure and environment of those animals may be maintained. All other housing requirements shall pertain to these animals.
7. Apes
   a. Gorilla, Orangutan and Chimpanzee
      (i) The walls and top of the cage shall be constructed of either 6 inch reinforced concrete; or 8 inch reinforced concrete block; or 5/8 inch diameter steel bars spaced on not greater than 4 inch centers and welded to horizontal angle iron bars 1-¼ inches x ¼ inch thick which are spaced no greater than 3 feet apart; or 6 gauge chain link or welded wire attached to 1-5/8 inch schedule 40 steel pipe spaced on 5 foot centers with vertical bracing of 1-5/8 inch schedule 40 steel pipe spaced on 4 foot centers. The horizontal angle iron bars shall be welded to the corner posts. The bottom horizontal bar shall be no more than 3 inches above a concrete floor or footing. Welded wire shall be welded to the framework every foot. Chain link fencing shall be secured along all edges to the framework using tension bars which shall be bolted, not welded, to the framework at 12 inch intervals. All bolt attachments shall be further secured by spot welding. Walls shall be secured to a concrete footing deep enough below grade to preclude escape by digging. The framework for the walls and top of the cage shall be made of 1-5/8 inch outside diameter

structural weight galvanized steel pipe or equivalent. Vertical supports shall be set 2-1/2 feet in concrete.

(ii) Corner posts shall be either one 2-3/8 inch steel pipe or two 1-5/8 inch schedule 40 steel pipes bolted together with 3/8 inch steel bolts or equivalent.

b. Gibbon

(i) Construction shall be 9 gauge chain link or welded wire or equivalent.

8. Old World Monkeys

a. Baboon, mandrill, macaque, guenon, mangabey, langur, etc.

(i) 9 gauge wire or concrete construction.

9. New World Monkeys

a. Marmoset, squirrel, titis, owl and other similar-sized monkeys.

(i) Cage mesh no greater than 1 inch by 2 inch.

b. Spider, woolly, howler, capuchin, saki, other medium and large sized South American monkeys, etc.

(i) 11 gauge wire or concrete construction.

(B) Order Edentata - Sloth, Anteater, Armadillo, etc.

1. The floor of the pen shall be at least 50% natural substrate. The walls of the pen shall be secured to a concrete footing or, if they are constructed of 11 gauge non-rusting chain link or welded wire, they shall be buried in the dirt deep enough to prevent escape by digging.
2. The pens for sloths may have a concrete floor and shall have limbs for climbing. One limb shall provide them an opportunity to get to a heat source.

(C) Order Marsupialia - Marsupial or Pouched Animal

1. The floor of the cage shall either be constructed of wood, or it shall be natural substrate. The surface of the paddock shall be natural substrate. Walls of the cage shall be secured to buried concrete or, if walls are constructed of 11 gauge non-rusting chain link or welded wire, they shall be buried in the dirt deep enough to prevent escape by digging.
2. Tree kangaroos and other arboreal marsupials shall be provided with limbs for perching, climbing and resting, a raised nest box or similar structure for seclusion and a heat source.
3. Kangaroos and wallabies shall be provided with a refuge area.

(D) Order Insectivora - Shrew, Mole, Hedgehog, etc.

1. The bottom of the cage shall be dirt, wood shavings or similar material over an escape-proof flooring.
2. A hide box or other refuge and protection from strong light are required.

(E) Order Dermoptera - Gliding Lemur

1. Limbs for perching and climbing and a rectangular cage are required.

(F) Order Chiroptera - Bat

1. Perching or other material shall be provided for the animal to suspend itself.
2. Protection from strong light shall be provided.

(G) Order Monotremata - Spiny Anteater, Platypus.

1. The floor of the cage shall be natural substrate. The walls of the cage shall be constructed of 11 gauge non-rusting chain link or welded wire, secured to buried concrete, or they shall be buried at least one foot below the surface.
2. Nest boxes with dry bedding or a natural burrow shall be provided for spiny anteaters. A heat source shall be provided.
3. A pool measuring at least 4 times the length of the animal(s) by 1-1/2 times the width of the animal by 2 feet deep shall be provided for platypuses for swimming and feeding. Each adult shall be provided with a dry land area equal to the surface area of the pool.
4. Platypuses require at least a 6 foot long, tunnel-like entrance to the nest box where water from the pool can be shed.
5. Platypuses shall be kept singly with young or paired only when breeding.

(H) Order Pholidota - Pangolin, Scaly Anteater

1. The floor of the cage shall be natural substrate or 4 inch concrete covered with permeable soil. The walls of the cage shall be constructed of 11 gauge non-rusting chain link or welded wire, secured to buried concrete, or they shall be buried at least one foot below the surface.

(I) Order Lagomorpha - Rabbit and Hare

All require tooth-resistant restraining materials and bone, wood or fibrous food to gnaw on.

1. The floor of a pen shall be constructed of concrete at least 2 inches thick or of 16 gauge non-rusting chain link or welded wire. Dirt or wood may be placed over the flooring.

(J) Order Rodentia - Muskrat, Porcupine, Squirrel, Beaver, Prairie Dog

All require tooth-resistant restraining materials and bone, wood or fibrous food to gnaw on.

1. Porcupine

a. New World porcupines require climbing perches.

b. A box shelter for seclusion is required.

2. Squirrel and Chipmunk

a. Arboreal forms require climbing perches.

b. Nest boxes are required for each animal.

c. The cage shall be completely enclosed with a welded wire and have a concrete floor.
d. The floor shall be covered with natural substrate, wood shavings or similar material.

3. Muskrat and Beaver
   a. A pool of fresh water with easy entry and exit shall be provided. Half of the required floor space shall be a pool of water 2-½ feet deep.
   b. A nest box or retreat shall be provided for each animal.
   c. The walls of the cages for beaver shall be constructed of 9 gauge chain link or welded wire or equivalent construction; 11 gauge for muskrats.
   d. The floor of the cages shall be constructed of 4 inch concrete or non-rusting 9 gauge chain link or welded steel wire. Such floors are not required if the side walls are anchored to equivalent materials which have been buried deep enough underground to prevent the animal's escape by digging.
   e. Not more than 2 compatible adults of the same species and their offspring of the year may be held in the same enclosure.
4. Prairie Dog
   a. The floor of a pen shall be constructed of 4 inch concrete, or 16 gauge, non-rusting woven wire or similar non-rusting material with mesh 1 inch in diameter. At least ¼ inch diameter reinforcement rods shall be used along the outer edge of a concrete floor to help support concrete or concrete block walls. To facilitate drainage, 6 inch floor drains shall be installed in a concrete floor at the rate of one per 16 square feet. Floor drains shall be covered with 9 gauge non-rusting woven wire or similar material to prevent animals from escaping. Floor drains are not required when wire is used for entire floor. The floor shall be a minimum of 3 feet below ground level and covered with permeable soil or other mixture to ensure adequate drainage.
   b. The walls of the pen below ground level shall be anchored to the floor and shall be of 4 inch concrete or concrete blocks or 9 gauge nonrusting woven wire or similar material with 1 inch mesh attached to the framework of steel or cedar posts. Above ground level the wall shall be of 18 gauge fur-farm netting with 1 inch mesh, 4 inch concrete or concrete blocks or similar material. The top shall be covered or the walls shall be at least 3-½ feet high and provide a non-climbable escape-proof barrier.
5. Acushi, Agouti, Paca and Capybara
   a. Gnawing logs shall be provided.
   b. A pool shall be provided for capybara.
   c. Walls or fencing shall be anchored far enough below ground level to prevent escape by digging. Dirt substrate or similar natural material shall be provided.

(K) Order Carnivora - Raccoon, Weasel, Skunk, Mongoose, Wolf, Lion, Bear, etc.

1. Procyonidae - Raccoon, Coatimundi and Kinkajou
   a. Limbs shall be required.
   b. A nest box or sheltered retreat shall be provided.
   c. The floor of the pen shall be constructed of 4 inch concrete, wood, or natural substrate over concrete or 9 gauge non-rusting chain link or similar material, or the walls shall be buried deep enough to prevent escape by digging.
   d. The walls of the pen shall be constructed of 11 gauge chain link or equivalent, 4 inch concrete or concrete block. If no top is provided, the walls shall be of sufficient height and shall be constructed in a manner which makes them non-climbable to prevent escape.
2. Mustelidae
   a. Weasel, Ferret, Mink, Marten, Tayra, Grison, and Skunk.
      (i) Limbs shall be required (except skunk).
      (ii) A nest box shall be provided for each animal, except neutered European ferrets may have a large communal nest box.
      (iii) The floor of the cage shall be constructed of one inch square or one inch by two inch mesh, 4 inch concrete, wood, 11 gauge non-rusting chain link or equivalent material with a covering of dirt or similar natural substrate.
   b. Wolverine and Badger.
      (i) A natural or artificial den area shall be provided for each animal.
      (ii) The floor of the cage shall be constructed of two inch by six inch wood or 4 inch concrete or nonrusting 9 gauge chain link or welded wire covered with 3 feet of permeable soil. Six-inch floor drains shall be installed in the concrete floor at the rate of one per 16 square feet. Floor drains shall be covered with 9 gauge non-rusting woven wire or similar material to prevent animals from escaping.
      (iii) Walls of the cage shall be constructed of 9 gauge chain link or welded steel wire, 4 inch concrete, or concrete block. If no top is provided, walls shall be of sufficient height and shall be constructed in a manner which makes them non-climbable to prevent escape.
   c. River Otter. (Sea otters shall be housed according to 9 CFR Sections 3.100-3.118.)
      (i) A den area shall be provided for each animal.
      (ii) A pool with fresh running water covering at least 1/2 of the required floor space and at least 2-1/2 feet deep shall be provided.

(iii) The floor of the cage shall be constructed of 4 inch concrete or dirt over such concrete or 9 gauge chain link or welded steel wire or the side walls shall be anchored to equal materials deep enough underground to prevent escape by digging. If concrete floor is used, 6 inch floor drains shall be used and they shall be covered with 9 gauge non-rusting woven wire or similar material to prevent animals from escaping.

(iv) The walls of the cage shall be constructed of 11 gauge chain link or welded steel fabric or equivalent construction.

3. Viverridae - Genet, Civet and Mongoose, Binturong
   a. Limbs shall be provided.
   b. A nest box or platform is required. A heat source shall be provided for genet, civet and mongoose.
   c. The floor of the cage shall be constructed of 4 inch concrete or for civets and binturongs, it may be 11 gauge non-rusting welded steel fabric with 2 inch mesh and the cage for genets and mongooses shall be of 16 gauge welded steel fabric with 3/4 inch mesh which is covered with soil.
   d. The walls of the cage for civets and binturongs shall be of 11 gauge welded steel fabric with 2 inch mesh and the cage for genets and mongooses shall be of 16 gauge welded steel fabric with 3/4 inch mesh, 4 inch concrete or concrete block.
4. Hyaenidae - Hyena
   a. The floor of the cage shall be constructed of 4 inch concrete, or 2 by 6 inch or larger wood flooring or buried non-rusting 9 gauge chain link or welded wire with mesh no larger than 2 inches by 4 inches.
   b. The walls of the cage shall be constructed of 9 gauge chain link or welded wire with mesh no larger than 2 inches by 4 inches, or 6 inch concrete or concrete block. If an animal is kept in a large enclosure in lieu of a cage, the floor shall be of natural substrate and the walls shall be anchored and extend at least 5 feet underground. If no top is provided, the walls shall be at least 10 feet high and constructed to be non-climbable by the animal or the walls shall be 8 feet high and shall have, in addition, a 2 foot overhang angling 45 degrees inward at the top.
   c. A sheltered retreat and either a den or elevated wood platform shall be provided.
5. Canidae - Wolf, Coyote, Fox and Other Members of the Dog Family
   a. Limbs shall be provided for gray and red foxes.
   b. The floor of the cage shall be either natural substrate or constructed of two inch by six inch wood or 4 inch concrete or buried nonrusting 9 gauge chain link or welded wire. In lieu of the above, either the walls shall be buried at least 8 feet deep to prevent escape by digging, or a buried 3-foot wide concrete, chain link, or welded wire apron shall be provided which shall be attached to the inside of the bottom of the perimeter walls to prevent escape by digging at the walls. All buried chain link or welded wire shall meet the gauge requirements for walls.
   c. The walls of the cage shall be constructed of 6 inch concrete or concrete block, chain link or welded wire. If chain link is used, it shall be 9 gauge for wolves and 11 gauge for other canids. If an animal is kept in a large enclosure in lieu of a cage, the floor shall be of natural substrate and the walls of the cage shall be anchored and extend at least 5 feet underground or a buried 3 foot wide concrete, chain link or welded wire apron shall be provided which shall be attached to the inside of the bottom of the perimeter walls to prevent escape by digging at the walls. If no top is provided, the walls shall be at least 10 feet high and constructed to be non-climbable by the animal or the walls shall be 6 feet high (except that the walls for the gray fox shall be 8 feet high) and shall have, in addition, a 2 foot overhang angling 45 degrees inward at the top.
   d. A sheltered retreat and either a den or elevated wood platform shall be provided.
6. Felidae - Cat Family
   a. Dens shall be provided and shall be adequate in size to provide privacy and comfort for all animals in the enclosure.
   b. An elevated wooden loafing platform or an elevated dry natural substrate loafing area, adequate in size for all animals within the enclosure, shall be provided. The top of the den or den box may be designed to meet this requirement.
   c. A tree limb or other suitable scratch block shall be provided.
   d. The floor of the cage shall be natural substrate or constructed of wood or 4 inches of concrete or welded wire or the walls shall be buried deep enough to prevent escape by digging. All buried chain link or welded wire shall be non-rusting and shall meet the gauge requirements for walls.
   e. Group I - Lion, Tiger, Cheetah, Snow Leopard, and Hybrids thereof:
      (i) A minimum of 100 square feet shall be of concrete or wood planking as a sanitary area for feeding unless a secured food receptacle which is cleaned daily is provided.
      (ii) Walls and top of the enclosure shall be constructed of at least 9 gauge chain link. The framework for the walls and top shall be constructed of 1-5/8 inch schedule 40 steel pipe. Vertical posts shall be bolted to or anchored in concrete 1-1/2 feet deep by 10 inches in diameter spaced no more than 10 feet apart. Horizontal pipe supports shall be spaced no more than 4 feet apart and welded at the ends to the vertical posts. The above chain link fencing shall be secured to the vertical and horizontal framing on all sides using tension bars which shall be welded or bolted to the framework every 18 inches. Welded wire shall be welded to the framework every 12 inches

on all sides. The bottom horizontal cross bar shall be no more than 3 inches above the concrete floor. If a bottom horizontal cross bar is not used, the walls shall be secured against the natural substrate or a wooden flooring in a manner which precludes escape. Corner posts shall be two 1-5/8 inch schedule 40 steel posts or one 2-3/8 inch schedule 40 steel post. The top cross members shall be spaced no more than 5 feet apart.

f. Group II - Black and Spotted Leopard, Jaguar, Clouded Leopard, Mountain Lion, European Lynx and Hybrids thereof:
   (i) At least 70 square feet of the floor space must be of concrete or wood planking as a sanitary area for feeding unless a secured food receptacle which is cleaned daily is provided.
   (ii) Walls and tops shall be the same as for Group I cats.

g. Group III - Caracal, Bobcat, Canadian Lynx, Golden Cat, Ocelot, Serval, Jungle Cat, Fishing Cat and Hybrids thereof:
   (i) At least 25 square feet of floor space shall be concrete or wood planking as a sanitary area for feeding, unless a secured food receptacle which is cleaned daily is provided.
   (ii) Walls and top of the enclosure shall be constructed of at least 12 gauge chain link or equivalent. Corner posts shall be either one 2-3/8 inch schedule 40 steel pipe or two 1-5/8 inch schedule 40 steel pipes and anchored as provided for Group I cats.

h. Group IV - Margay, Leopard Cat, Pallas Cat, Marble Cat, Geoffroy's Cat, African Wild Cat, European Wild Cat, Jaguarundi, Little Spotted Cat, African Black Footed Cat, Sand Cat, Flatheaded Cat, Pampas Cat and Hybrids thereof:
   (i) At least 20 square feet of floor space shall be concrete or wood planking as a sanitary area for feeding unless a secured food receptacle which is cleaned daily is provided.
   (ii) Wall and top of the enclosure shall be constructed of at least 12 gauge chain link or equivalent. Corner posts shall be either one 2-3/8 inch schedule 40 steel pipe or two 1-5/8 inch schedule 40 steel pipes and anchored as provided for Group I cats.

7. Ursidae - Bear Family

Bears shall be classified into 3 groups:
Group I = Sun Bears, Asiatic Black bears, Sloth bears and Spectacled bears; Group II = American Black bears and European brown bears; and Group III = Polar bears and Brown bears.

(i) Floors of the enclosure shall be constructed of reinforced concrete 4 inches thick or they shall be of natural substrate or wood with the walls secured to a concrete footing deep enough below grade to preclude escape by digging (at least 5 feet for Group III).

(ii) Vertical corner posts shall be made of either one 2-3/8 inch schedule 40 steel pipe or two 1-5/8 inch schedule 40 steel pipe. Other vertical, horizontal, and top cross member supports shall be made of 1-5/8 inch schedule 40 steel pipe for Group I and 1-7/8 inch schedule 40 steel pipe for Groups II and III. All horizontal pipe supports shall be spaced no more than 5 feet apart for any group. The bottom horizontal pipe shall be no more than 3 inches above the concrete floor.

(iii) The framework for the walls and top of the cage shall be constructed of materials that are equal or greater in strength than the corner posts with all upright members set 2-1/2 feet in concrete and spaced no more than 10 feet apart for Groups I and II or 5 feet apart for Group III. The cross members (stringers) forming the framework for the top shall be spaced no more than 5 feet apart for any group. Iron pipe shall be standard grade for Groups I and II and structural strength grade for Group III.

(iv) For Groups I and II the walls of the cage shall be constructed of 9 gauge chain link or welded wire with mesh no greater than 2 inches in diameter. For Group III bears the walls of the cage shall be constructed of 5 gauge chain link or welded wire. Welded wire shall be welded to the framework every 4 inches.
Chain link fencing shall be secured along all edges to the framework using tension bars which shall be bolted to the frame work every foot. The walls of the cage for Groups I, II and III bears may also be constructed of vertical steel bars or rods of 5/8 inch diameter, spaced on 4 inch centers, and welded at the ends to 1-1/4 inch x 1/4 inch angle iron.
The horizontal angle iron supports shall be welded to the vertical posts. The bottom horizontal support shall be no more than 3 inches above the concrete floor and each horizontal support shall be spaced no more than 4 feet apart between floor and top.

(v) The top of the cage shall be constructed of material equal to the wall requirements for the particular group of bears enclosed. Shade shall be provided by covering 1/4 to 1/2 of the top with exterior grade plywood, fiberglass, or similar material.

(vi) A concrete or concrete block den at least 4 feet high by 4 feet wide by 6 feet long or an equivalent shall be provided for each animal; or one den at least 4 feet high by 6 feet wide by 8 feet long for two animals or for a female and her offspring of the year. The top of the den shall be constructed of concrete which may be covered on top with wood for laying. A den shall be provided with shavings, straw, or a wooden platform or flooring for reclining. The den shall be provided with adequate ventilation to prevent condensation of moisture. The den box may be of wood if the den is completely within the cage.

(vii) A bear shall be provided with a suitable scratching post.
(viii) A pool deep enough for complete immersion shall be required for polar bears and the pool surface area shall be in addition to the minimum cage size requirement.

(L) Order Tubulidentata - Aardvarks
1. The floor of the cage shall be dirt. The walls of the cage shall be constructed of 9 gauge non-rusting welded wire or concrete which has been buried to a depth of at least 5 feet to prevent escape by digging.

(M) Order Proboscidea - Elephant
1. A heated barn shall be provided in any geographical area where the ambient air temperature drops below 40 degrees Fahrenheit. The floor of the barn shall be constructed of at least 6 inches of reinforced concrete. All lights and other such objects and obstacles in the barn shall be kept outside the reach of the elephant.
2. Elephants shall be provided free exercise unchained on dirt for a minimum of 5 hours per each 24 hour period.
3. An enclosure constructed of 6-inch reinforced concrete, 2 inch diameter steel bars or 4 inch diameter schedule 40 galvanized steel pipe shall be provided. No roof is required.
4. Chaining requirements:
   a. Chains shall be secured to a concrete floor, concrete "dead man", or other immovable anchor.
   b. A covered chaining area shall be provided.
   c. An elephant may be chained by only one rear leg and the opposite front leg and in such a manner as to restrict movement but still allow the animal to easily lay down and rise again. Chains shall be rotated to the other two legs daily.
   d. Elephants chained for any extended period shall have their leg chains padded and shall be checked regularly to insure they are secure and to detect any injury to the leg.
   e. Snaps and clips may be used only within a primary enclosure. A clevis or stronger type chain attachment shall be used outside the primary enclosure.
5. Either a pool shall be provided or the elephant shall be washed with water daily, as weather or temperature permit.

(N) Order Hyracoidea - Hyrax
1. Limbs shall be provided for arboreal species.
2. Nest box or sheltered retreat shall be provided.
3. The floor of the cage shall be constructed of 4 inch concrete which shall be covered with dirt or natural substrate.
4. The walls of the cage shall be constructed of 1/2 inch by 1 inch mesh welded wire.

(O) Order Sirenia - Dugongs and Manatees - These animals shall be maintained in a manner that complies with 50 CFR, Part 18, Section 18.13(c).

(P) Order Perissodactyla - Tapirs, Rhinoceroses, etc.
1. The floor of the pen shall be dirt or natural substrate.
2. The walls of the pen for tapirs shall be constructed of 9 gauge chain link, or equivalent material. The walls of the enclosure for rhinoceroses shall be constructed of 6 inch reinforced concrete, 2 inch diameter steel bars, or 6 inch heavy duty galvanized steel pipe.

(Q) Order Artiodactyla - Wild Pigs, Hippopotami, Deer, Giraffes, Wild Cattle, Antelope, etc.
1. Wild Pigs and Peccaries
   a. A shelter with a roof and three walls shall be provided.
   b. The floor of the pen shall be dirt or natural substrate.
   c. The animals shall be precluded from escape by digging.
2. Hippopotami
   a. A heated barn shall be provided in any geographical area where the ambient air temperature drops below 40 degrees Fahrenheit.
   b. A pool shall be provided for the Nile hippopotamus which shall have a surface area of at least 300 square feet and a 35-degree nonskid ramp. The pool shall be not less than 5 feet deep. For each additional animal there shall be a 25% increase in the required pool area.
   c. A pool shall be provided for the pygmy hippopotamus which shall have a surface area of at least 100 square feet with a 35-degree nonskid ramp. The pool shall be not less than 3 feet deep. For each additional animal there shall be a 25% increase in the required pool area.
   d. The walls of the corral or paddock enclosure shall be constructed of 5-inch reinforced concrete or 5-inch structural grade schedule 40 galvanized steel pipe.
3. Deer, Elk, Giraffes, Wild Cattle, Antelope, and Wild Goats and Sheep.
   a. The floor of the pen shall be dirt or other natural substrate.
   b. All animals shall be provided with a shelter which has a roof and three walls. Shelters for giraffes shall provide at least 140 square feet of floor space for each giraffe. A heat source shall be provided for giraffes.
   c. Fences for giraffe, elk and wild cattle shall be constructed of 9 gauge woven wire or chain link with mesh not more than 6 inches in diameter or equivalent. Posts shall be of structural grade schedule 40

quality steel pipe or structurally sound 4 x 4 wood, spaced not more than 12 feet apart. A 6 foot vertical fence, with or without overhang, shall be required; a 7 foot vertical fence is required for elk.

d. Fences for deer, antelope and wild goats and sheep shall be constructed of 11 gauge woven wire with mesh not more than 6 inches in diameter or equivalent. Posts shall be of structurally sound 4 x 4 wood or equivalent, spaced not more than 12 feet apart. A 7 foot vertical fence is required for elk, red deer, bison, buffalo, impala, eland, antelope, goats and sheep; a 6 foot vertical fence is required for white-tailed deer, fallow deer, auodad and sika deer.

(3) Class Amphibia - Frogs, Toads, Salamanders

(A) General Requirements:

1. The animal's enclosure shall be kept within a closed and locked room or building which has covers over all drains and openings to prevent escape of the amphibians from the building. All doors shall be equipped with sweeps. Containers or exhibits shall be labeled with the identification of current species and the number of animals contained inside.
2. The rock or aquarium substrate shall be nonabrasive and shall be kept clean.
3. Any transfer containers shall have locked tops and shall be constructed in a manner which shall prevent the likelihood of escape.

(B) Family Bufonidae

1. One ten gallon standard commercial aquarium shall be provided for one animal and an additional three-fourths of a square foot (equivalent to one 5 gallon aquarium) shall be provided for each additional animal.
2. At least one-third of the bottom of the aquarium shall be covered with water and two-thirds shall be dry.
3. Animals shall be kept at a temperature of between 60 - 80 degrees Fahrenheit.

(C) Family Pipidae

1. One 10 gallon standard commercial aquarium shall be provided for one animal. The minimum floor space requirement shall be increased by 50 percent for each additional animal. Water at a minimum depth of 1 foot shall cover at least the minimum floor space requirement for the number of animals confined.
2. Animals shall be confined at a temperature of between 60 - 80 degrees Fahrenheit.

(4) Class Reptilia

(A) Order Crocodilia - Alligators, Caimans, Crocodiles, Gavials

1. The minimum cage length and width dimensions for one animal shall be equal to one and one-half times the length of the animal by one and one-half times the length of the animal. This space requirement shall be doubled for two animals and shall be increased by a factor of two-thirds for each additional animal thereafter.
2. One-third of the minimum cage space shall be water that is deep enough for the animal to immerse itself. If more than one animal is present in the pen, the pool shall be of sufficient size that all animals can immerse themselves simultaneously. Pool surfaces shall be made of non-abrasive material and the pool shall have a drain.
3. That portion of the pen not occupied by the pool shall be covered with non-abrasive material such as dirt or grass.
4. Crocodilians, except alligators and caimans less than 4 feet in length, shall be kept in a totally enclosed building or exhibit. Animals shall be confined in a manner which precludes their coming in contact with the public. The walls of an open pen for other crocodilians shall be equivalent to at least one foot in height for every one foot in length of the largest animal up to a maximum of 6 feet high. If any of the walls are made of a climbable material such as fencing, the top 1-1/2 feet of the wall shall be constructed of a slippery, nonclimbable material for all crocodilians except alligators. The walls for all species shall be buried deep enough to prevent escape by digging, or a buried apron shall be used. The walls of an open alligator pen shall be at least 4 feet high, and the corners shall be covered to prevent climbing. The upper one-half of the walls of the enclosure shall be constructed of either concrete or concrete block or 9 gauge chain link or welded wire with no greater than 2 inch x 4 inch size mesh. Concrete or concrete block shall be used for the bottom half of the enclosure. All chain link or welded wire edges shall be smoothly secured in a manner which will prevent injury to the animals.
5. Alligators may be kept outdoors if:
   a. An external heat source is provided, and the pool temperature is maintained above freezing;
   b. The pool is at least three feet deep; and
   c. The nighttime temperature does not fall below freezing for more than two consecutive nights.
6. Crocodilians other than alligators may be confined outdoors between sunrise and sunset if:
   a. The air temperature is above 65 degrees Fahrenheit.
7. Crocodilians other than alligators shall not be confined outdoors between sunset and sunrise.

(B) Family Chelydridae - Snapping turtles

1. The container or exhibit shall be labeled with the common and scientific name of the species and the subspecies, if known, and the number of animals contained inside.
2. Each turtle shall be provided with a minimum floor space that is equal to five times the size of the animal.
3. At least one-half of the minimum floor space shall be water which is deep enough to immerse the turtle.

(C) Snakes - Families Elapidae, Viperidae, Colubridae and Crotalidae

1. The container or exhibit for venomous snakes shall be labeled with the common and scientific name of the species and the subspecies, if known, and the number of animals contained inside. The label shall be legibly marked with the warning "Poisonous" or "Venomous."
2. The perimeter of the enclosure for snakes less than 6 feet shall be 1-1/2 times the length of the snake. The perimeter of the enclosure for snakes over 6 feet shall be twice the length of the snake.
3. All venomous snakes shall be kept in a locked exhibit or container which shall be located within a locked building, compound or enclosure.
4. The floor of the enclosure shall be constructed of non-abrasive material and hiding areas shall be provided.
5. At least two fully trained people shall be present when an occupied enclosure is opened or when one of these snakes is handled. The names of the trained handlers shall be listed with the department's Wildlife Protection Division in Sacramento.
6. Written animal escape "emergency procedures" shall be clearly and conspicuously posted in the building housing these snakes and shall be supplied to the department at the time the permit application is initially submitted.
7. A notice shall be clearly and conspicuously posted on the premises which shall provide the location of the nearest most readily available source of appropriate antivenin and a written plan from a hospital stating how a venomous bite should be treated. Each enclosure shall be clearly and conspicuously labeled with the appropriate antivenin to be used for the species in the cage.
8. If a snake is transported or removed from its primary enclosure for feeding or in order to clean the enclosure, the snake shall be kept in a fully enclosed container with a secure and locked lid which has air holes or other means of ventilation.
9. Snake hooks shall be present for caring for these snakes.
10. The permittee shall telephonically notify the department of any snake bite on humans or escapes of any snakes within 24 hours and shall provide a written report of the incident to the department's Wildlife Protection Division in Sacramento within one week.

(5) All other Classes, Orders, Families, Genera and species for which specific caging and/or enclosure requirements have not been provided in sections (b)(1)-(4) above shall be humanely confined in a manner which precludes escape.

(c) Incorporation by reference of the Federal Animal Welfare Regulations and Federal "Guide for the Care and Use of Laboratory Animals". Except as otherwise provided in subsections (a) and (b) above, permittees shall follow the requirements of the Federal Animal Welfare Regulations contained in 9 Code of Federal Regulations (CFR), Sections 2.33; 2.40; 3.75-3.85; 3.101(a)(3); and 3.136-3.142, as amended from time to time, as the United States Department of Agriculture adopts regulations pursuant to the Laboratory Animal Welfare Act and its Amendments as found at 7 United States Code (USC), Sections 2131-2157. The Commission hereby incorporates by reference the cited Federal Animal Welfare Regulations and the "Guide for the Care and Use of Laboratory Animals," (NIH Publication No. 86-23, Revised 1985) as if they were set out in full.

(d) Variances to Minimum Caging and Enclosure Requirements.

(1) The general requirements set forth in subsections (a) and (b) above are minimum standards for permanent facilities. Any deviation from these specifications because of the age of the animal being housed, the use of an unusual facility design, such as moats, islands, outdoor natural habitat enclosures, pits or barriers shall be subject to the approval of the inspecting officer with concurrence of the director. In granting any variance of the minimum caging and enclosure requirements, the inspecting officer and the director shall make a finding that the overall welfare of the animal(s) involved has been maintained.

(2) Those cat cages which substantially conform to the provisions of Section 671.3(b)(2)(K)(6) on or before August 3, 1989, shall be "grandfathered in". Existing cages, except currently approved cat cages, will be given three calendar years or until February 25, 1995 to comply with the new caging requirement set forth herein. The department may approve nonstandard cages on a case by case basis, if they substantially conform to the spatial requirements. The Regional Manager shall make a recommendation to the Chief of Patrol who will make the department's final decision. The department's final decision may be appealed to the Commission.

(3) These minimum facility and caging standards do not apply to wildlife temporarily maintained pursuant to Section 251.5(f) as provided by Fish and Game Code Section 3005.5.

(e) Care of Laboratory Animals. With the approval of the department, prohibited wild animals used for research purposes may be confined and cared for pursuant to the provisions of the "Guide for the Care and Use of Laboratory Animals" adopted by the U.S. Department of Health and Human Services (NIH Publication No. 86-23, Revised 1985).

(f) Regulations Manual. The facility and caging requirements specific to animals that may be lawfully possessed are provided in the DEPARTMENT OF FISH AND WILDLIFE MANUAL 671 (2/25/92) - IMPORTATION, TRANSPORTATION AND POSSESSION OF WILD ANIMALS, which is incorporated by reference herein. Copies are available from the department's Wildlife Protection Division, 1416 Ninth Street, Box 944209, Sacramento, CA 94244-2090. Facility and caging regulations of subsection 671.3(b) contained in DEPARTMENT OF FISH AND WILDLIFE MANUAL 671 (2/25/92) are hereby adopted and made part of this Title 14 and are thus incorporated by reference.

§671.4 Transportation Standards for Exhibition of Live Restricted Animals.

(a) Responsibility of Permittee. Permittees shall provide a copy of these regulations to any carrier or intermediate handler transporting wild animals. Permittees shall not transport or possess wild animals within the state for periods exceeding their exhibiting itinerary unless they provide facilities which meet the caging standards of Section 671.3 for each animal listed on their permit.

(b) Requirements for Carriers and Intermediate Handlers. (Also see subsections (d) and (f) of this Section regarding holding and food and water requirements.)

(1) Carriers and intermediate handlers shall not accept any animal presented by any person for shipment more than four hours prior to the scheduled departure of the primary conveyance on which it is to be transported.

(2) Carriers or intermediate handlers shall accept wild animals for transportation only if the transport cages are constructed in accordance with the provisions of subsection 671.4(e)(1) below.

(3) Carriers or intermediate handlers whose facilities fail to meet the minimum temperature allowed by these regulations may not accept for transportation any live animal consigned by any person unless the consignor furnishes to the carrier or intermediate handler a certificate executed by a licensed veterinarian on a date which shall not be more than 10 days prior to delivery of such animal for transportation, stating that such live animal is acclimated to air temperatures lower than 7.2° C. (45° F.). A copy of such certificate shall accompany the shipment to its destination. The certificate shall include at least the following information: Name and address of the consignor; the number of animals in the shipment; a certifying statement (e.g.,"I hereby certify that the animal(s) in this shipment is (are), to the best of my knowledge, acclimated to air temperatures lower than 7.2° C (45° F)"; and the signature of the accredited veterinarian, assigned accreditation number, and date.

(4) Carriers and handlers shall not commingle animal shipments with inanimate cargo. All animal holding areas of any carrier, handler, or any mode of conveyance shall be cleaned and sanitized often enough to prevent an accumulation of debris or excreta, to minimize vermin infestation and to prevent a disease hazard. An effective program shall be provided and maintained by the owner or operator of the holding facility for the control of insects, ectoparasites, and avian and mammalian pests for all animal holding areas. All animal-holding areas containing live animals shall be provided with fresh air by means of windows, doors, vents or an air conditioning system to minimize odors and moisture condensation. Auxiliary ventilation, such as exhaust fans and vents or fans or blowers or air conditioning shall be used for any animal-holding area containing live animals when the air temperature within such animal-holding area is not compatible with the health and comfort of the animal. The temperature shall be regulated to protect the animals from temperature extremes. Animals shall not be placed in a direct draft.

(5) Carriers and intermediate handlers shall attempt to notify the consignee at least once every two hours following the arrival of any live animals at the animal holding area of the terminal cargo facility. The time, date and method of each attempted notification and the final notification to the consignee and the name of the person notifying the consignee shall be recorded on the copy of the shipping document retained by the carrier or intermediate handler and on a copy of the shipping document accompanying the animal shipment.

(c) Conveyances (motor vehicle, rail, air, and marine).

(1) The cargo space of any conveyance used to transport live animals shall be designed and constructed to protect the health, and ensure the safety and comfort of the live animals contained therein at all times.

(2) The animal space shall be constructed and maintained to prevent the ingress of direct engine exhaust fumes and gases from the conveyance.

(3) No live animal shall be placed in any cargo space that does not have sufficient air for normal breathing for each animal contained therein, and the transport cages shall be positioned in the animal cargo space so that each animal has sufficient air for normal breathing.

(4) Transport cages shall be positioned in the conveyance so that the animals can be quickly removed in an emergency.

(5) The interior of the animal cargo space shall be kept clean and sanitary.

(6) Live animals shall not be transported with any material, substance, (e.g., dry ice) or device which may be injurious to their health and well-being unless proper precaution is taken to prevent such injury.

(d) Handling Provisions.

(1) Carriers and handlers shall move live animals from animal holding areas to conveyances and from the conveyances to animal holding areas as expeditiously as possible. Carriers and handlers holding live animals in an animal holding area or transporting live animals from the animal holding area to the primary conveyance and from the primary conveyance to the animal holding area, including loading and unloading procedures, shall provide the following:

(A) Shelter from sunlight. Shade shall be provided to protect the animals from the direct rays of the sun. Animals shall not be subjected to surrounding air temperatures which exceed 29.5° C, (85° F.). The temperature shall be taken outside of the primary enclosure at a distance not to exceed 3 feet from any one of the external walls and on a level parallel to the bottom of the enclosure at a point which approximates half the distance between top and bottom of the enclosure.

(B) Shelter from rain or snow. Protection shall be provided so animals remain dry during rain or snow.

(C) Shelter from cold weather. Transport cages shall be covered to provide protection for animals when the air temperature falls below 10° C. (50° F.) and animals shall not be subjected to surrounding air temperatures which fall below 7.2° C. (45° F.). The temperature shall be taken at a distance not to exceed 3 feet from any one of the

external walls of the transport cage unless such animals are accompanied by a veterinarian's certificate of acclimation to temperatures lower than 7.2° C, (45° F.).

(2) The transport cage shall not be handled in a manner that may cause physical or emotional trauma to the animal contained therein. Transport cages with animals inside shall not be tossed, dropped, or needlessly tilted and shall not be stacked in a manner which may reasonably be expected to result in their falling.

(e) Transport Caging Provisions. No person shall offer for transportation any live animal in a cage which does not conform to the following requirements:

(1) Cages used to transport live animals shall be constructed in such a manner that:

(A) The structural strength of the cage shall be sufficient to contain the animal and to withstand the normal rigors of transportation;

(B) The interior of the cage shall be free from any protrusions that could injure the animal contained therein;

(C) The openings of such cages shall be easily accessible at all times for emergency removal of live animals;

(D) When a primary enclosure is permanently affixed within the animal cargo space of the primary conveyance so that the front opening is the only source of ventilation for such primary enclosure, the front opening shall open directly to the outside or to an unobstructed aisle or passageway within the primary conveyance. Such front ventilation opening shall be at least 90% of the total surface area of the front wall of the primary enclosure and covered with bars, wire mesh or smooth expanded metal.

If there are ventilation openings located on two opposite walls of the primary enclosure, the ventilation openings on each wall shall be at least 16 percent of the total surface area of each such wall; or, if there are ventilation openings located on all four walls of the primary enclosure, the ventilation openings on each such wall shall be at least 8 percent of the surface area of each such wall. At least one-third of the total minimum area required for ventilation of the primary enclosure shall be located on the lower one-half of the primary enclosure and at least one-third of the total minimum area required for ventilation of the primary enclosure shall be located on the upper one-half of the primary enclosure. Projecting rims or other devices shall be placed on the exterior of the outside walls to prevent obstruction of ventilation openings and to provide a minimum air circulation space of 1.9 centimeters (.75 inch) between the primary enclosure and any adjacent cargo or conveyance wall; and

(E) Adequate handholds or other devices for lifting shall be provided on the exterior of the cage to enable lifting of the enclosure without tilting and to ensure that the person handling the cage will not be in contact with the animal.

(2) Animals transported in the same cage shall be of the same species and maintained in compatible groups. Animals that have not reached puberty shall not be transported in the same cage with adult animals other than their dams. Socially dependent animals (e.g., sibling, dam, and other members of a family group) shall be allowed visual and olfactory contact. Any female animal in season (estrus) shall not be transported in the same cage with any male animal.

(3) Transport cages shall be as set forth below. In the event, however, the provisions of 9 CFR, Sections 3.85-3.91, Sections 3.112-3.118 and Sections 3.136-3.142 are met, the requirements of this subsection shall be deemed satisfied.

(A) All Animals Except Primates Traveling for Performances or Exhibition.

Minimum length: cages shall be at least 1-1/4 times the body length of quadruped (four-legged) animals, excluding the tail, or long enough for other animal species to lie down and get up normally.

Minimum height: cages shall be at least the full height of the animal plus 2 inches (antlers included in body height).

Minimum width: except for hoofstock, cages shall be at least 1-1/2 times the body width of the animal. For hoofstock, the width of the cages shall be consistent to the needs of the animal to ensure its safe delivery.

(B) Primates Traveling for Performance and Exhibition.

Minimum length: cages shall be at least equal to the length of the animal as measured from the buttocks to the top of the head.

Minimum height: cages shall be at least 1-1/2 times the height of the primate when it is in its natural posture.

Minimum width: cages shall be at least equal to the length of the animal as measured from the buttocks to the top of the head. The cage shall be large enough to allow the animal to lie down.

Notwithstanding the minimum requirements above, cages for adult chimpanzees and orangutans shall be at least 4' long(L) x 4' wide(W) x 4' high(H) with one shelf or perch. When not traveling, an exercise cage of at least 6'(L) x 4'(W) x 6'(H) shall be provided for a minimum of four hours per day. For adult small monkeys and baboons, cages shall be at least 3'(L) x 3'(W) x 4'(H). When not traveling, an exercise cage of at least 4'(L) x 4'(W) x 6'(H) shall be provided for a minimum of four hours per day. Primates less than one year of age shall be transported in a cage of such size and construction which ensures its safe delivery.

(C) Immediately upon arrival at a destination, animals traveling for performances or exhibition shall be placed in a space equal to 1/3 the minimum permanent space required for that species. Notwithstanding the foregoing, animals which are regularly exercised by exhibitors shall be permitted to remain in their transportation cages provided the permittee's veterinarian certifies that such cages provide sufficient space for the animal once it has arrived at a destination. The department shall bring to the immediate attention of the Commission any circumstances where in the opinion of the department's officer, proper care is not being provided.

Animals not used in performances or exercised regularly shall be placed in a space equal to 1/2 the minimum

permanent space required for that species. Elephants accompanied by an attendant may be staked out in a roped off area which excludes the public.

(4) Transport cages shall have solid bottoms to prevent leakage in shipment and shall be cleaned and disinfected pursuant to subsections 671.2(a)(4) and (5). Transport cages shall contain clean litter of a suitable absorbent material, which is safe and nontoxic to the animals, in sufficient quantity to absorb and cover excrement.

(5) Transport cages consigned to carriers and intermediate handlers shall be clearly marked on top and on all sides with the words "Live Wild Animal" in letters not less than 1 inch in height, and with arrows or other markings to indicate the correct upright position of the container.

(6) Documents accompanying the shipment consigned to carriers and intermediate handlers shall be attached in an accessible location on the outside of one transport cage.

(f) Care in Transit.

(1) To minimize the distress to animals during surface transportation, the driver shall visually inspect the animals at least once every 4 hours to assure that the animals are not in obvious physical distress and to provide for any needed veterinary care as soon as possible. When transported by air, animals shall be observed if the cargo space is accessible during flight. If the cargo space is not accessible during flight, the carrier shall visually observe the animals whenever the cargo space is accessible to assure that all applicable standards are being complied with and to determine whether any of the live animals are in obvious physical distress.

(2) Animals shall not be taken from their cage except under extreme emergency.

(3) Food and water requirements while in transit.

(A) All live animals shall be offered potable water within 4 hours prior to being transported. Any person who transports live animals shall provide potable water to all animals being transported at least every 12 hours after such transportation is initiated except as directed by a veterinarian or in the case of hibernation. Animals requiring more water shall be treated appropriately.

(B) Each animal shall be fed at least once in each 24 hour period, except as directed by a veterinarian. Predators are to be separated when feeding. Animals requiring more food shall be treated appropriately.

(C) Any person who offers animals to any carrier or intermediate handler for transportation shall comply with the provisions of subsection 671.1(a)(4) and shall affix to the outside of the transportation cage written instructions pursuant to subsections 671.4(f)(3)(A) and (B) concerning the food and water requirements of each animal.

(D) No carrier or intermediate handler shall accept any live animals for transportation unless written instructions concerning the food and water requirements of each animal are affixed to the outside of the cage.

§671.5. Disposition of Violations Related to Possession of Wild Animals.

(a) Any live bird or mammal that is (1) designated as a furbearer, game, nongame, fully protected, threatened, or endangered animal or is of a species native to California, and (2) possessed in violation of Fish and Game Code section 3005.5 or regulations adopted pursuant thereto, shall be seized by the department. An animal that is seized may be taken to another location by the department or seized in place.

(b) Any person who, in violation of the provisions of the Fish and Game Code or regulations adopted pursuant thereto, brings into this state or transports or possesses within this state any live wild animal other than those specified in subdivision (a) may, upon written notice from an enforcing officer, be authorized to exercise one of the following options within the time and by the method specified by the enforcing officer, to have the animal (1) transferred to an appropriately permitted facility, (2) transferred out of the state, or (3) humanely destroyed. The exercise of any such option shall be under the direction and control of the enforcing officer and at the expense of the owner or possessor. If the owner or possessor fails to exercise such option within the time specified by the enforcing officer, the department shall thereafter seize the animal. An animal that is seized may be taken to another location by the enforcing officer or seized in place.

(c) Once an animal is seized pursuant to subsection (a) or (b), the enforcing officer may: (1) transfer the animal to an appropriate facility, (2) transfer the animal out of the state, (3) humanely destroy the animal, or (4) for animals specified in subsection (a) only, release the animal to the wild. Costs associated with the seizure, care, holding, transfer and destruction of the animal will, at the discretion of the department, be at the expense of the owner or possessor. Failure to pay these costs may result in an action for cost recovery and civil penalties pursuant to Fish and Game Code section 2125.

§671.6. Release of Animals Into the Wild.

(a) No person shall release into the wild without written permission of the Commission any wild animal (as defined by Section 2116 of the Fish and Game Code), including domestically reared stocks of such animals, which:

(1) is not native to California;

(2) is found to be diseased, or there is reason to suspect may have the potential for disease;

(3) may be genetically detrimental to agriculture or to native wildlife; or

(4) has not been successfully introduced prior to 1955.

(b) No permission will be granted to any person to release into the wild state turkeys that have been domestically reared for propagation or hunting purposes, except as provided in subsection 600(i)(4) of these regulations. Only wild turkeys trapped from the wild by the department may be released into the wild.

(c) Every person who releases Barbary partridges, Turkish or Greek chukar partridges; French, Spanish or Arabian red-legged partridges; and/or bobwhite or coturnix quail into the wild shall have a valid permit signed by the director of the

department before making such a release. Persons desiring to release such birds shall submit an application showing the number and sex of birds to be released, the location of the proposed release, and the proposed date of such release.

At the time of release of such birds, the department required that they shall be banded by the permittee with appropriate bands furnished by the department. The department may require a report giving the age, sex and number of the individual birds released.

(d) Application for the introduction of all non-native animals, except those birds listed in subsection 671.6(c), shall be made to the commission on forms supplied by the department.

§671.7. Permit Requirements for Aquaculture and Fish.

All persons who apply for or have an Aquaculture permit (subsection 671.1(b)(2)) or a Fish permit (subsection 671.1(b)(12)) are subject to the following requirements and conditions. Aquatic species importations operating under these permits do not require the importation permit specified in Section 236.

(a) Definitions.

(1) "Closed-water system" is defined as a closed system or systems that treats holding water and sediments sufficiently to ensure against the release of live organisms, including parasites, pathogens and viruses, into the waters of the state. For purposes of this section, municipal treated sewage systems are not considered waters of the state.

(2) "Terminal" market is defined as a retail sale location holding live restricted species aquaculture product for human consumption following the sales requirements of subsection 671.7(g).

(b) General Requirements.

(1) All live restricted species shall be held, raised, and transported in closed-water systems. The department may inspect these systems at any time to determine if they are adequate for the specific restricted species being held.

(2) Facilities and transport systems must be designed so that biosecurity is maintained in the case of failure of the primary containment system.

(3) Access to facilities and transport systems containing restricted species shall be restricted through means determined to be adequate by the department to assure against unauthorized removal of restricted species.

(4) Co-mingling or hybridization of restricted and non-restricted species is prohibited unless authorized by the department. If restricted species are co-mingled or hybridized with non-restricted species, all such animals shall be considered restricted species for the purpose of these regulations. Such co-mingled restricted species that can be individually identified as non-restricted and that can be separated from the restricted species may be exempt from this provision with prior department approval.

(5) Every restricted species permittee shall have a written Emergency Action Plan readily available and posted in a conspicuous place in the event of an escape or a containment failure involving a restricted species.

(A) The Emergency Action Plan shall be titled, with a revision date, updated annually and include, but is not limited to the following:

1. Written plan of action for emergencies including a description of emergency measures in the event of a containment failure.
2. List of the re-capture and mobile transport equipment available and where they are located, including but not limited to nets and temporary containers.
3. List of emergency telephone numbers that includes the local department regional office and other contacts as specified on the permit.

(B) Permittees are responsible for the capture and for the costs incurred by the department related to capture of escaped animals or a containment failure.

(6) Aquaculture and Fish permits are subject to the department's authority to deny, suspend, or revoke a permit pursuant to subsection 671.1(c), but the department may also suspend or amend any Aquaculture or Fish permit if the department determines that additional permit conditions are necessary to mitigate or avoid unexpected adverse impacts to natural resources arising from the permitted activities.

(c) Permit Application Requirements. The following information shall accompany an application for each new restricted species permit, amendment of an existing permit, or renewal:

(1) New Applicants and Permittees Requesting Amendments.

(A) An inventory of all restricted species requested including the common and scientific name of each species, and the weight, volume, or count of each species.

(B) A written statement detailing the type of business that will be conducted with the restricted aquaculture species requested.

(C) A copy of the applicant's current aquaculture registration issued by the department, if a restricted species aquaculture permit is being requested.

(D) A copy of their Emergency Action Plan.

(2) Renewals.

(A) An inventory of all restricted species presently held at their facility including the common and scientific name of the each species, and the weight, volume, or count of each species.

(B) The permittee shall provide the following informational report to the department:

1. the weight, volume or count of all restricted species imported under their restricted species permit in the past year;

2. the weight, volume or count of all restricted species sold and/or shipped under their restricted species permit in the past year;
3. the weight, volume or count of all restricted species produced under their restricted species permit in the past year (for Aquaculture permits only) and;
4. Any other information as specified in the permit.

(C) A written statement detailing the type of business that will be conducted with the restricted species requested.
(D) A copy of the applicant's current aquaculture registration issued by the department, if a restricted species aquaculture permit is being requested.
(E) A copy of their Emergency Action Plan.

(d) Importation of Live Aquatic Restricted Species. With the exception of those importations described in subsections 236(a), (b) and (c) of these regulations, restricted species listed in subsection 671(c) may be imported into the state only in accordance with the following terms and conditions:

(1) No importations of restricted species into the state may be made prior to the issuance of the importer's restricted species permit.

(2) All importations of restricted species shall be accompanied by an invoice or bill of lading, showing the name and address of the producer, date of shipment, the common and scientific names of the species being transported, the weight, volume, or count of each species in the shipment, the name, address, and restricted species permit number of the intended receiver. A copy of the importer's restricted species permit shall accompany each shipment.

(3) Source of restricted species is an authorized seller who has a good record of husbandry and health management, as determined by the department.

(4) Notification of each restricted species importation(s) shall reach the department regional office or other specified office by letter, fax, or telephone at least five days in advance of the importation date. Under special circumstances, the department may waive this five day notice requirement.

(5) All restricted species imported into California under these regulations may be inspected by the department at either the place of entry into the state or at another location as specified by the department. The person importing restricted species may be required to provide facilities for inspection and sorting and shall be required to pay the department inspection costs including salary and travel expenses of the inspector.

(e) Transportation of Live Aquatic Restricted Species within the State.

(1) Restricted species cannot be moved alive from an aquaculture or any holding facility unless specifically authorized in the restricted species permit issued by the department.

(2) All shipments of live restricted species by a permittee shall be accompanied by an invoice or bill of lading, showing the name and address of the permittee, date of shipment, the common and scientific name of the species being transported, the weight, volume, or count of each species in the shipment, the name, address, and restricted species permit number of the intended receiver. A copy of the shipper's restricted species permit shall accompany each shipment. The contents of the shipment and all applicable documentation shall be immediately made available to the department upon request.

(3) Notification of restricted species shipment(s) shall reach the department regional office or other specified office by letter, fax, or telephone at least 48 hours in advance of the shipment date.

(4) Both the seller and intended receiver restricted species permittees shall retain a copy of the invoice, bill of lading or similar accountable document for three years and make it available to the department upon request.

(f) Sales by Restricted Species Permittees.

(1) Live restricted species may be sold by Aquaculture or Fish permittees if both the seller and buyer hold a restricted species permit issued by the department for the species being sold and only if the permit(s) specifically authorize live sales.

(2) All shipping containers of live restricted species shall be labeled as restricted aquaculture product unless specifically authorized differently in the restricted species permit issued by the department.

(3) All live or processed restricted species sold shall be accompanied by a sales invoice, showing the name and address of the permittee, the permittee's restricted species permit number, date of sale, the common and scientific name of the species, and the weight, volume, or count of each species sold. The restricted species and all applicable documents shall be immediately made available to the department upon request.

(4) No live restricted species shall be stocked in private, public or fish-for-fee facilities or released in the waters of the state.

(g) Terminal Market Sales.

(1) All restricted species sold or leaving the premises of a terminal market shall be dead and accompanied by a sales receipt showing the date of purchase and name of business where purchased or be packaged in accordance with subsection 240(c) of these regulations.

(2) It is unlawful for any person to allow any live restricted species to leave a terminal market or be released in the waters of the state.

§671.8. Inspection of Facilities.

(a) The department may approve an application prior to facilities being built, inspected and approved. The department shall not issue a restricted species permit until a determination that an applicant meets the qualifications to obtain a permit is verified, and the applicant's facility(ies) have been inspected by the department and the department

determines that the applicant's facility(ies) meets the minimum standards for humane care, treatment, and housing of wild animals.

(b) The applicant for a restricted species permit shall submit payment of the inspection fee to the department, as specified in Section 703, for the inspection of the applicant's caging or holding facility(ies) and animal(s) each permit year.

(c) Every applicant shall submit to the department with the inspection fee, a current map of all enclosures housing restricted species in California listed on their inventory. Each enclosure shall be numbered both on the map and physically on the enclosure. The number on the enclosure should be a minimum of two inches high, permanently attached, and clearly visible for ease of identification. The map shall also include identification of the species residing in the enclosure and the dimensions (Length x Width x Height) of the enclosure for ease of identification. An enclosure is defined as the structure where a restricted species is confined. If a structure or enclosure is divided into more than one confined area, each area is considered a separate enclosure and shall be shown as a separate enclosure on the map. If an enclosure houses more than one species that co-exist, and is not divided, it shall be considered one enclosure.

(d) The department's law enforcement staff may enter any place including, but not limited to, any holding facility, vehicle or vessel, where restricted species are kept or may be kept, to: inspect animals, facilities or animal equipment; inspect, audit, or copy any permit, book or record required to be kept for such species; or to otherwise monitor or enforce compliance with state and federal statutes, and regulations adopted pursuant to state and federal statutes, related to restricted species. Inspections may be made at any time with or without prior notification.

(e) Types of Inspections.

(1) Initial.

a. Before the department issues a new restricted species permit to any resident applicant, the applicant shall arrange for an initial inspection of an applicant's caging and holding facility(ies), as described in paragraphs (b) and (c), and arrange for another inspection after the animal(s) arrive.

b. Before the department issues a new permit to a nonresident applicant for exhibition purposes, the applicant shall arrange for an inspection of the facility(ies) prior to the applicant's first performance at the first location listed on the Restricted Species Nonresident Exhibiting Permit Itinerary. The applicant shall not proceed with a performance, show, or appearance prior to submitting to, and passing, an inspection.

c. Before the department issues a new permit to a nonresident applicant for nonexhibition purposes, the applicant shall arrange for an initial inspection of an applicant's caging and holding facilities, as described in paragraphs (b) and (c).

(2) Renewal.

a. Before the department renews a restricted species permit, the applicant shall pass an annual renewal inspection, based on the permit year, as described in paragraph (b).

b. Before the department renews a permit for a nonresident applicant, the applicant shall arrange for an inspection of the facility(ies) prior to the first performance at the first location listed on the Restricted Species Nonresident Exhibiting Permit Itinerary. The applicant shall not proceed with a performance, show, or appearance prior to submitting to and passing an inspection and receiving a permit.

c. Before the department renews a permit to a nonresident for non-exhibiting purposes the applicant shall pass an annual renewal inspection based on the permit year as described in paragraph (b).

(3) Amendment. Prior to an amendment of an existing permit, the permittee shall notify the department and provide photo documentation of the enclosure that includes all required elements of the minimum standards as specified in 671.3. If the amendment is approved, the permittee may add the species to their inventory. Upon renewal, the permittee shall include the new amended species and enclosure information.

(f) Re-inspection. If the department identifies a non-compliant item or violation during an inspection, as described in paragraphs (1), (2) and (3), the department may require that the applicant/permittee provide for one or more additional inspections within a specified time period at the applicant/permittee's expense prior to issuing a permit or permit amendment.

(g) Research Entities as Eligible Local Entities. Applicants for research permits shall submit the annual research-detrimental species fee and the ELE/MOU fee to the department as specified in Section 703, and the department may enter into a memorandum of understanding (MOU) with the applicant as an eligible local entity (ELE) to inspect facilities. With annual renewal and the annual ELE/MOU renewal fee paid, an MOU may be valid for up to five permit years, at which time, a new MOU will be required. Until the department enters into an MOU, a research facility shall submit an annual statement from a USDA accredited veterinarian certifying that the animals and their housing have been inspected at least twice during the year, at six month intervals, and that the animals are being cared for and housed in accordance with applicable requirements in subsections 671.1(a)(8)(A)-(F), and sections 671.2 through 671.4 to satisfy the inspection requirement.

Subpart D – Specifications for the Humane Handling, Care, Treatment, and Transportation of Nonhuman Primates[2]

Source: 56 FR 6495, Feb. 15, 1991, unless otherwise noted.

FACILITIES AND OPERATING STANDARDS

§ 3.75 - Housing facilities, general.

(a) ***Structure: construction.*** Housing facilities for nonhuman primates must be designed and constructed so that they are structurally sound for the species of nonhuman primates housed in them. They must be kept in good repair, and they must protect the animals from injury, contain the animals securely, and restrict other animals from entering.

(b) ***Condition and site.*** Housing facilities and areas used for storing animal food or bedding must be free of any accumulation of trash, waste material, junk, weeds, and other discarded materials. Animal areas inside of housing facilities must be kept neat and free of clutter, including equipment, furniture, or stored material, but may contain materials actually used and necessary for cleaning the area, and fixtures and equipment necessary for proper husbandry practices and research needs. Housing facilities other than those maintained by research facilities and Federal research facilities must be physically separated from any other businesses. If a housing facility is located on the same premises as any other businesses, it must be physically separated from the other businesses so that animals the size of dogs, skunks, and raccoons, are prevented from entering it.

(c) ***Surfaces.***

(1) ***General requirements.*** The surfaces of housing facilities – including perches, shelves, swings, boxes, houses, dens, and other furniture-type fixtures or objects within the facility – must be constructed in a manner and made of materials that allow them to be readily cleaned and sanitized, or removed or replaced when worn or soiled. Furniture-type fixtures or objects must be sturdily constructed and must be strong enough to provide for the safe activity and welfare of nonhuman primates. Floors may be made of dirt, absorbent bedding, sand, gravel, grass, or other similar material that can be readily cleaned, or can be removed or replaced whenever cleaning does not

2 *Nonhuman primates include a great diversity of forms, ranging from the marmoset weighing only a few ounces, to the adult gorilla weighing hundreds of pounds, and include more than 240 species. They come from Asia, Africa, and Central and South America, and they live in different habitats in nature. Some have been transported to the United States from their natural habitats and some have been raised in captivity in the United States. Their nutritional and activity requirements differ, as do their social and environmental requirements. As a result, the conditions appropriate for one species do not necessarily apply to another. Accordingly, these minimum specifications must be applied in accordance with the customary and generally accepted professional and husbandry practices considered appropriate for each species, and necessary to promote their psychological well-being. These minimum standards apply only to live nonhuman primates, unless stated otherwise.*

eliminate odors, diseases, pests, insects, or vermin. Any surfaces that come in contact with nonhuman primates must:

(i) Be free of excessive rust that prevents the required cleaning and sanitization, or that affects the structural strength of the surface; and

(ii) Be free of jagged edges or sharp points that might injure the animals.

(2) ***Maintenance and replacement of surfaces.*** All surfaces must be maintained on a regular basis. Surfaces of housing facilities – including houses, dens, and other furniture-type fixtures and objects within the facility – that cannot be readily cleaned and sanitized, must be replaced when worn or soiled.

(3) ***Cleaning.*** Hard surfaces with which nonhuman primates come in contact must be spot-cleaned daily and sanitized in accordance with § 3.84 of this subpart to prevent accumulation of excreta or disease hazards. If the species scent mark, the surfaces must be sanitized or replaced at regular intervals as determined by the attending veterinarian in accordance with generally accepted professional and husbandry practices. Floors made of dirt, absorbent bedding, sand, gravel, grass, or other similar material, and planted enclosures must be raked or spot-cleaned with sufficient frequency to ensure all animals the freedom to avoid contact with excreta. Contaminated material must be removed or replaced whenever raking and spot cleaning does not eliminate odors, diseases, insects, pests, or vermin infestation. All other surfaces of housing facilities must be cleaned and sanitized when necessary to satisfy generally accepted husbandry standards and practices. Sanitization may be done by any of the methods provided in § 3.84(b)(3) of this subpart for primary enclosures.

(d) ***Water and electric power.*** The housing facility must have reliable electric power adequate for heating, cooling, ventilation, and lighting, and for carrying out other husbandry requirements in accordance with the regulations in this subpart. The housing facility must provide running potable water for the nonhuman primates' drinking needs. It must be adequate for cleaning and for carrying out other husbandry requirements.

(e) ***Storage.*** Supplies of food and bedding must be stored in a manner that protects the supplies from spoilage, contamination, and vermin infestation. The supplies must be stored off the floor and away from the walls, to allow cleaning underneath and around the supplies. Food requiring refrigeration must be stored accordingly, and all food must be stored in a manner that prevents contamination and deterioration of its nutritive value. Only the food and bedding currently being used may be kept in animal areas, and when not in actual use, open food and bedding supplies must be kept in leakproof containers with tightly fitting lids to prevent spoilage and contamination. Substances that are toxic to the nonhuman primates but that are required

for normal husbandry practices must not be stored in food storage and preparation areas, but may be stored in cabinets in the animal areas.

(f) ***Drainage and waste disposal.*** Housing facility operators must provide for regular and frequent collection, removal, and disposal of animal and food wastes, bedding, dead animals, debris, garbage, water, and any other fluids and wastes, in a manner that minimizes contamination and disease risk. Housing facilities must be equipped with disposal facilities and drainage systems that are constructed and operated so that animal wastes and water are rapidly eliminated and the animals stay dry. Disposal and drainage systems must minimize vermin and pest infestation, insects, odors, and disease hazards. All drains must be properly constructed, installed, and maintained. If closed drainage systems are used, they must be equipped with traps and prevent the backflow of gases and the backup of sewage onto the floor. If the facility uses sump ponds, settlement ponds, or other similar systems for drainage and animal waste disposal, the system must be located far enough away from the animal area of the housing facility to prevent odors, diseases, insects, pests, and vermin infestation. If drip or constant flow watering devices are used to provide water to the animals, excess water must be rapidly drained out of the animal areas by gutters or pipes so that the animals stay dry. Standing puddles of water in animal areas must be mopped up or drained so that the animals remain dry. Trash containers in housing facilities and in food storage and food preparation areas must be leakproof and must have tightly fitted lids on them at all times. Dead animals, animal parts, and animal waste must not be kept in food storage or food preparation areas, food freezers, food refrigerators, and animal areas.

(g) ***Washrooms and sinks.*** Washing facilities, such as washrooms, basins, sinks, or showers must be provided for animal caretakers and must be readily accessible.

§ 3.76 - Indoor housing facilities.

(a) ***Heating, cooling, and temperature.*** Indoor housing facilities must be sufficiently heated and cooled when necessary to protect nonhuman primates from temperature extremes and to provide for their health and well-being. The ambient temperature in the facility must not fall below 45 °F (7.2 °C) for more than 4 consecutive hours when nonhuman primates are present, and must not rise above 85 °F (29.5 °C) for more than 4 consecutive hours when nonhuman primates are present. The ambient temperature must be maintained at a level that ensures the health and well-being of the species housed, as directed by the attending veterinarian, in accordance with generally accepted professional and husbandry practices.

(b) ***Ventilation.*** Indoor housing facilities must be sufficiently ventilated at all times when nonhuman primates are present to provide for their health

and well-being and to minimize odors, drafts, ammonia levels, and moisture condensation. Ventilation must be provided by windows, doors, vents, fans, or air conditioning. Auxiliary ventilation, such as fans, blowers, or air conditioning, must be provided when the ambient temperature is 85 °F (29.5 °C) or higher. The relative humidity maintained must be at a level that ensures the health and well-being of the animals housed, as directed by the attending veterinarian, in accordance with generally accepted professional and husbandry practices.

(c) ***Lighting.*** Indoor housing facilities must be lighted well enough to permit routine inspection and cleaning of the facility, and observation of the nonhuman primates. Animal areas must be provided a regular diurnal lighting cycle of either natural or artificial light. Lighting must be uniformly diffused throughout animal facilities and provide sufficient illumination to aid in maintaining good housekeeping practices, adequate cleaning, adequate inspection of animals, and for the well-being of the animals. Primary enclosures must be placed in the housing facility so as to protect the nonhuman primates from excessive light.

§ 3.77 - Sheltered housing facilities.

(a) ***Heating, cooling, and temperature.*** The sheltered part of sheltered housing facilities must be sufficiently heated and cooled when necessary to protect the nonhuman primates from temperature extremes, and to provide for their health and well-being. The ambient temperature in the sheltered part of the facility must not fall below 45 °F (7.2 °C) for more than 4 consecutive hours when nonhuman primates are present, and must not rise above 85 °F (29.5 °C) for more than 4 consecutive hours when nonhuman primates are present, unless temperatures above 85 °F (29.5 °C) are approved by the attending veterinarian, in accordance with generally accepted husbandry practices. The ambient temperature must be maintained at a level that ensures the health and well-being of the species housed, as directed by the attending veterinarian, in accordance with generally accepted professional and husbandry practices.

(b) ***Ventilation.*** The sheltered part of sheltered animal facilities must be sufficiently ventilated at all times to provide for the health and well-being of nonhuman primates and to minimize odors, drafts, ammonia levels, and moisture condensation. Ventilation must be provided by windows, doors, vents, fans, or air conditioning. Auxiliary ventilation, such as fans, blowers, or air conditioning, must be provided when the ambient temperature is 85 °F (29.5 °C) or higher. The relative humidity maintained must be at a level that ensures the health and well-being of the species housed, as directed by the attending veterinarian, in accordance with generally accepted professional and husbandry practices.

(c) ***Lighting.*** The sheltered part of sheltered housing facilities must be lighted well enough to permit routine inspection and cleaning of the facility, and observation of the nonhuman primates. Animal areas must be provided a regular diurnal lighting cycle of either natural or artificial light. Lighting must be uniformly diffused throughout animal facilities and provide sufficient illumination to aid in maintaining good housekeeping practices, adequate cleaning, adequate inspection of animals, and for the well-being of the animals. Primary enclosures must be placed in the housing facility so as to protect the nonhuman primates from excessive light.

(d) ***Shelter from the elements.*** Sheltered housing facilities for nonhuman primates must provide adequate shelter from the elements at all times. They must provide protection from the sun, rain, snow, wind, and cold, and from any weather conditions that may occur.

(e) ***Capacity: multiple shelters.*** Both the sheltered part of sheltered housing facilities and any other necessary shelter from the elements must be sufficiently large to provide protection comfortably to each nonhuman primate housed in the facility. If aggressive or dominant animals are housed in the facility with other animals, there must be multiple shelters or other means to ensure that each nonhuman primate has access to shelter.

(f) ***Perimeter fence.*** On and after February 15, 1994, the outdoor area of a sheltered housing facility must be enclosed by a fence that is of sufficient height to keep unwanted species out. Fences less than 6 feet high must be approved by the Administrator. The fence must be constructed so that it protects nonhuman primates by restricting unauthorized humans, and animals the size of dogs, skunks, and raccoons from going through it or under it and having contact with the nonhuman primates. It must be of sufficient distance from the outside wall or fence of the primary enclosure to prevent physical contact between animals inside the enclosure and outside the perimeter fence. Such fences less than 3 feet in distance from the primary enclosure must be approved by the Administrator. A perimeter fence is not required if:

(1) The outside walls of the primary enclosure are made of a sturdy, durable material such as concrete, wood, plastic, metal, or glass, and are high enough and constructed in a manner that restricts contact with or entry by humans and animals that are outside the sheltered housing facility; or

(2) The housing facility is surrounded by a natural barrier that restricts the nonhuman primates to the housing facility and protects them from contact with unauthorized humans and animals that are outside the sheltered housing facility, and the Administrator gives written permission

(g) ***Public barriers.*** Fixed public exhibits housing nonhuman primates, such as zoos, must have a barrier between the primary enclosure and the public at any time the public is present, that restricts physical contact between the public and the nonhuman primates. Nonhuman primates used in trained

animal acts or in uncaged public exhibits must be under the direct control and supervision of an experienced handler or trainer at all times when the public is present. Trained nonhuman primates may be permitted physical contact with the public, as allowed under § 2.131, but only if they are under the direct control and supervision of an experienced handler or trainer at all times during the contact.

(Approved by the Office of Management and Budget under control number 0579-0093)

§ 3.78 - Outdoor housing facilities.

(a) ***Acclimation.*** Only nonhuman primates that are acclimated, as determined by the attending veterinarian, to the prevailing temperature and humidity at the outdoor housing facility during the time of year they are at the facility, and that can tolerate the range of temperatures and climatic conditions known to occur at the facility at that time of year without stress or discomfort, may be kept in outdoor facilities.

(b) ***Shelter from the elements.*** Outdoor housing facilities for nonhuman primates must provide adequate shelter from the elements at all times. It must provide protection from the sun, rain, snow, wind, and cold, and from any weather conditions that may occur. The shelter must safely provide heat to the nonhuman primates to prevent the ambient temperature from falling below 45 °F (7.2 °C), except as directed by the attending veterinarian and in accordance with generally accepted professional and husbandry practices.

(c) ***Capacity: multiple shelters.*** The shelter must be sufficiently large to comfortably provide protection for each nonhuman primate housed in the facility. If aggressive or dominant animals are housed in the facility with other animals there must be multiple shelters, or other means to ensure protection for each nonhuman primate housed in the facility.

(d) ***Perimeter fence.*** On and after February 15, 1994, an outdoor housing facility must be enclosed by a fence that is of sufficient height to keep unwanted species out. Fences less than 6 feet high must be approved by the Administrator. The fence must be constructed so that it protects nonhuman primates by restricting unauthorized humans, and animals the size of dogs, skunks, and raccoons from going through it or under it and having contact with the nonhuman primates. It must be of sufficient distance from the outside wall or fence of the primary enclosure to prevent physical contact between animals inside the enclosure and outside the perimeter fence. Such fences less than 3 feet in distance from the primary enclosure must be approved by the Administrator. A perimeter fence is not required if:

(1) The outside walls of the primary enclosure are made of a sturdy, durable material such as concrete, wood, plastic, metal, or glass, and are high

enough and constructed in a manner that restricts contact with or entry by humans and animals that are outside the housing facility; or

(2) The housing facility is surrounded by a natural barrier that restricts the nonhuman primates to the housing facility and protects them from contact with unauthorized humans and animals that are outside the housing facility, and the Administrator gives written permission.

(e) ***Public barriers.*** Fixed public exhibits housing nonhuman primates, such as zoos, must have a barrier between the primary enclosure and the public at any time the public is present, in order to restrict physical contact between the public and the nonhuman primates. Nonhuman primates used in trained animal acts or in uncaged public exhibits must be under the direct control and supervision of an experienced handler or trainer at all times when the public is present. Trained nonhuman primates may be allowed physical contact with the public, but only if they are under the direct control and supervision of an experienced handler or trainer at all times during the contact.

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§ 3.79 - Mobile or traveling housing facilities.

(a) ***Heating, cooling, and temperature.*** Mobile or traveling housing facilities must be sufficiently heated and cooled when necessary to protect nonhuman primates from temperature extremes and to provide for their health and well-being. The ambient temperature in the traveling housing facility must not fall below 45 °F (7.2 °C) for more than 4 consecutive hours when nonhuman primates are present, and must not rise above 85 °F (29.5 °C) for more than 4 consecutive hours when nonhuman primates are present. The ambient temperature must be maintained at a level that ensures the health and well-being of the species housed, as directed by the attending veterinarian, and in accordance with generally accepted professional and husbandry practices.

(b) ***Ventilation.*** Traveling housing facilities must be sufficiently ventilated at all times when nonhuman primates are present to provide for the health and well-being of nonhuman primates and to minimize odors, drafts, ammonia levels, moisture condensation, and exhaust fumes. Ventilation must be provided by means of windows, doors, vents, fans, or air conditioning. Auxiliary ventilation, such as fans, blowers, or air conditioning, must be provided when the ambient temperature in the traveling housing facility is 85 °F (29.5 °C) or higher.

(c) ***Lighting.*** Mobile or traveling housing facilities must be lighted well enough to permit routine inspection and cleaning of the facility, and

observation of the nonhuman primates. Animal areas must be provided a regular diurnal lighting cycle of either natural or artificial light. Lighting must be uniformly diffused throughout animal facilities and provide sufficient illumination to aid in maintaining good housekeeping practices, adequate cleaning, adequate inspection of animals, and for the well-being of the animals. Primary enclosures must be placed in the housing facility so as to protect the nonhuman primates from excessive light.

(d) ***Public barriers.*** There must be a barrier between a mobile or traveling housing facility and the public at any time the public is present, in order to restrict physical contact between the nonhuman primates and the public. Nonhuman primates used in traveling exhibits, trained animal acts, or in uncaged public exhibits must be under the direct control and supervision of an experienced handler or trainer at all times when the public is present. Trained nonhuman primates may be allowed physical contact with the public, but only if they are under the direct control and supervision of an experienced handler or trainer at all times during the contact.

§ 3.80 - Primary enclosures.

Primary enclosures for nonhuman primates must meet the following minimum requirements:

(a) ***General requirements.***

(1) Primary enclosures must be designed and constructed of suitable materials so that they are structurally sound for the species of nonhuman primates contained in them. They must be kept in good repair.

(2) Primary enclosures must be constructed and maintained so that they:

(i) Have no sharp points or edges that could injure the nonhuman primates;

(ii) Protect the nonhuman primates from injury;

(iii) Contain the nonhuman primates securely and prevent accidental opening of the enclosure, including opening by the animal;

(iv) Keep other unwanted animals from entering the enclosure or having physical contact with the nonhuman primates;

(v) Enable the nonhuman primates to remain dry and clean;

(vi) Provide shelter and protection from extreme temperatures and weather conditions that may be uncomfortable or hazardous to the species of nonhuman primate contained;

(vii) Provide sufficient shade to shelter all the nonhuman primates housed in the primary enclosure at one time;

(viii) Provide the nonhuman primates with easy and convenient access to clean food and water;

(ix) Enable all surfaces in contact with nonhuman primates to be readily cleaned and sanitized in accordance with § 3.84(b)(3) of this subpart, or replaced when worn or soiled;

(x) Have floors that are constructed in a manner that protects the nonhuman primates from injuring themselves; and

(xi) Provide sufficient space for the nonhuman primates to make normal postural adjustments with freedom of movement.

(b) ***Minimum space requirements.*** Primary enclosures must meet the minimum space requirements provided in this subpart.

These minimum space requirements must be met even if perches, ledges, swings, or other suspended fixtures are placed in the enclosure. Low perches and ledges that do not allow the space underneath them to be comfortably occupied by the animal will be counted as part of the floor space.

(1) Prior to February 15, 1994:

(i) Primary enclosures must be constructed and maintained so as to provide sufficient space to allow each nonhuman primate to make normal postural adjustments with adequate freedom of movement; and

(ii) Each nonhuman primate housed in a primary enclosure must be provided with a minimum floor space equal to an area at least three times the area occupied by the primate when standing on four feet.

(2) On and after February 15, 1994:

(i) The minimum space that must be provided to *each* nonhuman primate, whether housed individually or with other nonhuman primates, will be determined by the typical weight of animals of its species, except for brachiating species and great apes[3] and will be calculated by using the following table:[4]

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3 The different species of nonhuman primates are divided into six weight groups for determining minimum space requirements, except that all brachiating species of any weight are grouped together since they require additional space to engage in species-typical behavior. The grouping provided is based upon the typical weight for various species and not on changes associated with obesity, aging, or pregnancy. These conditions will not be considered in determining a nonhuman primate's weight group unless the animal is obviously unable to make normal postural adjustments and movements within the primary enclosure. Different species of prosimians vary in weight and should be grouped with their appropriate weight group. They have not been included in the weight table since different species typically fall into different weight groups. Infants and juveniles of certain species are substantially lower in weight than adults of those species and require the minimum space requirements of lighter weight species, unless the animal is obviously unable to make normal postural adjustments and movements within the primary enclosure.

4 Examples of the kinds of nonhuman primates typically included in each age group are:
Group 1—marmosets, tamarins, and infants (less than 6 months of age) of various species.
Group 2—capuchins, squirrel monkeys and similar size species, and juveniles (6 months to 3 years of age) of various species.
Group 3—macaques and African species.
Group 4—male macaques and large African species.
Group 5—baboons and nonbrachiating species larger than 33.0 lbs. (15 kg.).
Group 6—great apes over 55.0 lbs. (25 kg.), except as provided in paragraph (b)(2)(ii) of this section, and brachiating species.

Group	Weight		Floor area/animal		Height	
	lbs.	(kg.)	ft.^{2}	(m^2)	in.	(cm.)
1	Under 2.2	(under 1)	1.6	(0.15)	20	(50.8)
2	2.2-6.6	(1-3)	3.0	(0.28)	30	(76.2)
3	6.6-22.0	(3-10)	4.3	(0.40)	30	(76.2)
4	22.0-33.0	(10-15)	6.0	(0.56)	32	(81.28)
5	33.0-55.0	(15-25)	8.0	(0.74)	36	(91.44)
6	Over 55.0	(over 25)	25.1	(2.33)	84	(213.36)

(ii) Dealers. exhibitors, and research facilities, including Federal research facilities, must provide great apes weighing over 110 lbs. (50 kg) an additional volume of space in excess of that required for Group 6 animals as set forth in paragraph (b)(2)(i) of this section, to allow for normal postural adjustments.

(iii) In the case of research facilities, any exemption from these standards must be required by a research proposal or in the judgment of the attending veterinarian and must be approved by the Committee. In the case of dealers and exhibitors, any exemption from these standards must be required in the judgment of the attending veterinarian and approved by the Administrator.

(iv) When more than one nonhuman primate is housed in a primary enclosure, the minimum space requirement for the enclosure is the sum of the minimum floor area space required for each individual nonhuman primate in the table in paragraph (b)(2)(i) of this section, and the minimum height requirement for the largest nonhuman primate housed in the enclosure. Provided however, that mothers with infants less than 6 months of age may be maintained together in primary enclosures that meet the floor area space and height requirements of the mother.

(c) Innovative primary enclosures not precisely meeting the floor area and height requirements provided in paragraphs (b)(1) and (b)(2) of this section, but that do provide nonhuman primates with a sufficient volume of space and the opportunity to express species-typical behavior, may be used at research facilities when approved by the Committee, and by dealers and exhibitors when approved by the Administrator.

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§ 3.81 - Environment enhancement to promote psychological well-being.

Dealers, exhibitors, and research facilities must develop, document, and follow an appropriate plan for environment enhancement adequate to promote the psychological well-being of nonhuman primates. The plan must be in accordance with the currently accepted professional standards as cited in appropriate professional journals or reference guides, and as directed by the attending veterinarian. This plan must be made available to APHIS upon request, and, in the case of research facilities, to officials of any pertinent funding agency. The plan, at a minimum, must address each of the following:

(a) ***Social grouping.*** The environment enhancement plan must include specific provisions to address the social needs of nonhuman primates of species known to exist in social groups in nature. Such specific provisions must be in accordance with currently accepted professional standards, as cited in appropriate professional journals or reference guides, and as directed by the attending veterinarian. The plan may provide for the following exceptions:

(1) If a nonhuman primate exhibits vicious or overly aggressive behavior, or is debilitated as a result of age or other conditions (e.g., arthritis), it should be housed separately;

(2) Nonhuman primates that have or are suspected of having a contagious disease must be isolated from healthy animals in the colony as directed by the attending veterinarian. When an entire group or room of nonhuman primates is known to have or believed to be exposed to an infectious agent, the group may be kept intact during the process of diagnosis, treatment, and control.

(3) Nonhuman primates may not be housed with other species of primates or animals unless they are compatible, do not prevent access to food, water, or shelter by individual animals. and are not known to be hazardous to the health and well-being of each other. Compatibility of nonhuman primates must be determined in accordance with generally accepted professional practices and actual observations, as directed by the attending veterinarian, to ensure that the nonhuman primates are in fact compatible. Individually housed nonhuman primates must be able to see and hear nonhuman primates of their own or compatible species unless the attending veterinarian determines that it would endanger their health, safety, or well-being.

(b) ***Environmental enrichment.*** The physical environment in the primary enclosures must be enriched by providing means of expressing noninjurious species-typical activities. Species differences should be considered when determining the type or methods of enrichment. Examples of environmental enrichments include providing perches, swings, mirrors, and other increased cage complexities; providing objects to manipulate; varied food items; using foraging or task-oriented feeding methods; and providing interaction with

the care giver or other familiar and knowledgeable person consistent with personnel safety precautions.

(c) ***Special considerations.*** Certain nonhuman primates must be provided special attention regarding enhancement of their environment, based on the needs of the individual species and in accordance with the instructions of the attending veterinarian. Nonhuman primates requiring special attention are the following:

(1) Infants and young juveniles;

(2) Those that show signs of being in psychological distress through behavior or appearance;

(3) Those used in research for which the Committee-approved protocol requires restricted activity;

(4) Individually housed nonhuman primates that are unable to see and hear nonhuman primates of their own or compatible species; and

(5) Great apes weighing over 110 lbs. (50 kg). Dealers, exhibitors, and research facilities must include in the environment enhancement plan special provisions for great apes weighing over 110 lbs. (50 kg), including additional opportunities to express species-typical behavior.

(d) ***Restraint devices.*** Nonhuman primates must not be maintained in restraint devices unless required for health reasons as determined by the attending veterinarian or by a research proposal approved by the Committee at research facilities. Maintenance under such restraint must be for the shortest period possible. In instances where long-term (more than 12 hours) restraint is required, the nonhuman primate must be provided the opportunity daily for unrestrained activity for at least one continuous hour during the period of restraint, unless continuous restraint is required by the research proposal approved by the Committee at research facilities.

(e) ***Exemptions.***

(1) The attending veterinarian may exempt an individual nonhuman primate from participation in the environment enhancement plan because of its health or condition, or in consideration of its well-being. The basis of the exemption must be recorded by the attending veterinarian for each exempted nonhuman primate. Unless the basis for the exemption is a permanent condition, the exemption must be reviewed at least every 30 days by the attending veterinarian.

(2) For a research facility, the Committee may exempt an individual nonhuman primate from participation in some or all of the otherwise required environment enhancement plans for scientific reasons set forth in the research proposal. The basis of the exemption shall be documented in the approved proposal and must be reviewed at appropriate intervals as determined by the Committee, but not less than annually.

(3) Records of any exemptions must be maintained by the dealer, exhibitor, or research facility and must be made available to USDA officials or officials of any pertinent funding Federal agency upon request.

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ANIMAL HEALTH AND HUSBANDRY STANDARDS

§ 3.82 - Feeding.

(a) The diet for nonhuman primates must be appropriate for the species, size, age, and condition of the animal, and for the conditions in which the nonhuman primate is maintained, according to generally accepted professional and husbandry practices and nutritional standards. The food must be clean, wholesome, and palatable to the animals. It must be of sufficient quantity and have sufficient nutritive value to maintain a healthful condition and weight range of the animal and to meet its normal daily nutritional requirements.

(b) Nonhuman primates must be fed at least once each day except as otherwise might be required to provide adequate veterinary care. Infant and juvenile nonhuman primates must be fed as often as necessary in accordance with generally accepted professional and husbandry practices and nutritional standards, based upon the animals' age and condition.

(c) Food and food receptacles, if used, must be readily accessible to all the nonhuman primates being fed. If members of dominant nonhuman primate or other species are fed together with other nonhuman primates, multiple feeding sites must be provided. The animals must be observed to determine that all receive a sufficient quantity of food.

(d) Food and food receptacles, if used, must be located so as to minimize any risk of contamination by excreta and pests. Food receptacles must be kept clean and must be sanitized in accordance with the procedures listed in § 3.84(b)(3) of this subpart at least once every 2 weeks. Used food receptacles must be sanitized before they can be used to provide food to a different nonhuman primate or social grouping of nonhuman primates. Measures must be taken to ensure there is no molding, deterioration, contamination, or caking or wetting of food placed in self-feeders.

§ 3.83 - Watering.

Potable water must be provided in sufficient quantity to every nonhuman primate housed at the facility. If potable water is not continually available to the nonhuman primates, it must be offered to them as often as necessary to ensure their health and well-being, but no less than twice daily for at least l hour each time, unless otherwise required by the attending veterinarian,

or as required by the research proposal approved by the Committee at research facilities. Water receptacles must be kept clean and sanitized in accordance with methods provided in § 3.84(b)(3) of this subpart at least once every 2 weeks or as often as necessary to keep them clean and free from contamination. Used water receptacles must be sanitized before they can be used to provide water to a different nonhuman primate or social grouping of nonhuman primates.

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§ 3.84 - Cleaning, sanitization, housekeeping, and pest control.

(a) ***Cleaning of primary enclosures.*** Excreta and food waste must be removed from inside each indoor primary enclosure daily and from underneath them as often as necessary to prevent an excessive accumulation of feces and food waste, to prevent the nonhuman primates from becoming soiled, and to reduce disease hazards, insects, pests, and odors. Dirt floors, floors with absorbent bedding, and planted areas in primary enclosures must be spot-cleaned with sufficient frequency to ensure all animals the freedom to avoid contact with excreta, or as often as necessary to reduce disease hazards, insects, pests, and odors. When steam or water is used to clean the primary enclosure, whether by hosing, flushing, or other methods, nonhuman primates must be removed, unless the enclosure is large enough to ensure the animals will not be harmed, wetted, or distressed in the process. Perches, bars, and shelves must be kept clean and replaced when worn. If the species of the nonhuman primates housed in the primary enclosure engages in scent marking, hard surfaces in the primary enclosure must be spot-cleaned daily.

(b) ***Sanitization of primary enclosures and food and water receptacles.***

(1) A used primary enclosure must be sanitized in accordance with this section before it can be used to house another nonhuman primate or group of nonhuman primates.

(2) Indoor primary enclosures must be sanitized at least once every 2 weeks and as often as necessary to prevent an excessive accumulation of dirt, debris, waste, food waste, excreta, or disease hazard, using one of the methods prescribed in paragraph (b)(3) of this section. However, if the species of nonhuman primates housed in the primary enclosure engages in scent marking, the primary enclosure must be sanitized at regular intervals determined in accordance with generally accepted professional and husbandry practices.

(3) Hard surfaces of primary enclosures and food and water receptacles must be sanitized using one of the following methods:

(i) Live steam under pressure;

(ii) Washing with hot water (at least 180 °F (82.2 °C)) and soap or detergent, such as in a mechanical cage washer;

(iii) Washing all soiled surfaces with appropriate detergent solutions or disinfectants, or by using a combination detergent/disinfectant product that accomplishes the same purpose, with a thorough cleaning of the surfaces to remove organic material, so as to remove all organic material and mineral buildup, and to provide sanitization followed by a clean water rinse.

(4) Primary enclosures containing material that cannot be sanitized using the methods provided in paragraph (b)(3) of this section, such as sand, gravel, dirt, absorbent bedding, grass, or planted areas, must be sanitized by removing the contaminated material as necessary to prevent odors, diseases, pests, insects, and vermin infestation.

(c) ***Housekeeping for premises.*** Premises where housing facilities are located, including buildings and surrounding grounds, must be kept clean and in good repair in order to protect the nonhuman primates from injury, to facilitate the husbandry practices required in this subpart, and to reduce or eliminate breeding and living areas for rodents, pests, and vermin. Premises must be kept free of accumulations of trash, junk, waste, and discarded matter. Weeds, grass, and bushes must be controlled so as to facilitate cleaning of the premises and pest control.

(d) ***Pest control.*** An effective program for control of insects, external parasites affecting nonhuman primates, and birds and mammals that are pests, must be established and maintained so as to promote the health and well-being of the animals and reduce contamination by pests in animal areas.

§ 3.85 - Employees.

Every person subject to the Animal Welfare regulations (9 CFR parts 1, 2, and 3) maintaining nonhuman primates must have enough employees to carry out the level of husbandry practices and care required in this subpart. The employees who provide husbandry practices and care, or handle nonhuman primates, must be trained and supervised by an individual who has the knowledge, background, and experience in proper husbandry and care of nonhuman primates to supervise others. The employer must be certain that the supervisor can perform to these standards.

TRANSPORTATION STANDARDS

§ 3.86 - Consignments to carriers and intermediate handlers.

(a) Carriers and intermediate handlers must not accept a nonhuman primate for transport in commerce more than 4 hours before the scheduled departure time of the primary conveyance on which the animal is to be

transported. However, a carrier or intermediate handler may agree with anyone consigning a nonhuman primate to extend this time by up to 2 hours.

(b) Carriers and intermediate handlers must not accept a nonhuman primate for transport in commerce unless they are provided with the name, address, telephone number, and telex number, if applicable, of the consignee.

(c) Carriers and intermediate handlers must not accept a nonhuman primate for transport in commerce unless the consignor certifies in writing to the carrier or intermediate handler that the nonhuman primate was offered food and water during the 4 hours before delivery to the carrier or intermediate handler. The certification must be securely attached to the outside of the primary enclosure in a manner that makes it easily noticed and read. Instructions for no food or water are not acceptable unless directed by the attending veterinarian. Instructions must be in compliance with § 3.89 of this subpart. The certification must include the following information for each nonhuman primate:

(1) The consignor's name and address;

(2) The species of nonhuman primate;

(3) The time and date the animal was last fed and watered and the specific instructions for the next feeding(s) and watering(s) for a 24-hour period; and

(4) The consignor's signature and the date and time the certification was signed.

(d) Carriers and intermediate handlers must not accept a nonhuman primate for transport in commerce unless the primary enclosure meets the requirements of § 3.87 of this subpart. A carrier or intermediate handler must not accept a nonhuman primate for transport if the primary enclosure is obviously defective or damaged and cannot reasonably be expected to safely and comfortably contain the nonhuman primate without suffering or injury.

(e) Carriers and intermediate handlers must not accept a nonhuman primate for transport in commerce unless their animal holding area facilities meet the minimum temperature requirements provided in §§ 3.91 and 3.92 of this subpart, or unless the consignor provides them with a certificate signed by a veterinarian and dated no more than 10 days before delivery of the animal to the carrier or intermediate handler for transport in commerce, certifying that the animal is acclimated to temperatures lower than those that are required in §§ 3.91 and 3.92 of this subpart. Even if the carrier or intermediate handler receives this certification, the temperatures the nonhuman primate is exposed to while in the carrier's or intermediate handler's custody must not be lower than the minimum temperature specified by the veterinarian in accordance with paragraph (e)(4) of this section, and must be reasonably within the generally and professionally accepted temperature range for the nonhuman primate, as determined by

the veterinarian, considering its age, condition, and species. A copy of the certification must accompany the nonhuman primate to its destination and must include the following information for each primary enclosure:

(1) The consignor's name and address;

(2) The number of nonhuman primates contained in the primary enclosure;

(3) The species of nonhuman primate contained in the primary enclosure;

(4) A statement by a veterinarian that to the best of his or her knowledge, each of the nonhuman primates contained in the primary enclosure is acclimated to air temperatures lower than 50 °F (10 °C), but not lower than a minimum temperature specified on the certificate based on the generally and professionally accepted temperature range for the nonhuman primate, considering its age, condition, and species; and

(5) The veterinarian's signature and the date the certification was signed.

(f) When a primary enclosure containing a nonhuman primate has arrived at the animal holding area of a terminal facility after transport, the carrier or intermediate handler must attempt to notify the consignee upon arrival and at least once in every 6-hour period after arrival. The time, date, and method of all attempted notifications and the actual notification of the consignee, and the name of the person who notifies or attempts to notify the consignee must be written either on the carrier's or intermediate handler's copy of the shipping document or on the copy that accompanies the primary enclosure. If the consignee cannot be notified within 24 hours after the nonhuman primate has arrived at the terminal facility, the carrier or intermediate handler must return the animal to the consignor or to whomever the consignor designates. If the consignee is notified of the arrival and does not take physical delivery of the nonhuman primate within 48 hours after arrival of the nonhuman primate, the carrier or intermediate handler must return the animal to the consignor or to whomever the consignor designates. The carrier or intermediate handler must continue to provide proper care, feeding, and housing to the nonhuman primate, and maintain the nonhuman primate in accordance with generally accepted professional and husbandry practices until the consignee accepts delivery of the nonhuman primate or until it is returned to the consignor or to whomever the consignor designates. The carrier or intermediate handler must obligate the consignor to reimburse the carrier or intermediate handler for the cost of return transportation and care.

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§ 3.87 - Primary enclosures used to transport nonhuman primates.

Any person subject to the Animal Welfare regulations (9 CFR parts 1, 2, and 3) must not transport or deliver for transport in commerce a nonhuman primate unless it is contained in a primary enclosure, such as a compartment, transport cage, carton, or crate, and the following requirements are met:

(a) ***Construction of primary enclosures.*** Primary enclosures used to transport nonhuman primates may be connected or attached to each other and must be constructed so that:

(1) The primary enclosure is strong enough to contain the nonhuman primate securely and comfortably and to withstand the normal rigors of transportation;

(2) The interior of the enclosure has no sharp points or edges and no protrusions that could injure the animal contained in it;

(3) The nonhuman primate is at all times securely contained within the enclosure and cannot put any part of its body outside the enclosure in a way that could result in injury to the animal, or to persons or animals nearby;

(4) The nonhuman primate can be easily and quickly removed from the enclosure in an emergency;

(5) The doors or other closures that provide access into the enclosure are secured with animal-proof devices that prevent accidental opening of the enclosure, including opening by the nonhuman primate;

(6) Unless the enclosure is permanently affixed to the conveyance, adequate devices such as handles or handholds are provided on its exterior, and enable the enclosure to be lifted without tilting it, and ensure that anyone handling the enclosure will not come into physical contact with the animal contained inside;

(7) Any material, treatment, paint, preservative, or other chemical used in or on the enclosure is nontoxic to the animal and not harmful to the health or well-being of the animal;

(8) Proper ventilation is provided to the nonhuman primate in accordance with paragraph (c) of this section;

(9) Ventilation openings are covered with bars, wire mesh, or smooth expanded metal having air spaces; and

(10) The primary enclosure has a solid, leak-proof bottom, or a removable, leak-proof collection tray under a slatted or wire mesh floor that prevents seepage of waste products, such as excreta and body fluids, outside of the enclosure. If a slatted or wire mesh floor is used in the enclosure, it must be designed and constructed so that the animal cannot put any part of its body between the slats or through the holes in the mesh. It must contain enough previously unused litter to absorb and cover excreta. The litter must be of a suitably absorbent material that is safe and nontoxic to the nonhuman

primate and is appropriate for the species transported in the primary enclosure.

(b) ***Cleaning of primary enclosures.*** A primary enclosure used to hold or transport nonhuman primates in commerce must be cleaned and sanitized before each use in accordance with the methods provided in § 3.84(b)(3) of this subpart.

(c) ***Ventilation.***

(1) If the primary enclosure is movable, ventilation openings must be constructed in one of the following ways:

(i) If ventilation openings are located on two opposite walls of the primary enclosure, the openings on each wall must be at least 16 percent of the total surface area of each such wall and be located above the midline of the enclosure; or

(ii) If ventilation openings are located on all four walls of the primary enclosure, the openings on every wall must be at least 8 percent of the total surface area of each such wall and be located above the midline of the enclosure.

(2) Unless the primary enclosure is permanently affixed to the conveyance, projecting rims or similar devices must be located on the exterior of each enclosure wall having a ventilation opening, in order to prevent obstruction of the openings. The projecting rims or similar devices must be large enough to provide a minimum air circulation space of 0.75 inches (1.9 centimeters) between the primary enclosure and anything the enclosure is placed against.

(3) If a primary enclosure is permanently affixed to the primary conveyance so that there is only a front ventilation opening for the enclosure, the primary enclosure must be affixed to the primary conveyance in such a way that the front ventilation opening cannot be blocked, and the front ventilation opening must open directly to an unobstructed aisle or passageway inside of the conveyance. The ventilation opening must be at least 90 percent of the total area of the front wall of the enclosure, and must be covered with bars, wire mesh, or smooth expanded metal having air spaces.

(d) ***Compatibility.***

(1) Only one live nonhuman primate may be transported in a primary enclosure, except as follows:

(i) A mother and her nursing infant may be transported together;

(ii) An established male-female pair or family group may be transported together, except that a female in estrus must not be transported with a male nonhuman primate;

(iii) A compatible pair of juveniles of the same species that have not reached puberty may be transported together.

(2) Nonhuman primates of different species must not be transported in adjacent or connecting primary enclosures.

(e) ***Space requirements.*** Primary enclosures used to transport nonhuman primates must be large enough so that each animal contained in the primary enclosure has enough space to turn around freely in a normal manner and to sit in an upright, hands down position without its head touching the top of the enclosure. However, certain larger species may be restricted in their movements, in accordance with professionally accepted standards of care, when greater freedom of movement would be dangerous to the animal, its handler, or to other persons.

(f) ***Marking and labeling.*** Primary enclosures, other than those that are permanently affixed to a conveyance, must be clearly marked in English on the top and on one or more sides with the words "Wild Animals," or "Live Animals," in letters at least 1 inch (2.5 cm.) high, and with arrows or other markings to indicate the correct upright position of the primary enclosure. Permanently affixed primary enclosures must be clearly marked in English with the words "Wild Animals" or "Live Animals," in the same manner.

(g) ***Accompanying documents and records.*** Shipping documents that must accompany shipments of nonhuman primates may be held by the operator of the primary conveyance, for surface transportation only, or must be securely attached in a readily accessible manner to the outside of any primary enclosure that is part of the shipment, in a manner that allows them to be detached for examination and securely reattached, such as in a pocket or sleeve. Instructions for administration of drugs, medication, and other special care must be attached to each primary enclosure in a manner that makes them easy to notice, to detach for examination, and to reattach securely. Food and water instructions must be attached in accordance with § 3.86(c) of this subpart.

(Approved by the Office of Management and Budget under control number 0579-0093)

§ 3.88 - Primary conveyances (motor vehicle, rail, air, and marine).

(a) The animal cargo space of primary conveyances used to transport nonhuman primates must be designed, constructed, and maintained in a manner that at all times protects the health and well-being of the animals transported in it, ensures their safety and comfort, and prevents the entry of engine exhaust from the primary conveyance during transportation.

(b) The animal cargo space must have a supply of air that is sufficient for the normal breathing of all the animals being transported in it.

(c) Each primary enclosure containing nonhuman primates must be positioned in the animal cargo space in a manner that provides protection

from the elements and that allows each nonhuman primate enough air for normal breathing.

(d) During air transportation, the ambient temperature inside a primary conveyance used to transport nonhuman primates must be maintained at a level that ensures the health and well-being of the species housed, in accordance with generally accepted professional and husbandry practices, at all times a nonhuman primate is present.

(e) During surface transportation, the ambient temperature inside a primary conveyance used to transport nonhuman primates must be maintained between 45 °F (7.2 °C) and 85 °F (30 °C) at all times a nonhuman primate is present.

(f) A primary enclosure containing a nonhuman primate must be placed far enough away from animals that are predators or natural enemies of nonhuman primates, whether the other animals are in primary enclosures or not, so that the nonhuman primate cannot touch or see the other animals.

(g) Primary enclosures must be positioned in the primary conveyance in a manner that allows the nonhuman primates to be quickly and easily removed from the primary conveyance in an emergency.

(h) The interior of the animal cargo space must be kept clean

(i) Nonhuman primates must not be transported with any material, substance (e.g., dry ice), or device in a manner that may reasonably be expected to harm the nonhuman primates or cause inhumane conditions.

§ 3.89 - Food and water requirements.

(a) Each nonhuman primate that is 1 year of age or more must be offered food[5] at least once every 24 hours. Each nonhuman primate that is less than 1 year of age must be offered food at least once every 12 hours. Each nonhuman primate must be offered potable water at least once every 12 hours. These time periods apply to dealers, exhibitors, and research facilities, including Federal research facilities, who transport nonhuman primates in their own primary conveyances, starting from the time the nonhuman primate was last offered food and potable water before transportation was begun. These time periods apply to carriers and intermediate handlers starting from the date and time stated on the certification provided under § 3.86(c) of this subpart. Each nonhuman primate must be offered food and potable water within 4 hours before being transported in commerce. Consignors who are subject to the Animal Welfare regulations (9 CFR parts 1, 2, and 3) must certify that each nonhuman primate was offered food and potable water within the 4 hours preceding delivery of the nonhuman primate to a carrier or intermediate handler for transportation in commerce, and must certify the

5 Proper food for purposes of this section is described in § 3.82 of this subpart, with the necessities and circumstances of the mode of travel taken into account.

date and time the food and potable water was offered, in accordance with § 3.86(c) of this subpart.

(b) Any dealer, exhibitor, or research facility, including a Federal research facility, offering a nonhuman primate to a carrier or intermediate handler for transportation in commerce must securely attach to the outside of the primary enclosure used for transporting the nonhuman primate, written instructions for a 24-hour period for the in-transit food and water requirements of the nonhuman primate(s) contained in the enclosure. The instructions must be attached in a manner that makes them easily noticed and read.

(c) Food and water receptacles must be securely attached inside the primary enclosure and placed so that the receptacles can be filled from outside of the enclosure without opening the door. Food and water receptacles must be designed, constructed, and installed so that a nonhuman primate cannot leave the primary enclosure through the food or water opening.

(Approved by the Office of Management and Budget under control number 0579-0093)

§ 3.90 - Care in transit.

(a) ***Surface transportation (ground and water).*** Any person subject to the Animal Welfare regulations (9 CFR parts 1, 2, and 3) transporting nonhuman primates in commerce must ensure that the operator of the conveyance or a person accompanying the operator of the conveyance observes the nonhuman primates as often as circumstances allow, but not less than once every 4 hours, to make sure that they have sufficient air for normal breathing, that the ambient temperature is within the limits provided in § 3.88(d) of this subpart, and that all other applicable standards of this subpart are being complied with. The regulated person transporting the nonhuman primates must ensure that the operator or the person accompanying the operator determines whether any of the nonhuman primates are in obvious physical distress, and obtains any veterinary care needed for the nonhuman primates at the closest available veterinary facility.

(b) ***Air transportation.*** During air transportation of nonhuman primates, it is the responsibility of the carrier to observe the nonhuman primates as frequently as circumstances allow, but not less than once every 4 hours if the animal cargo area is accessible during flight. If the animal cargo area is not accessible during flight, the carrier must observe the nonhuman primates whenever they are loaded and unloaded and whenever the animal cargo space is otherwise accessible to make sure that the nonhuman primates have sufficient air for normal breathing, that the ambient temperature is within the limits provided in § 3.88(d) of this subpart, and that all other applicable standards of this subpart are being complied with. The carrier must determine whether any of the nonhuman primates is in obvious physical distress, and

arrange for any needed veterinary care for the nonhuman primates as soon as possible.

(c) If a nonhuman primate is obviously ill, injured, or in physical distress, it must not be transported in commerce, except to receive veterinary care for the condition.

(d) During transportation in commerce, a nonhuman primate must not be removed from its primary enclosure unless it is placed in another primary enclosure or a facility that meets the requirements of § 3.80 or § 3.87 of this subpart. Only persons who are experienced and authorized by the shipper, or authorized by the consignor or the consignee upon delivery, if the animal is consigned for transportation, may remove nonhuman primates from their primary enclosure during transportation in commerce, unless required for the health or well-being of the animal.

(e) The transportation regulations contained in this subpart must be complied with until a consignee takes physical delivery of the animal if the animal is consigned for transportation, or until the animal is returned to the consignor.

§ 3.91 - Terminal facilities.

(a) ***Placement.*** Any persons subject to the Animal Welfare regulations (9 CFR parts l, 2, and 3) must not commingle shipments of nonhuman primates with inanimate cargo or with other animals in animal holding areas of terminal facilities. Nonhuman primates must not be placed near any other animals, including other species of nonhuman primates, and must not be able to touch or see any other animals, including other species of nonhuman primates.

(b) ***Cleaning, sanitization, and pest control.*** All animal holding areas of terminal facilities must be cleaned and sanitized in a manner prescribed in § 3.84(b)(3) of this subpart, as often as necessary to prevent an accumulation of debris or excreta and to minimize vermin infestation and disease hazards. Terminal facilities must follow an effective program in all animal holding areas for the control of insects, ectoparasites, and birds and mammals that are pests of nonhuman primates.

(c) ***Ventilation.*** Ventilation must be provided in any animal holding area in a terminal facility containing nonhuman primates by means of windows, doors, vents, or air conditioning. The air must be circulated by fans, blowers, or air conditioning so as to minimize drafts, odors, and moisture condensation. Auxiliary ventilation, such as exhaust fans, vents, fans, blowers, or air conditioning, must be used in any animal holding area containing nonhuman primates when the ambient temperature is 85 °F (29.5 °C) or higher.

(d) ***Temperature.*** The ambient temperature in an animal holding area containing nonhuman primates must not fall below 45 °F (7.2 °C) or rise above 85 °F (29.5 °C) for more than four consecutive hours at any time nonhuman primates are present. The ambient temperature must be measured in the animal holding area by the carrier, intermediate handler, or a person transporting nonhuman primates who is subject to the Animal Welfare regulations (9 CFR parts 1, 2, and 3), outside any primary enclosure containing a nonhuman primate at a point not more than 3 feet (0.91 m.) away from an outside wall of the primary enclosure, on a level that is even with the enclosure and approximately midway up the side of the enclosure.

(e) ***Shelter.*** Any person subject to the Animal Welfare regulations (9 CFR parts l, 2, and 3) holding a nonhuman primate in an animal holding area of a terminal facility must provide the following:

(1) Shelter from sunlight and extreme heat. Shade must be provided that is sufficient to protect the nonhuman primate from the direct rays of the sun.

(2) Shelter from rain or snow. Sufficient protection must be provided to allow nonhuman primates to remain dry during rain, snow, and other precipitation.

(f) ***Duration.*** The length of time any person subject to the Animal Welfare regulations (9 CFR parts 1, 2, and 3) can hold a nonhuman primate in an animal holding area of a terminal facility upon arrival is the same as that provided in § 3.86(f) of this subpart.

§ 3.92 - Handling.

(a) Any person subject to the Animal Welfare regulations (9 CFR parts 1, 2, and 3) who moves (including loading and unloading) nonhuman primates within, to, or from the animal holding area of a terminal facility or a primary conveyance must do so as quickly and efficiently as possible, and must provide the following during movement of the nonhuman primate:

(1) ***Shelter from sunlight and extreme heat.*** Sufficient shade must be provided to protect the nonhuman primate from the direct rays of the sun. A nonhuman primate must not be exposed to an ambient temperature above 85 °F (29.5 °C) for a period of more than 45 minutes while being moved to or from a primary conveyance or a terminal facility, The ambient temperature must be measured in the manner provided in § 3.91(d) of this subpart.

(2) ***Shelter from rain or snow.*** Sufficient protection must be provided to allow nonhuman primates to remain dry during rain, snow, and other precipitation.

(3) ***Shelter from cold temperatures.*** Transporting devices on which nonhuman primates are placed to move them must be covered to protect the animals when the outdoor temperature falls below 45 °F (7.2 °C). A

nonhuman primate must not be exposed to an ambient air temperature below 45 °F (7.2 °C) for a period of more than 45 minutes, unless it is accompanied by a certificate of acclimation to lower temperatures as provided in § 3.86(e) of this subpart. The ambient temperature must be measured in the manner provided in § 3.91(d) of this subpart.

(b) Any person handling a primary enclosure containing a nonhuman primate must use care and must avoid causing physical harm or distress to the nonhuman primate.

(1) A primary enclosure containing a nonhuman primate must not be placed on unattended conveyor belts or on elevated conveyor belts, such as baggage claim conveyor belts and inclined conveyor ramps that lead to baggage claim areas, at any time; except that a primary enclosure may be placed on inclined conveyor ramps used to load and unload aircraft if an attendant is present at each end of the conveyor belt.

(2) A primary enclosure containing a nonhuman primate must not be tossed, dropped, or needlessly tilted, and must not be stacked in a manner that may reasonably be expected to result in its falling. It must be handled and positioned in the manner that written instructions and arrows on the outside of the primary enclosure indicate.

(c) This section applies to movement of a nonhuman primate from primary conveyance to primary conveyance, within a primary conveyance or terminal facility, and to or from a terminal facility or a primary conveyance.

(Approved by the Office of Management and Budget under control number 0579-0093)

or written notification, whichever is earlier. In the event of oral notification, a written confirmation thereof shall be given to such person pursuant to § 1.147(b) of the Uniform Rules of Practice (7 CFR 1.147(b)) as promptly as circumstances permit.

(c) The temporary suspension of a license shall be in addition to any sanction which may be imposed against said person by the Secretary pursuant to the Act after notice and opportunity for hearing.

§ 4.11 - Stipulations.

(a) At any time prior to the issuance of a complaint seeking a civil penalty under the Act, the Administrator, in his discretion, may enter into a stipulation with any person in which:

(1) The Administrator gives notice of an apparent violation of the Act, or the regulations or standards issued thereunder, by such person and affords such person an opportunity for a hearing regarding the matter as provided by the Act;

(2) Such person expressly waives hearing and agrees to pay a specified penalty within a designated time; and

(3) The Administrator agrees to accept the specified penalty in settlement of the particular matter involved if it is paid within the designated time.

(b) If the specified penalty is not paid within the time designated in such a stipulation, the amount of the stipulated penalty shall not be relevant in any respect to the penalty which may be assessed after issuance of a complaint.

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United States
Department of
Agriculture

Squirrel Monkey Haven

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	7.80	1000sqft	0.18	7,800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2019
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No demolition. No Paving needed; parking area already exists. Prefabricated building

Off-road Equipment - small site. no need for two of any of the above listed equipment

Trips and VMT - no demolition. minimal grading (if any) and limited site prep. no paving

On-road Fugitive Dust - no paving. no demolition

Grading -

Vehicle Trips - Trip generation estimated provided by County DoT estimate 6 daily trips from 2 employees, and 4 daily trips from 2 visitors = 10 total trips

Road Dust -

Water And Wastewater - 41,000 gal/yr expected. 23,580 for landscaping.

Land Use Change -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	5.00	1.00
tblConstructionPhase	NumDays	100.00	30.00
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	5.00	0.00
tblGrading	MaterialImported	0.00	75.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOnRoadDust	HaulingPercentPave	100.00	0.00
tblOnRoadDust	HaulingPercentPave	100.00	0.00
tblOnRoadDust	VendorPercentPave	100.00	0.00
tblOnRoadDust	VendorPercentPave	100.00	0.00
tblOnRoadDust	WorkerPercentPave	100.00	0.00
tblOnRoadDust	WorkerPercentPave	100.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	2.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblVehicleTrips	HW_TL	0.00	20.00
tblVehicleTrips	ST_TR	1.32	6.00
tblVehicleTrips	SU_TR	0.68	6.00
tblVehicleTrips	WD_TR	6.97	10.00
tblWater	IndoorWaterUseRate	1,803,750.00	17,420.00
tblWater	OutdoorWaterUseRate	0.00	23,580.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0524	0.1650	0.1270	2.0000e-004	1.7700e-003	9.8900e-003	0.0117	6.4000e-004	9.1300e-003	9.7700e-003	0.0000	18.2541	18.2541	5.2700e-003	0.0000	18.3857
Maximum	**0.0524**	**0.1650**	**0.1270**	**2.0000e-004**	**1.7700e-003**	**9.8900e-003**	**0.0117**	**6.4000e-004**	**9.1300e-003**	**9.7700e-003**	**0.0000**	**18.2541**	**18.2541**	**5.2700e-003**	**0.0000**	**18.3857**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0524	0.1650	0.1270	2.0000e-004	1.7700e-003	9.8900e-003	0.0117	6.4000e-004	9.1300e-003	9.7700e-003	0.0000	18.2541	18.2541	5.2700e-003	0.0000	18.3857
Maximum	**0.0524**	**0.1650**	**0.1270**	**2.0000e-004**	**1.7700e-003**	**9.8900e-003**	**0.0117**	**6.4000e-004**	**9.1300e-003**	**9.7700e-003**	**0.0000**	**18.2541**	**18.2541**	**5.2700e-003**	**0.0000**	**18.3857**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-1-2019**	**4-30-2019**	0.1825	0.1825
2	**5-1-2019**	**7-31-2019**	0.0266	0.0266
		Highest	0.1825	0.1825

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0341	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.1000e-004
Energy	1.5100e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	46.6093	46.6093	1.8400e-003	6.0000e-004	46.8329
Mobile	0.0318	0.1534	0.4506	1.2900e-003	0.1055	1.6000e-003	0.1071	0.0283	1.5000e-003	0.0298	0.0000	118.7906	118.7906	6.1100e-003	0.0000	118.9434
Waste						0.0000	0.0000		0.0000	0.0000	1.9629	0.0000	1.9629	0.1160	0.0000	4.8631
Water						0.0000	0.0000		0.0000	0.0000	6.1600e-003	0.0453	0.0515	2.0000e-005	1.0000e-005	0.0562
Total	**0.0674**	**0.1671**	**0.4622**	**1.3700e-003**	**0.1055**	**2.6400e-003**	**0.1082**	**0.0283**	**2.5400e-003**	**0.0309**	**1.9691**	**165.4455**	**167.4146**	**0.1240**	**6.1000e-004**	**170.6958**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0341	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.1000e-004
Energy	1.5100e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	46.6093	46.6093	1.8400e-003	6.0000e-004	46.8329
Mobile	0.0318	0.1534	0.4506	1.2900e-003	0.1055	1.6000e-003	0.1071	0.0283	1.5000e-003	0.0298	0.0000	118.7906	118.7906	6.1100e-003	0.0000	118.9434
Waste						0.0000	0.0000		0.0000	0.0000	1.9629	0.0000	1.9629	0.1160	0.0000	4.8631
Water						0.0000	0.0000		0.0000	0.0000	6.1600e-003	0.0453	0.0515	2.0000e-005	1.0000e-005	0.0562
Total	**0.0674**	**0.1671**	**0.4622**	**1.3700e-003**	**0.1055**	**2.6400e-003**	**0.1082**	**0.0283**	**2.5400e-003**	**0.0309**	**1.9691**	**165.4455**	**167.4146**	**0.1240**	**6.1000e-004**	**170.6958**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
Vegetation Land Change	0.0000
Total	**0.0000**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/1/2019	1/31/2019	5	0	
2	Site Preparation	Site Preparation	2/15/2019	2/15/2019	5	1	
3	Grading	Grading	2/16/2019	2/19/2019	5	2	
4	Building Construction	Building Construction	2/20/2019	4/2/2019	5	30	
5	Paving	Paving	7/10/2019	7/9/2019	5	0	
6	Architectural Coating	Architectural Coating	7/17/2019	7/17/2019	5	1	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 11,700; Non-Residential Outdoor: 3,900; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	0.00	0.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	9.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	2.00	0.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	3.00	1.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	0.00	0.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6000e-004	4.4600e-003	2.0700e-003	0.0000		1.8000e-004	1.8000e-004		1.7000e-004	1.7000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413
Total	**3.6000e-004**	**4.4600e-003**	**2.0700e-003**	**0.0000**	**2.7000e-004**	**1.8000e-004**	**4.5000e-004**	**3.0000e-005**	**1.7000e-004**	**2.0000e-004**	**0.0000**	**0.4378**	**0.4378**	**1.4000e-004**	**0.0000**	**0.4413**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.4000e-003	3.4000e-004	0.0000	8.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3479	0.3479	2.0000e-005	0.0000	0.3485
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0249	0.0249	0.0000	0.0000	0.0249
Total	**5.0000e-005**	**1.4100e-003**	**4.5000e-004**	**0.0000**	**1.1000e-004**	**1.0000e-005**	**1.1000e-004**	**3.0000e-005**	**1.0000e-005**	**4.0000e-005**	**0.0000**	**0.3728**	**0.3728**	**2.0000e-005**	**0.0000**	**0.3734**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6000e-004	4.4600e-003	2.0700e-003	0.0000		1.8000e-004	1.8000e-004		1.7000e-004	1.7000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413
Total	**3.6000e-004**	**4.4600e-003**	**2.0700e-003**	**0.0000**	**2.7000e-004**	**1.8000e-004**	**4.5000e-004**	**3.0000e-005**	**1.7000e-004**	**2.0000e-004**	**0.0000**	**0.4378**	**0.4378**	**1.4000e-004**	**0.0000**	**0.4413**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.4000e-003	3.4000e-004	0.0000	8.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3479	0.3479	2.0000e-005	0.0000	0.3485
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0249	0.0249	0.0000	0.0000	0.0249
Total	**5.0000e-005**	**1.4100e-003**	**4.5000e-004**	**0.0000**	**1.1000e-004**	**1.0000e-005**	**1.1000e-004**	**3.0000e-005**	**1.0000e-005**	**4.0000e-005**	**0.0000**	**0.3728**	**0.3728**	**2.0000e-005**	**0.0000**	**0.3734**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005		5.4000e-004	5.4000e-004		5.1000e-004	5.1000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570
Total	**9.5000e-004**	**8.6000e-003**	**7.6900e-003**	**1.0000e-005**	**7.5000e-004**	**5.4000e-004**	**1.2900e-003**	**4.1000e-004**	**5.1000e-004**	**9.2000e-004**	**0.0000**	**1.0520**	**1.0520**	**2.0000e-004**	**0.0000**	**1.0570**

3.4 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0199	0.0199	0.0000	0.0000	0.0199
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0199**	**0.0199**	**0.0000**	**0.0000**	**0.0199**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005		5.4000e-004	5.4000e-004		5.1000e-004	5.1000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570
Total	**9.5000e-004**	**8.6000e-003**	**7.6900e-003**	**1.0000e-005**	**7.5000e-004**	**5.4000e-004**	**1.2900e-003**	**4.1000e-004**	**5.1000e-004**	**9.2000e-004**	**0.0000**	**1.0520**	**1.0520**	**2.0000e-004**	**0.0000**	**1.0570**

3.4 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0199	0.0199	0.0000	0.0000	0.0199
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0199**	**0.0199**	**0.0000**	**0.0000**	**0.0199**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0144	0.1473	0.1132	1.7000e-004		9.0800e-003	9.0800e-003		8.3500e-003	8.3500e-003	0.0000	15.3451	15.3451	4.8600e-003	0.0000	15.4665
Total	**0.0144**	**0.1473**	**0.1132**	**1.7000e-004**		**9.0800e-003**	**9.0800e-003**		**8.3500e-003**	**8.3500e-003**	**0.0000**	**15.3451**	**15.3451**	**4.8600e-003**	**0.0000**	**15.4665**

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.0000e-005	2.1100e-003	6.4000e-004	0.0000	1.1000e-004	2.0000e-005	1.3000e-004	3.0000e-005	2.0000e-005	5.0000e-005	0.0000	0.4454	0.4454	3.0000e-005	0.0000	0.4460
Worker	2.5000e-004	1.8000e-004	1.9300e-003	0.0000	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4484	0.4484	1.0000e-005	0.0000	0.4488
Total	**3.4000e-004**	**2.2900e-003**	**2.5700e-003**	**0.0000**	**6.1000e-004**	**2.0000e-005**	**6.3000e-004**	**1.6000e-004**	**2.0000e-005**	**1.9000e-004**	**0.0000**	**0.8938**	**0.8938**	**4.0000e-005**	**0.0000**	**0.8948**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0144	0.1473	0.1132	1.7000e-004		9.0800e-003	9.0800e-003		8.3500e-003	8.3500e-003	0.0000	15.3451	15.3451	4.8600e-003	0.0000	15.4664
Total	**0.0144**	**0.1473**	**0.1132**	**1.7000e-004**		**9.0800e-003**	**9.0800e-003**		**8.3500e-003**	**8.3500e-003**	**0.0000**	**15.3451**	**15.3451**	**4.8600e-003**	**0.0000**	**15.4664**

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.0000e-005	2.1100e-003	6.4000e-004	0.0000	1.1000e-004	2.0000e-005	1.3000e-004	3.0000e-005	2.0000e-005	5.0000e-005	0.0000	0.4454	0.4454	3.0000e-005	0.0000	0.4460
Worker	2.5000e-004	1.8000e-004	1.9300e-003	0.0000	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4484	0.4484	1.0000e-005	0.0000	0.4488
Total	**3.4000e-004**	**2.2900e-003**	**2.5700e-003**	**0.0000**	**6.1000e-004**	**2.0000e-005**	**6.3000e-004**	**1.6000e-004**	**2.0000e-005**	**1.9000e-004**	**0.0000**	**0.8938**	**0.8938**	**4.0000e-005**	**0.0000**	**0.8948**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0362					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3000e-004	9.2000e-004	9.2000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.1277	0.1277	1.0000e-005	0.0000	0.1279
Total	**0.0363**	**9.2000e-004**	**9.2000e-004**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.1277**	**0.1277**	**1.0000e-005**	**0.0000**	**0.1279**

3.7 Architectural Coating - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	2.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	4.9800e-003	4.9800e-003	0.0000	0.0000	4.9900e-003
Total	**0.0000**	**0.0000**	**2.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**4.9800e-003**	**4.9800e-003**	**0.0000**	**0.0000**	**4.9900e-003**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0362					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3000e-004	9.2000e-004	9.2000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.1277	0.1277	1.0000e-005	0.0000	0.1279
Total	**0.0363**	**9.2000e-004**	**9.2000e-004**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.1277**	**0.1277**	**1.0000e-005**	**0.0000**	**0.1279**

3.7 Architectural Coating - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	2.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	4.9800e-003	4.9800e-003	0.0000	0.0000	4.9900e-003
Total	**0.0000**	**0.0000**	**2.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**4.9800e-003**	**4.9800e-003**	**0.0000**	**0.0000**	**4.9900e-003**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0318	0.1534	0.4506	1.2900e-003	0.1055	1.6000e-003	0.1071	0.0283	1.5000e-003	0.0298	0.0000	118.7906	118.7906	6.1100e-003	0.0000	118.9434
Unmitigated	0.0318	0.1534	0.4506	1.2900e-003	0.1055	1.6000e-003	0.1071	0.0283	1.5000e-003	0.0298	0.0000	118.7906	118.7906	6.1100e-003	0.0000	118.9434

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	78.00	46.80	46.80	282,762	282,762
Total	78.00	46.80	46.80	282,762	282,762

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	15.00	7.50	8.50	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.547085	0.042365	0.202414	0.127049	0.023381	0.005779	0.018348	0.021363	0.002103	0.002394	0.006067	0.000620	0.001032

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	31.7039	31.7039	1.5600e-003	3.2000e-004	31.8388
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	31.7039	31.7039	1.5600e-003	3.2000e-004	31.8388
NaturalGas Mitigated	1.5100e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	14.9055	14.9055	2.9000e-004	2.7000e-004	14.9941
NaturalGas Unmitigated	1.5100e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	14.9055	14.9055	2.9000e-004	2.7000e-004	14.9941

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	279318	1.5100e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	14.9055	14.9055	2.9000e-004	2.7000e-004	14.9941
Total		**1.5100e-003**	**0.0137**	**0.0115**	**8.0000e-005**		**1.0400e-003**	**1.0400e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**14.9055**	**14.9055**	**2.9000e-004**	**2.7000e-004**	**14.9941**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	279318	1.5100e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	14.9055	14.9055	2.9000e-004	2.7000e-004	14.9941
Total		**1.5100e-003**	**0.0137**	**0.0115**	**8.0000e-005**		**1.0400e-003**	**1.0400e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**14.9055**	**14.9055**	**2.9000e-004**	**2.7000e-004**	**14.9941**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	118404	31.7039	1.5600e-003	3.2000e-004	31.8388
Total		**31.7039**	**1.5600e-003**	**3.2000e-004**	**31.8388**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	118404	31.7039	1.5600e-003	3.2000e-004	31.8388
Total		**31.7039**	**1.5600e-003**	**3.2000e-004**	**31.8388**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0341	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.1000e-004
Unmitigated	0.0341	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.1000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.6200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0305					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.1000e-004
Total	**0.0341**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.9000e-004**	**1.9000e-004**	**0.0000**	**0.0000**	**2.1000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.6200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0305					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.1000e-004
Total	**0.0341**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.9000e-004**	**1.9000e-004**	**0.0000**	**0.0000**	**2.1000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

Use Water Efficient Landscaping

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0515	2.0000e-005	1.0000e-005	0.0562
Unmitigated	0.0515	2.0000e-005	1.0000e-005	0.0562

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.01742 / 0.02358	0.0515	2.0000e-005	1.0000e-005	0.0562
Total		**0.0515**	**2.0000e-005**	**1.0000e-005**	**0.0562**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.01742 / 0.02358	0.0515	2.0000e-005	1.0000e-005	0.0562
Total		**0.0515**	**2.0000e-005**	**1.0000e-005**	**0.0562**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.9629	0.1160	0.0000	4.8631
Unmitigated	1.9629	0.1160	0.0000	4.8631

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	9.67	1.9629	0.1160	0.0000	4.8631
Total		**1.9629**	**0.1160**	**0.0000**	**4.8631**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	9.67	1.9629	0.1160	0.0000	4.8631
Total		**1.9629**	**0.1160**	**0.0000**	**4.8631**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	0.0000	0.0000	0.0000	0.0000

11.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Others	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Squirrel Monkey Haven

Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	7.80	1000sqft	0.18	7,800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2019
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Squirrel Monkey Haven - Sacramento County, Winter

Project Characteristics -

Land Use -

Construction Phase - No demolition. No Paving needed; parking area already exists. Prefabricated building

Off-road Equipment - small site. no need for two of any of the above listed equipment

Trips and VMT - no demolition. minimal grading (if any) and limited site prep. no paving

On-road Fugitive Dust - no paving. no demolition

Grading -

Vehicle Trips - Trip generation estimated provided by County DoT estimate 6 daily trips from 2 employees, and 4 daily trips from 2 visitors = 10 total trips

Road Dust -

Water And Wastewater - 41,000 gal/yr expected. 23,580 for landscaping.

Land Use Change -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	5.00	1.00
tblConstructionPhase	NumDays	100.00	30.00
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	5.00	0.00
tblGrading	MaterialImported	0.00	75.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOnRoadDust	HaulingPercentPave	100.00	0.00
tblOnRoadDust	HaulingPercentPave	100.00	0.00
tblOnRoadDust	VendorPercentPave	100.00	0.00
tblOnRoadDust	VendorPercentPave	100.00	0.00
tblOnRoadDust	WorkerPercentPave	100.00	0.00
tblOnRoadDust	WorkerPercentPave	100.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	2.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblVehicleTrips	HW_TL	0.00	20.00
tblVehicleTrips	ST_TR	1.32	6.00
tblVehicleTrips	SU_TR	0.68	6.00
tblVehicleTrips	WD_TR	6.97	10.00
tblWater	IndoorWaterUseRate	1,803,750.00	17,420.00
tblWater	OutdoorWaterUseRate	0.00	23,580.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	72.5784	11.7522	7.7774	0.0174	0.7756	0.8626	1.3128	0.4198	0.8154	0.9324	0.0000	1,778.8537	1,778.8537	0.3597	0.0000	1,787.7023
Maximum	**72.5784**	**11.7522**	**7.7774**	**0.0174**	**0.7756**	**0.8626**	**1.3128**	**0.4198**	**0.8154**	**0.9324**	**0.0000**	**1,778.8537**	**1,778.8537**	**0.3597**	**0.0000**	**1,787.7023**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	72.5784	11.7522	7.7774	0.0174	0.7756	0.8626	1.3128	0.4198	0.8154	0.9324	0.0000	1,778.8537	1,778.8537	0.3597	0.0000	1,787.7023
Maximum	**72.5784**	**11.7522**	**7.7774**	**0.0174**	**0.7756**	**0.8626**	**1.3128**	**0.4198**	**0.8154**	**0.9324**	**0.0000**	**1,778.8537**	**1,778.8537**	**0.3597**	**0.0000**	**1,787.7023**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1868	1.0000e-005	8.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7100e-003	1.7100e-003	0.0000		1.8200e-003
Energy	8.2500e-003	0.0750	0.0630	4.5000e-004		5.7000e-003	5.7000e-003		5.7000e-003	5.7000e-003		90.0300	90.0300	1.7300e-003	1.6500e-003	90.5650
Mobile	0.1908	0.9880	2.8536	7.8500e-003	0.6778	9.9500e-003	0.6877	0.1813	9.3900e-003	0.1907		794.2103	794.2103	0.0421		795.2639
Total	**0.3858**	**1.0630**	**2.9174**	**8.3000e-003**	**0.6778**	**0.0157**	**0.6934**	**0.1813**	**0.0151**	**0.1964**		**884.2420**	**884.2420**	**0.0439**	**1.6500e-003**	**885.8307**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1868	1.0000e-005	8.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7100e-003	1.7100e-003	0.0000		1.8200e-003
Energy	8.2500e-003	0.0750	0.0630	4.5000e-004		5.7000e-003	5.7000e-003		5.7000e-003	5.7000e-003		90.0300	90.0300	1.7300e-003	1.6500e-003	90.5650
Mobile	0.1908	0.9880	2.8536	7.8500e-003	0.6778	9.9500e-003	0.6877	0.1813	9.3900e-003	0.1907		794.2103	794.2103	0.0421		795.2639
Total	**0.3858**	**1.0630**	**2.9174**	**8.3000e-003**	**0.6778**	**0.0157**	**0.6934**	**0.1813**	**0.0151**	**0.1964**		**884.2420**	**884.2420**	**0.0439**	**1.6500e-003**	**885.8307**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/1/2019	1/31/2019	5	0	
2	Site Preparation	Site Preparation	2/15/2019	2/15/2019	5	1	
3	Grading	Grading	2/16/2019	2/19/2019	5	2	
4	Building Construction	Building Construction	2/20/2019	4/2/2019	5	30	
5	Paving	Paving	7/10/2019	7/9/2019	5	0	
6	Architectural Coating	Architectural Coating	7/17/2019	7/17/2019	5	1	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 11,700; Non-Residential Outdoor: 3,900; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Squirrel Monkey Haven - Sacramento County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	0.00	0.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	9.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	2.00	0.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	3.00	1.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	0.00	0.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5458	0.0000	0.5458	0.0596	0.0000	0.0596			0.0000			0.0000
Off-Road	0.7195	8.9170	4.1407	9.7500e-003		0.3672	0.3672		0.3378	0.3378		965.1690	965.1690	0.3054		972.8032
Total	**0.7195**	**8.9170**	**4.1407**	**9.7500e-003**	**0.5458**	**0.3672**	**0.9130**	**0.0596**	**0.3378**	**0.3974**		**965.1690**	**965.1690**	**0.3054**		**972.8032**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0813	2.8125	0.7122	7.1000e-003	0.1566	0.0120	0.1686	0.0429	0.0115	0.0543		760.3366	760.3366	0.0470		761.5107
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0297	0.0227	0.2141	5.4000e-004	0.0570	3.9000e-004	0.0574	0.0151	3.6000e-004	0.0155		53.3480	53.3480	1.6200e-003		53.3884
Total	**0.1110**	**2.8352**	**0.9263**	**7.6400e-003**	**0.2136**	**0.0124**	**0.2260**	**0.0580**	**0.0118**	**0.0698**		**813.6847**	**813.6847**	**0.0486**		**814.8991**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5458	0.0000	0.5458	0.0596	0.0000	0.0596			0.0000			0.0000
Off-Road	0.7195	8.9170	4.1407	9.7500e-003		0.3672	0.3672		0.3378	0.3378	0.0000	965.1690	965.1690	0.3054		972.8032
Total	**0.7195**	**8.9170**	**4.1407**	**9.7500e-003**	**0.5458**	**0.3672**	**0.9130**	**0.0596**	**0.3378**	**0.3974**	**0.0000**	**965.1690**	**965.1690**	**0.3054**		**972.8032**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0813	2.8125	0.7122	7.1000e-003	0.1566	0.0120	0.1686	0.0429	0.0115	0.0543		760.3366	760.3366	0.0470		761.5107
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0297	0.0227	0.2141	5.4000e-004	0.0570	3.9000e-004	0.0574	0.0151	3.6000e-004	0.0155		53.3480	53.3480	1.6200e-003		53.3884
Total	**0.1110**	**2.8352**	**0.9263**	**7.6400e-003**	**0.2136**	**0.0124**	**0.2260**	**0.0580**	**0.0118**	**0.0698**		**813.6847**	**813.6847**	**0.0486**		**814.8991**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125		1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**	**0.7528**	**0.5371**	**1.2898**	**0.4138**	**0.5125**	**0.9263**		**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.4 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0119	9.0800e-003	0.0857	2.1000e-004	0.0228	1.6000e-004	0.0230	6.0500e-003	1.4000e-004	6.1900e-003		21.3392	21.3392	6.5000e-004		21.3554
Total	**0.0119**	**9.0800e-003**	**0.0857**	**2.1000e-004**	**0.0228**	**1.6000e-004**	**0.0230**	**6.0500e-003**	**1.4000e-004**	**6.1900e-003**		**21.3392**	**21.3392**	**6.5000e-004**		**21.3554**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**	**0.7528**	**0.5371**	**1.2898**	**0.4138**	**0.5125**	**0.9263**	**0.0000**	**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.4 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0119	9.0800e-003	0.0857	2.1000e-004	0.0228	1.6000e-004	0.0230	6.0500e-003	1.4000e-004	6.1900e-003		21.3392	21.3392	6.5000e-004		21.3554
Total	**0.0119**	**9.0800e-003**	**0.0857**	**2.1000e-004**	**0.0228**	**1.6000e-004**	**0.0230**	**6.0500e-003**	**1.4000e-004**	**6.1900e-003**		**21.3392**	**21.3392**	**6.5000e-004**		**21.3554**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569		1,127.6696	1,127.6696	0.3568		1,136.5892
Total	**0.9576**	**9.8207**	**7.5432**	**0.0114**		**0.6054**	**0.6054**		**0.5569**	**0.5569**		**1,127.6696**	**1,127.6696**	**0.3568**		**1,136.5892**

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.8700e-003	0.1410	0.0458	3.1000e-004	7.8600e-003	1.1300e-003	8.9900e-003	2.2600e-003	1.0800e-003	3.3400e-003		32.3419	32.3419	1.9300e-003		32.3902
Worker	0.0178	0.0136	0.1285	3.2000e-004	0.0342	2.3000e-004	0.0345	9.0700e-003	2.2000e-004	9.2900e-003		32.0088	32.0088	9.7000e-004		32.0331
Total	**0.0237**	**0.1546**	**0.1742**	**6.3000e-004**	**0.0421**	**1.3600e-003**	**0.0434**	**0.0113**	**1.3000e-003**	**0.0126**		**64.3507**	**64.3507**	**2.9000e-003**		**64.4233**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569	0.0000	1,127.6696	1,127.6696	0.3568		1,136.5892
Total	**0.9576**	**9.8207**	**7.5432**	**0.0114**		**0.6054**	**0.6054**		**0.5569**	**0.5569**	**0.0000**	**1,127.6696**	**1,127.6696**	**0.3568**		**1,136.5892**

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.8700e-003	0.1410	0.0458	3.1000e-004	7.8600e-003	1.1300e-003	8.9900e-003	2.2600e-003	1.0800e-003	3.3400e-003		32.3419	32.3419	1.9300e-003		32.3902
Worker	0.0178	0.0136	0.1285	3.2000e-004	0.0342	2.3000e-004	0.0345	9.0700e-003	2.2000e-004	9.2900e-003		32.0088	32.0088	9.7000e-004		32.0331
Total	**0.0237**	**0.1546**	**0.1742**	**6.3000e-004**	**0.0421**	**1.3600e-003**	**0.0434**	**0.0113**	**1.3000e-003**	**0.0126**		**64.3507**	**64.3507**	**2.9000e-003**		**64.4233**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	72.3060					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**72.5724**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

3.7 Architectural Coating - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	5.9400e-003	4.5400e-003	0.0428	1.1000e-004	0.0114	8.0000e-005	0.0115	3.0200e-003	7.0000e-005	3.1000e-003		10.6696	10.6696	3.2000e-004		10.6777
Total	**5.9400e-003**	**4.5400e-003**	**0.0428**	**1.1000e-004**	**0.0114**	**8.0000e-005**	**0.0115**	**3.0200e-003**	**7.0000e-005**	**3.1000e-003**		**10.6696**	**10.6696**	**3.2000e-004**		**10.6777**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	72.3060					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**72.5724**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

3.7 Architectural Coating - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	5.9400e-003	4.5400e-003	0.0428	1.1000e-004	0.0114	8.0000e-005	0.0115	3.0200e-003	7.0000e-005	3.1000e-003		10.6696	10.6696	3.2000e-004		10.6777
Total	**5.9400e-003**	**4.5400e-003**	**0.0428**	**1.1000e-004**	**0.0114**	**8.0000e-005**	**0.0115**	**3.0200e-003**	**7.0000e-005**	**3.1000e-003**		**10.6696**	**10.6696**	**3.2000e-004**		**10.6777**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1908	0.9880	2.8536	7.8500e-003	0.6778	9.9500e-003	0.6877	0.1813	9.3900e-003	0.1907		794.2103	794.2103	0.0421		795.2639
Unmitigated	0.1908	0.9880	2.8536	7.8500e-003	0.6778	9.9500e-003	0.6877	0.1813	9.3900e-003	0.1907		794.2103	794.2103	0.0421		795.2639

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	78.00	46.80	46.80	282,762	282,762
Total	78.00	46.80	46.80	282,762	282,762

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	15.00	7.50	8.50	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.547085	0.042365	0.202414	0.127049	0.023381	0.005779	0.018348	0.021363	0.002103	0.002394	0.006067	0.000620	0.001032

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	8.2500e-003	0.0750	0.0630	4.5000e-004		5.7000e-003	5.7000e-003		5.7000e-003	5.7000e-003		90.0300	90.0300	1.7300e-003	1.6500e-003	90.5650
NaturalGas Unmitigated	8.2500e-003	0.0750	0.0630	4.5000e-004		5.7000e-003	5.7000e-003		5.7000e-003	5.7000e-003		90.0300	90.0300	1.7300e-003	1.6500e-003	90.5650

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	765.255	8.2500e-003	0.0750	0.0630	4.5000e-004		5.7000e-003	5.7000e-003		5.7000e-003	5.7000e-003		90.0300	90.0300	1.7300e-003	1.6500e-003	90.5650
Total		**8.2500e-003**	**0.0750**	**0.0630**	**4.5000e-004**		**5.7000e-003**	**5.7000e-003**		**5.7000e-003**	**5.7000e-003**		**90.0300**	**90.0300**	**1.7300e-003**	**1.6500e-003**	**90.5650**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0.765255	8.2500e-003	0.0750	0.0630	4.5000e-004		5.7000e-003	5.7000e-003		5.7000e-003	5.7000e-003		90.0300	90.0300	1.7300e-003	1.6500e-003	90.5650
Total		**8.2500e-003**	**0.0750**	**0.0630**	**4.5000e-004**		**5.7000e-003**	**5.7000e-003**		**5.7000e-003**	**5.7000e-003**		**90.0300**	**90.0300**	**1.7300e-003**	**1.6500e-003**	**90.5650**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1868	1.0000e-005	8.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7100e-003	1.7100e-003	0.0000		1.8200e-003
Unmitigated	0.1868	1.0000e-005	8.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7100e-003	1.7100e-003	0.0000		1.8200e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0198					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1669					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	8.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7100e-003	1.7100e-003	0.0000		1.8200e-003
Total	**0.1868**	**1.0000e-005**	**8.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.7100e-003**	**1.7100e-003**	**0.0000**		**1.8200e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0198					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1669					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	8.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7100e-003	1.7100e-003	0.0000		1.8200e-003
Total	**0.1868**	**1.0000e-005**	**8.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.7100e-003**	**1.7100e-003**	**0.0000**		**1.8200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

Use Water Efficient Landscaping

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

BARGAS
Environmental Consulting

07 May 2018

Mr. Nicholas Avdis
THOMAS LAW GROUP
455 Capitol Mall, Suite 801
Sacramento, CA 95814

Subject: Reconnaissance-level special-status species survey for the +/- 4.5 acre Squirrel Monkey Haven property in Galt, Sacramento County, California (APN 138-0090-069

To whom it may concern:

This report summarizes the results of the reconnaissance-level special-status species survey conducted by Bargas Environmental Consulting (Bargas) biologist for the proposed Squirrel Monkey Haven approximately 6 miles northeast of the City of Galt, Sacramento County, California. The focus of the survey was a 0.07-acre man-made pond located on a 4.5-acre property parcel at 11859 North (N.) Valensin Road (Rd), approximately 5 miles east of Highway 99, Sacramento County, California, and comprised of parcel APN 138-0090-069 within the Clay USGS 7.5-minute quadrangle. The survey was conducted on 01 May, 2018, focusing on the following items:

- Presence of suitable habitat that may support endangered species, including vernal pool branchiopods, and California tiger salamanders;

Site Description

The site is located on a residential property in a rural community adjacent to agricultural land northeast of Galt, California (**Figures 1** and **2**). The upland areas surrounding the pond are characterized by non-native annual grasses and forbs (**Photo 1**). Surrounding the site are undeveloped ruderal areas also dominated by non-native annual species, as well as agricultural vineyards and orchards. Within these orchards, the herbaceous vegetation layer appears to be well trimmed (**Photos 2** and **3**). The topography is relatively flat throughout the study area, with the exception of a slight slope allowing for the collection of water in the pond. There was evidence of turbidity in the basin from adjacent agricultural land uses.

The pond is dominated by tules and cattails and surrounded by trees that include valley oak and ornamental pines.

Methods

Prior to conducting the survey of the site, and per accepted protocol, a thorough review of habitat, special-status species, and jurisdictional wetland databases was performed. The databases queried to obtain background information for the study area included Natural Resource Conservation Service (NRCS) Web

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Soil Survey, California Department of Fish and Wildlife (CDFW) Natural Diversity Database (CNDDB), US Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC), USFWS National Wetlands Inventory, and USFWS Online Critical Habitat Mapper. The CNDDB data was drawn from the Elk Grove, Sloughhouse, Carbondale, Galt, Clay, Goose Creek, Lodi North, Lockeford, and Clements USGS 7.5-minute quadrangles. The IPaC compiles a list of species from Sacramento County.

Bargas biologist, Grayson Sandy, conducted a reconnaissance-level survey of the study area on 01 May 2018. Weather conditions were characterized by mostly clear skies with temperatures from 62-70°F and north to northeast winds at approximately 5 mph. The pedestrian survey consisted of walking the perimeter of the pond area with an evaluation of current site conditions; investigation of potential habitat for special-status species; and identification of wildlife and plants observed. Vegetation was identified to genera or species on site. Photos were taken throughout the study area (**Photos 1** through **7**).

Results

Table 1: Summary of the preliminary database review.

Database	Summary of Results
NRCS Soil Survey	• San Joaquin silt loam, leveled, 0-1% slopes; • San Joaquin-Galt complex, leveled, 0-1 % slopes; • San Joaquin-Galt complex, 0-3% slopes.
CDFW CNDDB (9-quad area)	Wildlife: burrowing owl, Swainson's hawk, tricolored blackbird, giant garter snake, western pond turtle, steelhead trout, valley elderberry longhorn beetle, vernal pool fairy shrimp, vernal pool tadpole shrimp, yellow warbler. Plants: Ahart's dwarf rush, Succulent owl's clover, Sanford's arrowhead, pincushion navarretia, legenere, Bogg's lake hedge-hyssop, Tuolumne button celery, Sacramento orcutt grass
USFWS IPaC (Sacramento County)	Wildlife: giant garter snake, California red-legged frog, California tiger salamander, Delta smelt, valley elderberry longhorn beetle, Conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp. Migratory birds: burrowing owl, common yellowthroat, long-billed curlew, Nuttall's woodpecker, song sparrow, tricolored blackbird, yellow-billed magpie. Plants: fleshy owl's-clover
USFWS NWI	No features mapped within the study area.
USFWS Critical Habitat	No USFWS designated critical habitats within proximity of the site.

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Table 2: Wildlife observed in the study area during the 01 May 2018 survey.

Type	Scientific Name	Common Name	Special-Status*
amphibian	*Lithobates catesbeianus*	American bullfrog	none
bird	*Agelaius phoeniceus*	red-winged blackbird	none
bird	*Anas platyrhynchos*	mallard	none
bird	*Buteo jamaicensis*	red-tailed hawk	none
bird	*Buteo lineatus*	red-shouldered hawk	none
bird	*Cathartes aura*	turkey vulture	none
bird	*Charadrius vociferus*	killdeer	none
bird	*Zenadia macroura*	mourning dove	none
bird	*Sturnus vulgaris*	Eurasian starling	none
bird	*Euphagus cyanocephalus*	Brewer's blackbird	none
bird	*Corvus brachyrhynchos*	American crow	none
bird	*Mimus polyglottos*	northern mockingbird	none
bird	*Tyrannus verticalis*	western kingbird	none
fish	*Gambusia affinis*	mosquito fish	none

Table 3: Plants observed in the study area during the 01 May 2018 survey.

Scientific Name	Common Name	Special-Status
Avena fatua	wild oats	none
Avena sativa	cultivated oats	none
Brassica nigra	black mustard	none
Bromus diandrus	ripgut brome	none
Bromus hordeaceaus	soft chess	none
Foeniculum vulgare	Sweet fennel	none
Festuca perennis	Italian ryegrass	none
Geranium dissectum	cranesbill geranium	none
Hordeum sp.	barley	none
Medicago polymorpha	bur clover	none
Quercus lobata	valley oak	none
Raphanus sativus	wild radish	none
Rumex crispus	curly dock	none
Salix sp.	willow	none
Schoenoplectus acutus var. *occidentalis*	tule	none
Trifolium repens	white clover	none
Triticum aestivum	common wheat	none
Vicia sativa	spring vetch	none

A total of 14 wildlife species were observed during the site visit (**Table 2**). None of the species observed are special-status species, and the only amphibian observed was the invasive American bullfrog.

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Table 4: Special-Status Species and their Potential of Occurrence within the Study Area.

Type	Scientific Name	Common Name	Special-Status	Potential to Occur
invertebrate	*Branchinecta lynchi*	vernal pool fairy shrimp	FT	very low
invertebrate	*Lepidurus packardi*	vernal pool tadpole shrimp	FE	very low
amphibian	*Ambystoma californiense*	California tiger salamander	FE	very low
plant	*Sagittaria sanfordii*	Sanford's arrowhead	CRPR 1B	very low

*FE, FT = Federally Endangered or Threatened; ST = State Threatened; FP, SSC = CDFW Fully Protected or Species of Special Concern; California Native Plant Society CRPR 1B = rare, threatened, or endangered in California and elsewhere.

Very Low Potential of Occurrence within the Study Area

The study area does not provide suitable habitat for vernal pool invertebrates or California tiger salamander. The aquatic wildlife within the pond is dominated by invasive American bullfrogs and planted mosquito fish. The nearest CNDDB occurrence for California tiger salamander is >3 miles east of the study area. The presence of American bullfrogs makes it highly unlikely that a viable California tiger salamander population could successfully breed in this pond. Moreover, the lack of rodent burrows in the surrounding upland habitat means that summer and fall sheltering habitat for California tiger salamanders is minimal.

The wetlands present within the study area do not provide suitable habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp. The nearest CNDDB occurrence for vernal pool fairy shrimp is approximately 0.5 miles west of the study area. The amount of perennial freshwater emergent vegetation present in the pond implies that pond is likely perennially-inundated, thus providing poor habitat for vernal pool invertebrates.

Sanford's arrowhead has a low potential for occurring within the pond in the study area. The nearest documented CNDDB occurrence for this aquatic perennial herb is located approximately 6 miles northeast of the study area. This species requires freshwater wetland habitat such as ponds or ditches. Sanford's arrowhead was not observed in the pond during this survey.

Conclusions

This pond provides low-quality habitat for vernal pool invertebrates and California tiger salamanders. The presence of aquatic predators and lack of adequate upland habitat means it is highly unlikely any of these listed species would occur here. The relative lack of proximity to other areas where these species have been documented to be present makes it highly unlikely that any migration events could end up populating this pond. In addition, the perennial nature of the pond does not support the life cycles of the vernal pool invertebrates.

The information obtained during the site visit, the poor quality of the habitat in question, and the lack of connectivity to other sites occupied by endangered vernal pool invertebrates and California tiger salamanders makes the likelihood of occurrence of any of these species at this location very low.

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Should you have any questions or comments regarding this report, please do not hesitate to contact myself (jstewart@bargasconsulting.com) or Grayson Sandy (gsandy@bargasconsulting.com) at our listed emails, or the office at (916) 993-9218.

Sincerely,

James Stewart
Senior Project Manager

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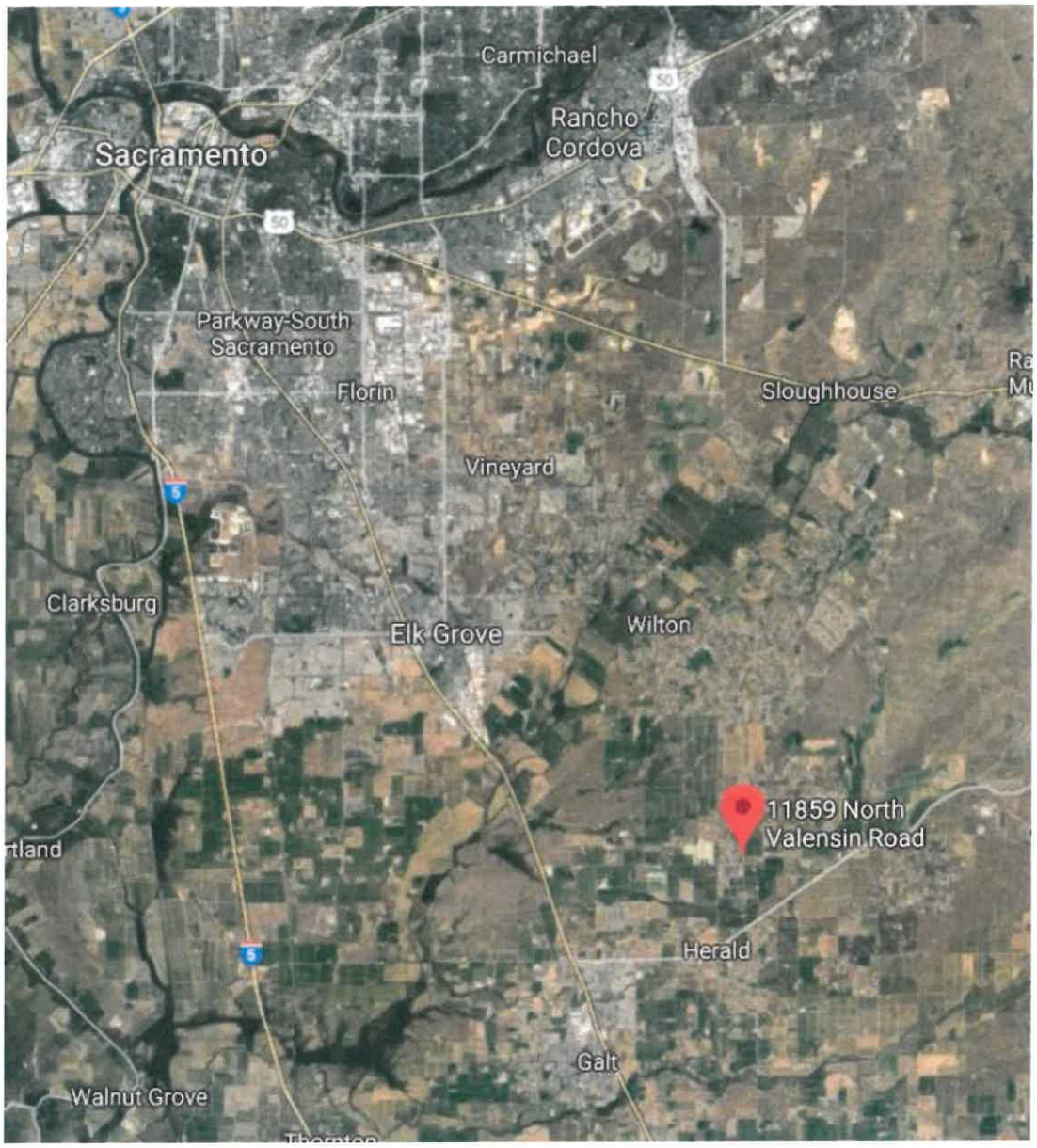

Figure 1: Aerial image of the vicinity of the study area located at APN 138-0090-069 on N. Valensin Rd, Sacramento County, California.

Figure 2: Aerial image of the study area located at APN 138-0090-069 on N. Valensin Rd, Sacramento County, California.

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Photo 1: East-facing view of upland habitat southwest of the pond in question.

Photo 2: Southeast-facing view of surrounding upland habitat southeast of the pond, characterized by non-native annual plants and agricultural orchards.

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Photo 3: North-facing view of adjacent land parcel north of the pond, dominated by annual grasses and perennial rushes.

Photo 4: North-facing view of the pond. This pond likely holds large amounts of water throughout the year.

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Photo5: East-facing view of the pond. The pond is approximately 0.07 acres in size.

Photo 6: View from wooden dock on south side of pond. Aquatic habitat is dominated by tule and cattail.

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Photo 7: American bullfrogs were prevalent throughout the pond.

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BARGAS
Environmental Consulting

17 September 2018

Mr. Nicholas Avdis
THOMAS LAW GROUP
455 Capitol Mall, Suite 801
Sacramento, CA 95814

Subject: FINAL Reconnaissance-level tricolored blackbird survey for the +/- 4.5-acre proposed Squirrel Monkey Haven in Galt, Sacramento County, California (APN 138-0090-069)

Mr. Avdis:

This report summarizes the results of the reconnaissance-level tricolored blackbird (*Agelaius tricolor*) survey conducted by Bargas Environmental Consulting (Bargas) biologist for the proposed Squirrel Monkey Haven (project) located approximately 6 miles northeast of the City of Galt, Sacramento County, California (**Figures 1** and **2**). The focus of the survey was a 0.07-acre man-made pond located at 38.326486°, -121.233150° (WGS84) on a 4.5-acre property parcel (study area) at 11859 North (N.) Valensin Road (Rd), approximately 5 miles east of Highway 99, Sacramento County, California. The study area is comprised of parcel APN 138-0090-069 within the Clay USGS 7.5-minute quadrangle. The tricolored blackbird is listed as a threatened species under the California Endangered Species Act.

Methods

A database review was performed prior to the special-status species survey conducted by Bargas on 01 May 2018. The databases queried to obtain background information for the study area included California Department of Fish and Wildlife (CDFW) Natural Diversity Database (CNDDB), US Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC), and USFWS Online Critical Habitat Mapper. The CNDDB data was drawn from the Elk Grove, Sloughhouse, Carbondale, Galt, Clay, Goose Creek, Lodi North, Lockeford, and Clements USGS 7.5-minute quadrangles. The IPaC compiles a list of species from Sacramento County.

Bargas biologist, Grayson Sandy, conducted a reconnaissance-level survey of the study area on 21 August 2018, focusing on evaluating the habitat suitability for nesting tricolored blackbird. Weather conditions were characterized by clear skies with temperatures from 72-80°F and north to northeast winds at approximately 5 mph. The pedestrian survey consisted of walking the perimeter of the pond area with an evaluation of current site conditions, and passive observation to listen for birds in the area and observe potential presence of tricolored blackbirds; investigation of potential habitat that could support tricolored blackbird and identification of wildlife and plants observed. Vegetation was identified to genera or species on site. Photos were taken throughout the study area (**Photos 1** through **7**).

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Site Description

The site is located on a residential property in a rural community adjacent to agricultural land northeast of Galt, California (**Figures 1** and **2**). The upland areas surrounding the pond are characterized by non-native annual grasses and forbs (**Photo 1**). Surrounding the site are undeveloped ruderal areas also dominated by non-native annual species, as well as agricultural vineyards and orchards. Within these orchards, the herbaceous vegetation layer appears to be well maintained through mowing (**Photos 2** and **3).** The topography is relatively flat throughout the study area, with the exception of a slight slope allowing for the collection of water in the pond. There was evidence of turbidity in the basin from adjacent agricultural land uses. The pond is dominated by tule (*Schoenoplectus acutus* var. *occidentalis*) and cattails (*Typha* sp.) and surrounded by trees that include valley oak (*Quercus* lobata) and ornamental pines (*Pinus* sp).

Results

Table 1: Summary of tricolored blackbird data identified during the preliminary database review.

Database	Summary of Results
CDFW CNDDB (9-quad area)	10 occurrences for tricolored blackbird within a 3-mile radius of the study area, ranging from 1972 to 2015. The nearest to the study area is approximately 2015, ~1.5 miles southeast of the study area, along Twin Cities Rd;
USFWS IPaC (Sacramento County)	Tricolored blackbird is documented as occurring in Sacramento County.
USFWS Critical Habitat	No USFWS designated critical habitats within proximity of the site.

Results

No tricolored blackbirds were visually or audibly detected. A total of 14 wildlife species were observed during the site visit (**Table 2**). None of the species observed are special-status species, and the only amphibian observed was the invasive American bullfrog which was pervasive in the wetland feature on present in the study area.

Table 2: Wildlife observed in the study area during the 22 August 2018 survey.

Type	Scientific Name	Common Name	Special-Status
amphibian	*Lithobates catesbeianus*	American bullfrog	none
bird	*Anas platyrhynchos*	mallard	none
bird	*Elanus leucurus*	white-tailed kite	none
bird	*Cathartes aura*	turkey vulture	none
bird	*Zenadia macroura*	mourning dove	none
bird	*Sturnus vulgaris*	Eurasian starling	none
bird	*Corvus brachyrhynchos*	American crow	none
fish	*Gambusia affinis*	mosquito fish	none

Table 3: Plants observed in the study area during the 22 August 2018 survey.

Scientific Name	Common Name	Special-Status
Avena fatua	wild oats	none
Avena sativa	cultivated oats	none
Brassica nigra	black mustard	none
Bromus diandrus	ripgut brome	none
Bromus hordeaceaus	soft chess	none
Foeniculum vulgare	sweet fennel	none
Festuca perennis	Italian ryegrass	none
Geranium dissectum	cranesbill geranium	none
Hordeum sp.	barley	none
Medicago polymorpha	bur clover	none
Quercus lobata	valley oak	none
Raphanus sativus	wild radish	none
Rumex crispus	curly dock	none
Salix sp.	willow	none
Schoenoplectus acutus var. *occidentalis*	tule	none
Trifolium repens	white clover	none
Triticum aestivum	common wheat	none
Typha sp.	cattail species	none
Vicia sativa	spring vetch	none

Potential of Tricolored Blackbird Occurrence within the Study Area

The study area contains the appropriate wetland vegetation required to support nesting tricolored blackbirds, however, the pond and its freshwater emergent wetland habitat are only 0.07 acres (3,049 square feet) in size making it highly unlikely to support a tricolored blackbird breeding colony. According to Audubon California's web page on tricolored blackbirds, their nesting habitat occurs in, "marsh with cattails or bulrushes, or in willows at water's edge" (UC Davis, 2018). Tricolored blackbirds are colonially-nesting birds, generally nesting very close to one another and often in large groups (UC Davis, 2018). Colonies have been found to vary in size from a minimum of 50 nests to more than 20,000 in one colony (Zeiner et al., 1988-1990). Typically, there is one nest per every 21.5 square feet, but additional dense vegetation is needed as a protective buffer against predators (Kyle, 2011). Current research suggests that tricolored blackbirds in some areas of the Central Valley are trending towards more numerous small colonies, where in the past they tended towards very large single colonies (UC Davis, 2018).

There are ten CNDDB occurrences for tricolored blackbird colonies located within three miles of this study area, most having been recorded in 2014 and 2015 and concentrated along Twin Cities Rd approximately 1.5 to 3 miles to the southeast. This means that the study area pond could potentially be colonized by birds dispersing from those locations. However, the habitats present at the locations of the CNDDB records are larger continuous freshwater emergent wetlands than what is present in the study area, making these areas more preferable to this species. Further, a colony of red-winged blackbirds (*A. phoeniceus*) was observed within the pond habitat actively displaying and singing during the 01 May 2018

site survey; none were observed during the 22 August 2018 site survey. The red-winged blackbirds were displaying mating behaviors including singing, wing displays and general territoriality. The presence of the more aggressive and territorial red-winged blackbirds in a pond of this size suggests that colonization and nesting by tricolored blackbirds is highly unlikely.

Conclusions

The pond within the study area provides suitable vegetation for tricolored blackbird but is too small to support a typical breeding colony of tricolored blackbirds. It is possible that tricolored blackbirds may colonize the study area in the future, though the usage of the study area by nesting red-winged blackbirds in addition to the presence of higher quality and generally larger habitat nearby makes this occurrence highly unlikely.

Should you have any questions or comments regarding this report, please do not hesitate to contact myself (jstewart@bargasconsulting.com) or Grayson Sandy (gsandy@bargasconsulting.com) at our listed emails, or the office at (916) 993-9218.

Sincerely,

James Stewart
Senior Project Manager

References

Kyle, K., 2011. Tricolored Blackbird Habitat on California Department of Fish and Game Properties: An Assessment of Existing and Potential Habitat and Recommendations for Habitat Improvement and Maintenance. Nongame Wildlife Program and Lands Program, Report 2011-07. Available online at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=38296

UC Davis, 2018. Tricolored Blackbird Portal. Collaboration between UC Davis Information Center for the Environment, US Fish and Wildlife Service, Audubon California, California Department of Fish and Wildlife, Sustainable Conservation, and Point Blue Conservation Science. Available online at https://tricolor.ice.ucdavis.edu/

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California's Wildlife. Volumes I – III. California Department of Fish and Wildlife, Sacramento, California. Available online at https://www.wildlife.ca.gov/Data/CWHR/Life-History-and-Range

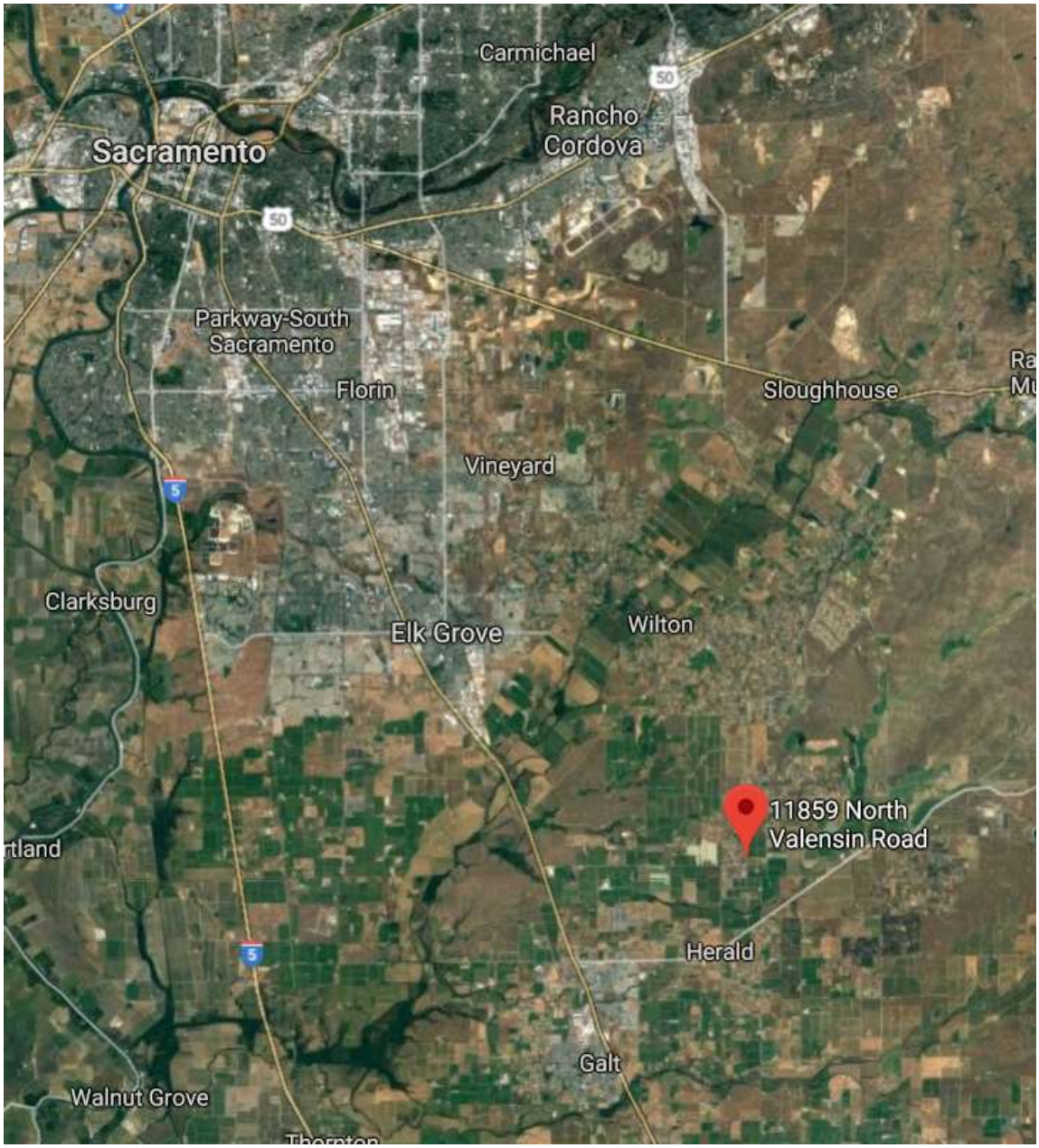

Figure 1: Aerial image of the vicinity of the study area located at APN 138-0090-069 on N. Valensin Rd, Sacramento County, California.

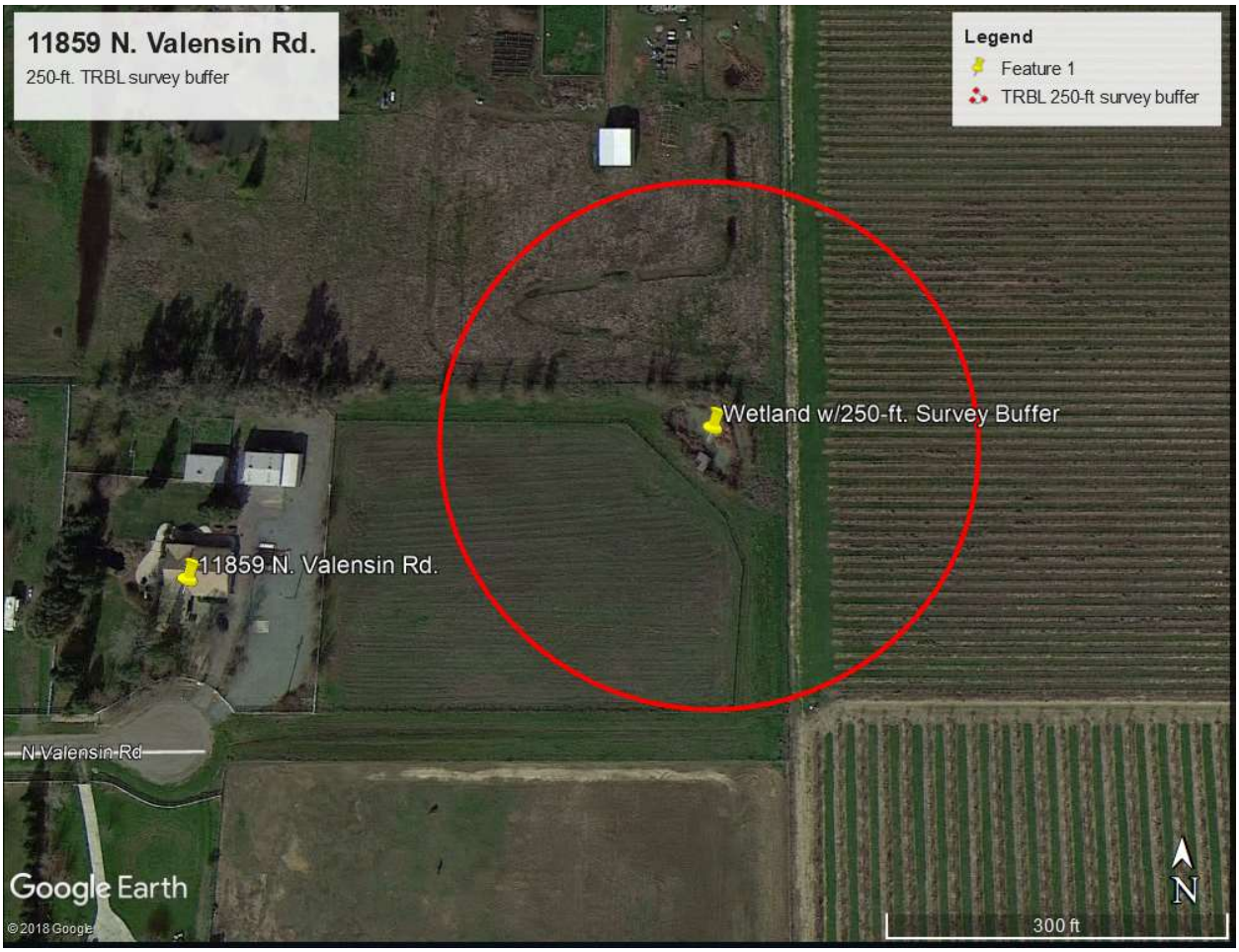

Figure 2: Aerial image of the study area located at APN 138-0090-069 on N. Valensin Rd, Sacramento County, California.

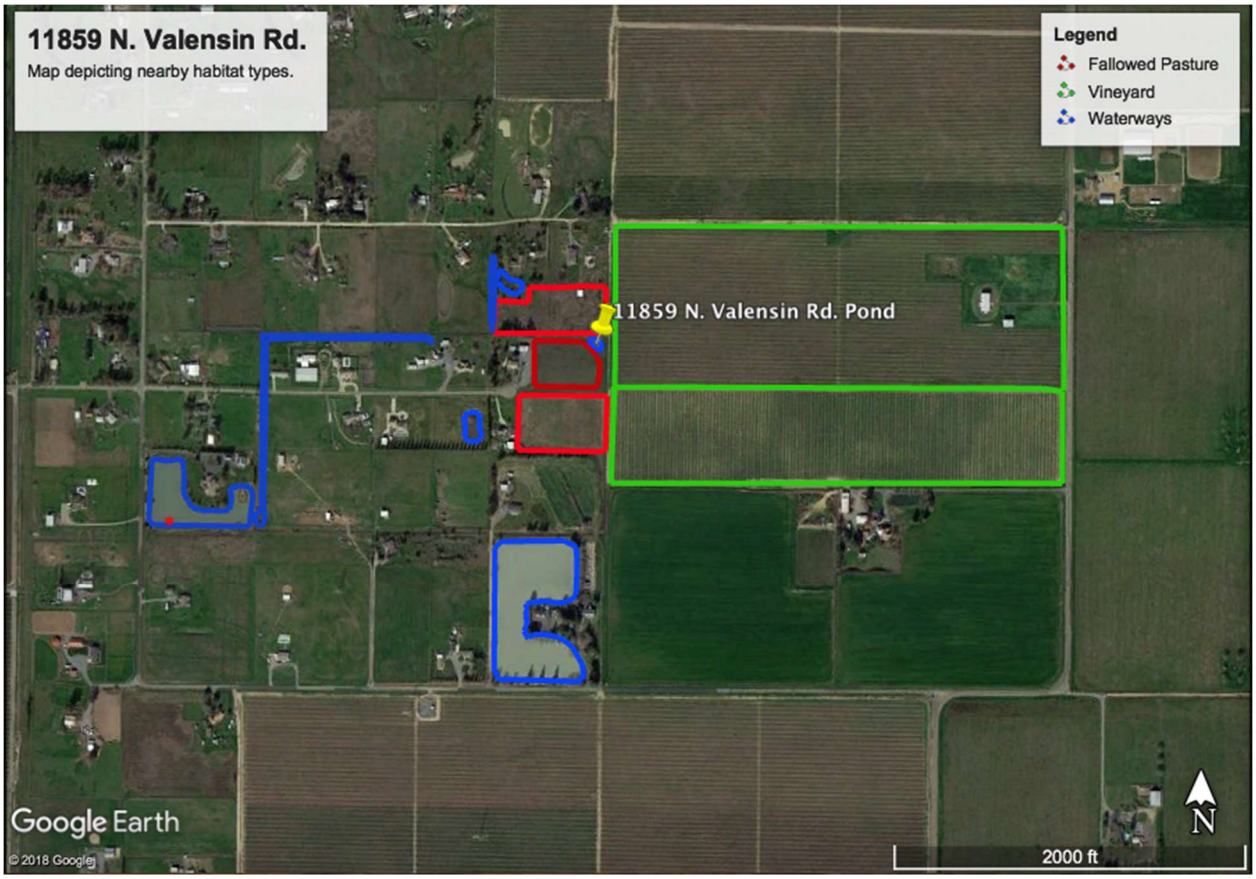

Figure 3. Aerial image of the study area with red polygons delineating fallowed pastures, green agricultural vineyards, and blue nearby waterways.

Photo 1: Pasture directly southwest of the manmade pond in the project area.

Photo 2: View of the manmade pond in the project area, with California bulrushes and other wetland vegetation.

Photo 3: Closer view of the wetland habitat in the study area. Species in view include California bulrush (*Schoeneoplectus californicus*) and cattails (*Typha spp.*), both commonly associated with tricolored blackbird nesting habitat.

Photo 4: Grape vineyard immediately east of the study area's pond.

Photo5: View of the fallowed pasture directly north of the study area's pond. This area contains a drainage that discharges into the onsite pond, but does not contain any wetland vegetation, and likely does not hold water year-round.

Photo 6: Nearby property with a large pond, containing small portions of wetland vegetation.

Photo 7: Nearby manmade drainage containing ample amounts of live and dead wetland vegetation.

Global Federation of Animal Sanctuaries

Helping Sanctuaries Help Animals

Wendy W. Hartman, AICP, Senior Planner
Office of Planning and Environmental Review
827 7th St, Room 225
Sacramento, CA 95814
(916) 875-0527
hartmanw@saccounty.net

Dear Ms. Hartman: May 29, 2018

It has come to the attention of the Global Federation of Animal Sanctuaries (GFAS) that an appeal is filed against the conditional land use permit that was approved by the Sacramento County Zoning Administrator in March of 2018 for Squirrel Monkey Haven (SMH). SMH is a candidate for accreditation by GFAS. It is the understanding of GFAS the appellant is concerned SMH would not fulfill GFAS Standards for New World Primates (SNWP). The appellant submitted to the county a document with highlighted sections of the SNWP (Item #55 Material Received at Meeting) and has expressed concern that SMH would mishandle and dispose monkey waste improperly by not treating all monkey waste as biohazardous waste.

GFAS appreciates the appellant reading the SNWP. However, the appellants concern that SMH would fail to comply with any or all of the standards in the SNWP is unfounded and we offer this statement in support of SMH. In California, primate waste is not classified as biohazardous and is disposed as regular waste by typical commercial waste management contractors. An exception to this would be if a monkey were diagnosed with a zoonotic disease or was involved with biomedical research involving zoonotic diseases, in which case, their veterinarian would determine if the waste should be handled as biohazardous medical waste. SMH's Zoonotic Disease Prevention Plan is comprehensive and outlines appropriate means to safely dispose of primate waste.

Regarding SMH fulfilling the SNWP broadly, GFAS offers peer-reviewed accreditation of animal sanctuaries. Seeking this accreditation is voluntary. Submitting to the accreditation process reflects an organizations professionalism and respect for standards, regulations, and transparency. SMH has been preparing for the accreditation process with the utmost integrity by first engaging with GFAS early, in fact well before the county permitting process, to ensure the sanctuary will fulfill the standards necessary for accreditation. The people developing SMH have expertise in regulatory compliance which includes developing and implementing standard operating procedures for the comprehensive care of squirrel monkeys as well as for training and educating personnel that work with them. GFAS supports the endeavor by SMH to develop a sanctuary for squirrel monkeys retired from research. GFAS is confident that SMH will fulfill all federal, state, and county regulations as well as the SNWP standards necessary to obtain accreditation. GFAS is confidant SMH will be conferred GFAS Accreditation promptly.

Respectfully,

Kim K. Haddad

Kim K. Haddad, DVM
Chair, Global Federation of Animal Sanctuaries
kim@sanctuaryfederation.org

UNIVERSITY OF CALIFORNIA, DAVIS

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CALIFORNIA NATIONAL PRIMATE RESEARCH CENTER
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FAX: (530) 752-2880

May 26, 2018

Wendy W. Hartman, AICP, Senior Planner
Office of Planning and Environmental Review
827 7th St, Room 225
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hartmanw@saccounty.net

Dear Ms. Hartman:

We have reviewed the waste handling methods of the proposed Squirrel Monkey Haven.

Neither the California Department of Public Health nor California Occupational Health and Safety Administration classifies non-human primate waste as medical or biohazardous waste until the animal is either experimentally infected or suspected, by a veterinarian, to be infected with a pathogen that could be transferred to humans (zoonosis) (1,2).

The plan to contain monkey waste, i.e., feces and urine soiled materials (e.g., wood shavings, wood mulch, straw/hay), in regular heavy-duty plastic bags and disposing it as regular waste in a container provided and removed by a commercial waste company is appropriate for this squirrel monkey population.

In the unlikely event a monkey is diagnosed with a zoonosis, the SMH zoonotic disease prevention plan states appropriately that this waste would be treated as biohazardous when deemed necessary by Veterinarians. Biohazardous medical waste is contained in receptacles provided and collected by commercial medical waste contractors. The staff associated with SMH is experienced to manage such waste appropriately.

Sincerely,

Jeffrey Roberts

Jeffrey Roberts, D.V.M. DACLAM
Associate Director Primate Services
California National Primate Research Center

Gregory C. Hodge

Greg Hodge,
Safety and Effectiveness Operations Manager
California National Primate Research Center

Koen Van Rompay, DVM, Ph.D.
Core Scientist, Infectious Disease Unit
Scientific Supervisor, Primate Assay
Laboratory/Pathogen Detection Laboratory
California National Primate Research Center

References

1) California Department of Public Health Medical Waste Management Act 2015. Definitions of Medical waste, biological waste and pathology waste.
2) CalOSHA Blood Bourne Pathogen Standards Definitions of other potentially infections materials.

Hartman. Wendy

Subject: FW: Squirrel Monkey Haven

XTERNAL EMAIL: If unknown sender, do not click links/attachments.

Mr. Buckmaster,

We reviewed the information submitted to us by the Sacramento County Planning Department and reviewed the plan and other information you submitted to our office via email. Based on the information submitted we have no current water quality concerns with the Squirrel Monkey Haven project.

Richard Muhl
Senior Environmental Scientist
Compliance and Enforcement Unit
CVRWQCB
(916) 464-4749

From: Chris Buckmaster [mailto:smhyear@gmail.com]
Sent: Friday, May 25, 2018 1:01 PM
To: Muhl, Richard@Waterboards <Richard.Muhl@waterboards.ca.gov>
Cc: L'Heureux, Robert@Waterboards <Robert.LHeureux@waterboards.ca.gov>; Sellards, Kim@Waterboards <Kim.Sellards@waterboards.ca.gov>
Subject: Re: Squirrel Monkey Haven

On Wed, May 23, 2018 at 5:45 AM, Muhl, Richard@Waterboards <Richard.Muhl@waterboards.ca.gov> wrote:

Mr. Buckmaster,

As you know we received a complaint regarding your proposed project. We want to insure that the project does not create water quality issues. To better access the project could you answer the following questions. We appreciate the information and understand the lengthy approval process. Once we receive the information we will review it quickly and will let you know if we have any issues regarding water quality. If we have find no issues will send you an email stating that we have identified no water quality issues.

Here is some information that may be useful and also answers to the questions.

Estimated daily monkey waste:
The biomass (summed body weights) of the 51 squirrel monkeys we propsoe to house at the facility is ~98-lbs. Using peer-reviewed scientific literature on squirrel monkey waste production (feces and urine) it's estimated the population would produce ~0.6 gallons of urine and ~0.8 pounds of feces in a 24-hr period. The project's land use permit is for no more than 55 squirrel monkeys.

The monkeys would be locked in the indoor kennel area for 10-12 hrs each day, from approximately dusk to 8-10am, and will have access to both the indoor and outdoor when not locked indoors. With this in mind, and given retired research monkeys choose to spend more time inside than outside, at least half the waste produced in a 24-hr period will be captured indoors.

Waste disposal plan:
Feces, urine, and soiled bedding (shavings/hay- indoors; mulch-outdoors) from healthy monkeys like the the ones we propose to house is treated as regular waste, and not as biohazardous material. Soiled bedding materials from the indoors and soiled mulch from the outdoors would be bagged in heavy duty contractors

bags, placed in a regular waste container provided by and picked up by a commercial waste management company.

Will the outdoor kennels have a concrete floor? If the outdoor kennels do not have a concrete floor how will you capture the solid and liquid monkey waste?

Concrete: There are no plans to put concrete in the outdoor kennel area.

Capturing monkey waste in the outdoor kennel area:

The natural substrate that exists in the pasture area where the facility is proposed to be built is clay. Within each of the 18 outdoor kennel areas we propose to put a water permeable weed barrier membrane, ~2 inches of base gravel on the membrane, and ~4-6 inches of decomposed granite (DG) on the gravel. On the DG, there would be ~ 2-4 inches of wood mulch. The mulch would capture the feces and urine that the monkeys excrete in the outdoor kennels. USDA-Animal Welfare Act regulations require that we spot cleaning the mulch daily. The DG would be compressed enough to allow spot cleaning that involves raking but not overly compressed to prevent rain water permeability.

In each of the 18 outdoor kennel areas clump grasses, shrubs, and small trees would be planted in the ground . The plants would be watered using a drip irrigation system.

- Will the waste water be discharged to a leach field?

  Waste water from hosing the cement floor in the indoor kennel would drain into a dedicated septic. A septic contractor has recommended one dry well for this purpose.

- Will a berm or other containment structure be placed along the perimeter fence or around the outdoor kennels to retain storm water runoff? Or can the waste water in the outdoor kennels be discharged to the leach field?

  We do not have plans for a berm or a containment structure. There is no exisiting leachfield and we do not have a plan for one.

- Do you have an electronic set of plans? Even a PDF copy of the building design would work. If so it would be very helpful.

  Yes, please refer to attached PDF.

Please let me know if you need more information or would like to visit the property. We welcome and appreciate assessment of the project.

Thank you,
Chris

Thanks Rich

Richard Muhl
Senior Environmental Scientist
Compliance and Enforcement Unit
CVRWQCB
(916) 464-4749

Environmental Noise Assessment

Squirrel Monkey Haven

Sacramento County, California

BAC Job # 2017-128

Prepared For:

Christine and Paul Buckmaster

11859 N. Valensin Road
Galt, CA 95632

Prepared By:

Bollard Acoustical Consultants, Inc.

Paul Bollard, President

December 21, 2017

3551 Bankhead Road • Loomis, CA 95650 • Phone: (916) 663-0500 • Fax: (916) 663-0501 • BACNOISE.COM

Introduction

The proposed Squirrel Monkey Sanctuary (project) is located at 11859 N. Valensin Road in Galt (Sacramento County), California. The project proposes the development of a sanctuary for 51 squirrel monkeys (Saimiri sciureus) that are retired from research. The project would include the construction of a new 2,700 square foot steel agricultural building that would house the squirrel monkeys. The project site and proposed site plan are depicted in Figures 1 and 2, respectively.

Sacramento County has requested a noise study be prepared to determine if project noise generation would be satisfactory relative to Sacramento County criteria for acceptable noise exposure. In response to that request, Bollard Acoustical Consultants, Inc. (BAC) was retained by the project applicant to prepare this analysis.

Acoustical Terminology

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that human hearing can detect. If the air pressure variations occur frequently enough (at least 20 times per second), they may be interpreted as sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz). Definitions of acoustical terminology are presented in Appendix A of this report.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. The decibel scale was devised to address this problem. The decibel scale uses the threshold of human hearing (generally 20 micropascals of pressure) as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers within a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in decibel levels correspond closely to human perception of relative loudness.

Figure 3 illustrates noise levels associated with common noise sources. The perceived loudness of sounds is dependent on many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by filtering the sound signal using the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard descriptor for environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels.

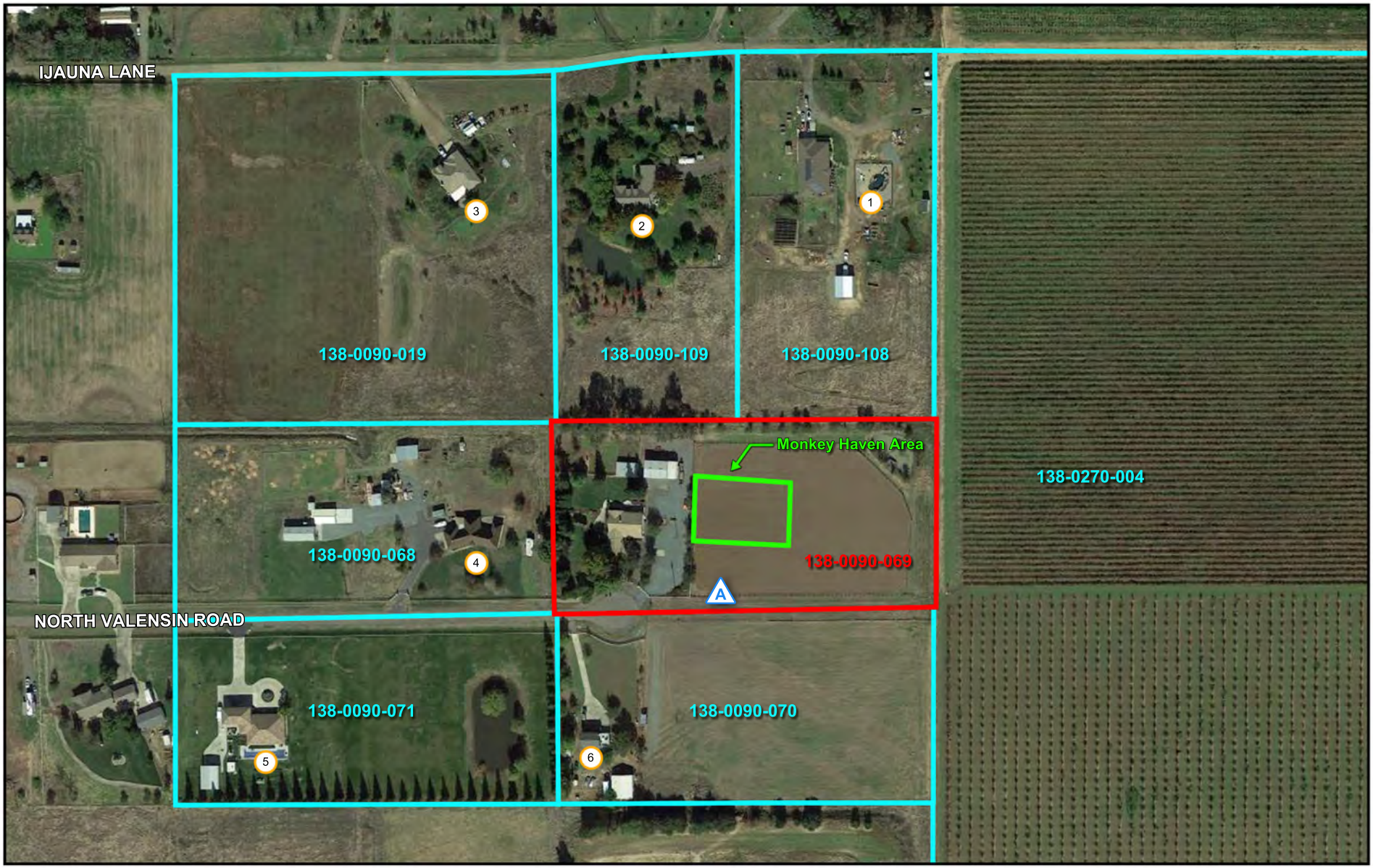
Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent sound level (L_{eq}). The Hourly L_{eq} (equivalent sound level over a 60 minute period) is the foundation of the Day-Night Average (L_{dn}) and shows very good correlation with community response to noise.

The Day-Night Average Level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment. L_{dn}-based noise standards are commonly used to assess noise impacts associated with traffic, railroad and aircraft noise sources.

A single noise event is an individual distinct loud activity, such as a train passage, or any other brief and discrete noise-generating activity. Extensive studies have been conducted regarding the effects of single-event noise on sleep disturbance, with the Sound Exposure Level (SEL) metric being a common metric used for such assessments. SEL represents the entire sound energy of a given single-event normalized into a one-second period regardless of event duration. As a result, the single-number SEL metric contains information pertaining to both event duration and intensity. Another descriptor utilized to assess single-event noise is the maximum, or L_{max}, noise level associated with the event. A problem with utilizing L_{max} to assess singe events is that the duration of the event is not considered.

There is currently no national consensus regarding the appropriateness of SEL criteria as a supplement or replacement for cumulative noise level metrics such as L_{dn} and CNEL. Nonetheless, because SEL describes a receiver's total noise exposure from a single impulsive event, SEL is often used to characterize noise from individual brief loud events.

Due to the wide variation in test subjects' reactions to noises of various levels (some test subjects were awakened by indoor SEL values of 50 dB, whereas others slept through indoor SEL values exceeding 80 dB), no universal criterion has been developed for environmental noise assessments.



Legend

- Long-Term Noise Measurement Site
- Noise-Sensitive Outdoor Areas
- Project Parcel
- Adjacent Parcels to Project

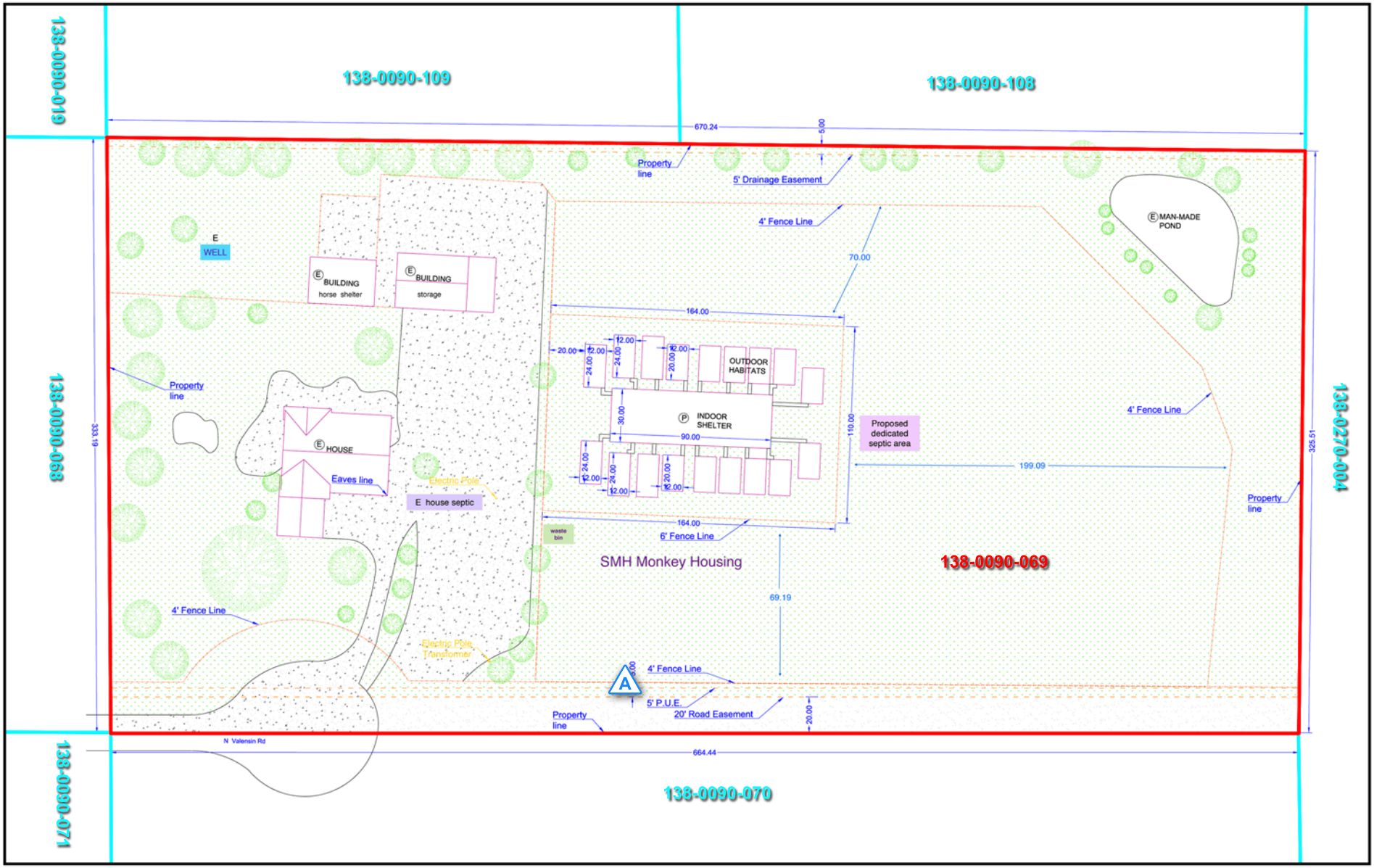
N

Scale (feet)

0 150 300

Figure 1

Project Area and Ambient Noise Measurement Location
Squirrel Monkey Haven
Sacramento County, California



Legend

- A — Long-Term Noise Measurement Site
- Project Parcel
- Adjacent Parcels to Project

N

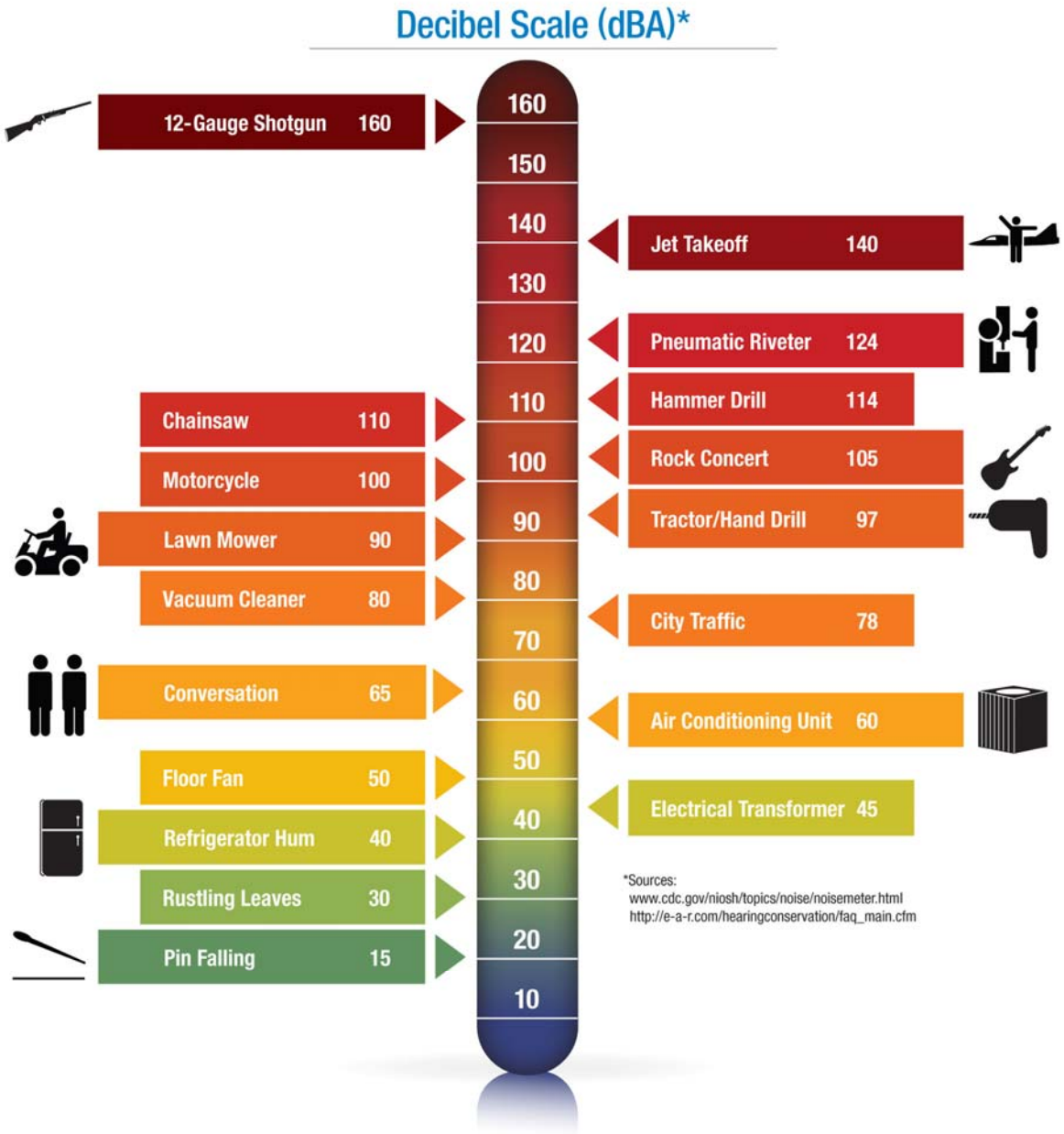
Scale (feet)

0 50 100

Figure 2

Project Site Plan
Squirrel Monkey Haven
Sacramento County, California

Figure 3
Typical A-Weighted Sound Levels of Common Noise Sources



Existing Ambient Noise Environment

The existing noise environment in the project vicinity is defined by noise sources typical in a rural setting. Noise sources contributing to measured ambient noise levels consisted of wind blowing through grass, wildlife, insects, birds, and intermittent traffic on North Valensin Road. To quantify existing background noise levels in the project vicinity, long-term ambient noise level measurements were conducted on the project site from Saturday, July 8 through Monday, July 10, 2017. Please see Figure 1 for the noise measurement location. Table 1 shows a summary of the ambient noise measurement results with detailed results provided in Appendices B and C.

A Larson-Davis Laboratories (LDL) Model 820 precision integrating sound level meter was used to complete the noise level measurement survey. The meter was calibrated in the field before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

Table 1
Measured Ambient Noise Level Summary
Squirrel Monkey Haven – Sacramento County, California

		Measured Noise Levels (dBA)			
		Daytime (7 AM to 10 PM)		Nighttime (7 AM to 10 PM)	
Site[1]	Date	L_{50}	L_{max}	L_{50}	L_{max}
1	Saturday, July 8, 2017	44	58	58	62
	Sunday, July 9, 2017	45	60	57	62
	Monday, July 10, 2017	45	57	55	65
	Average:	45	58	57	63
Sacramento County Standards (Table 1):		55	75	50	70

Notes:
1. Ambient noise level monitoring was conducted along the southern property line. Location is shown on Figure 1.

The Table 1 and Appendix B data indicate that existing ambient noise levels in the project vicinity were consistent from day-to-day and night-to-night. The measured ambient data from the three day monitoring period was averaged to determine the baseline noise level condition in the project vicinity. The calculated daytime and nighttime median noise levels were 45 dB and 57 dB, while daytime and nighttime maximum noise levels were 58 dB and 63 dB. The elevated nighttime noise levels are believed to be attributable to the presence of increased insect activity during the nighttime hours.

Criteria for Acceptable Noise Exposure

Sacramento County General Plan Noise Element

Sacramento County General Plan was adopted in 2011 and serves as the overall guiding policy document for land use, development, and environmental quality for the County. The Sacramento County Noise Element of the General Plan contains noise standards for transportation as well as non-transportation or "stationary" noise sources. The non-transportation criteria, shown in Table 2, would apply to the noise-generation of the monkeys.

Table 2
Non-Transportation Noise Standards
Sacramento County Noise Element
Median (L_{50}) / Maximum (L_{max})[1]

Receiving Land Use	Outdoor Area[2] Daytime (7 a.m. – 10 p.m.)	Outdoor Area[2] Nighttime (10 p.m. – 7 a.m.)	Interior[3] Day & Night	Notes
All Residential	55 / 75	50 / 70	35 / 55	
Transient Lodging	55 / 75	--	35 / 55	4
Hospitals & Nursing Homes	55 / 75	--	35 / 55	5,6
Theaters & Auditoriums	--	--	30 / 50	6
Churches, Meeting Halls Schools, Libraries, etc.	55 / 75	--	35 / 60	6
Office Buildings	60 / 75	--	45 / 65	6
Commercial Buildings	--	--	45 / 65	6
Playgrounds, Parks, etc.	65 / 75	--	--	6
Industry	60 / 80	--	50 / 70	6

Notes:

1. The Table 2 standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards of Table 2, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.
2. Sensitive areas are defined in the acoustic terminology section.
3. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
4. Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.
5. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
6. The outdoor activity areas of these uses (if any), are not typically utilized during nighttime hours.
7. Where median (L50) noise level data is not available for a particular noise source, average (Leq) values may be substituted for the standards of this table provided the noise source in question operates for at least 30 minutes of an hour. If the source in question operates less than 30 minutes per hour, then the maximum noise level standards shown would apply.

Source: Sacramento County General Plan Noise Element (Amended 2011)

For residential land uses, the county requires that the exterior noise level standards above be applied at the "sensitive outdoor areas". The county defines sensitive outdoor areas as the primary outdoor activity area associated with any given land use at which noise-sensitivity exists (e.g. backyards, patio/deck areas). However, where the location of the outdoor activity areas for large lot residential properties cannot be determined, the County's exterior noise level standards are applied within 50 feet of the rear of the residence.

Sacramento County Noise Ordinance

Section 6.68 of the Sacramento County Code (noise control) establishes standards for acceptable noise exposure at residential uses. Because the County's Noise Ordinance standards are consistent with the County's General Plan Noise Element standards, compliance with the Table 2 standards would ensure that both the Noise Element and Noise Ordinance standards of Sacramento County have been satisfied.

Noise Standards Applied to the Project

The project parcel and surrounding parcels are large lot agriculturally zoned parcels containing single-family residences. The monkeys sleep pattern is diurnal like humans, awake during daytime hours and asleep during nighttime hours. Furthermore, the monkeys would be indoors within the proposed agricultural building during nighttime hours. Because noise-generation from the monkeys is not anticipated during nighttime hours, only the Sacramento County General Plan daytime (7 a.m. to 10 p.m.) noise level standards would be applicable to the project.

According to footnote 7 of Table 2, the median (L_{50}) noise level standards are applicable to noise sources present in excess of 30 minutes out of the hour while the maximum (L_{max}) noise level standards are applicable to noise sources present less than 30 minutes out of the hour. It is our understanding that most of the vocalizations from monkeys throughout the day are "conversational chit-chat" with limited episodes of shrieking, occurring approximately 3-5 times per day. Because the conversational chit-chat could potentially occur in excess of 30 minutes out of an hour, it would be subject to the median (L_{50}) noise level standard of 55 dB. Because the shrieking would only occur on limited occasions, it would be subject to the maximum (L_{max}) noise level standard of 75 dB.

The county's noise standards would be applied at the outdoor activity areas of the adjacent parcels. The location of the identified outdoor activity areas have been identified on Figure 1. As required by the county's general plan, in instances where the outdoor activity area was not clearly defined, the noise level standards were applied at a point 50 feet from the residence. Satisfaction with the county's noise level standards would ensure that the project would not result in a substantial increase in the project vicinity.

The Sacramento County General Plan utilizes an exterior maximum (L_{max}) noise level descriptor to assess individual distinct loud activities. The maximum noise level descriptor, however, does not account for the duration of the event. Alternatively, the Sound Exposure Level (SEL) noise level descriptor factors the duration of a distinct loud activity since it represents the entire sound energy of a given single-event normalized into a one second period regardless of the event duration. Although the SEL descriptor factors the duration of a loud event, it is typically utilized

for sleep disturbance assessments where the SEL is assessed indoors (bedroom). Noise-generation due to the project is not anticipated during nighttime hours, and therefore no sleep disturbance is anticipated. Nonetheless, a recommended indoor SEL of 55 dB was conservatively applied to the project.

Project Noise Generation

Description of Shelter

The monkeys would be housed within a new 2,700 square foot steel agricultural building. The building will have insulation on the ceiling and continue to approximately 4 feet down from the ceiling. Each end of the building will have a 10-foot sliding door that can be opened for airflow and a 4-foot walkthrough door. Indoor caging will be made of wire mesh. The outdoor habitats will be made of similar wire mesh and connect to the indoor shelter via aerial wire mesh runways. The habitats will be heavily planted and the tops and sides will have shade netting for the warmer summer months. The perimeter of the monkey housing, visible on Figure 2, will have an 8 foot tall security fence. The applicant proposes to suspend vinyl acoustic curtains from perimeter security fence, providing a visual and noise screen for the project.

Reference Noise Levels for Squirrel Monkey Vocalizations

The primary noise source associated with this facility would be the vocalizations of the monkeys. The project applicant has indicated that the population of 51 monkeys will consist of 35 females and 16 males. The males are not heard vocalizing very often. If they do it is either a happy twitter at feeding time or a brief cackle to threaten a neighboring male. The females chit chat a lot throughout the day. The conversational chit chat (e.g., purrs, chirps, chucks) occur between monkeys when they are close to each another. According to the project applicant, these types of vocalizations are similar in sound level to average human conversation. Other vocalizations, which are the loudest, are given in reaction to specific events that are scary (alarm call yap) or annoying (cackle, shrieks). About 3-5 episodes of social drama occur daily that involve shrieking. These episodes are momentary and last about 30-60 seconds. Squirrel monkeys vocalize for specific reasons and do not vocalize impulsively or repetitively like dogs barking at strangers, out of boredom, or to protect territory.

The journal article published by the Acoustical Society of America titled, “Responses of Squirrel Monkeys to their Experimentally Modified Mobbing Calls,” by Claudia Fichtel and Kurt Hammerschmidt (May 2003), provides reference noise levels for squirrel monkey vocalizations. Specifically, the article provides reference noise levels for the alarm call yap. The yap, according to the article, serves to inform members of the same species about the presence of a mammalian predator and is often uttered in a chorus as a mobbing reaction. The maximum squirrel monkey yap noise levels were measured to be 76 dB ± 5 dB at a distance of 3 feet. Therefore, the worst-case maximum noise levels of for yaps documented in the journal article were 81 dB at 3 feet. As indicated previously, the loudest types of monkey vocalizations are alarm call yaps, cackles and shrieks. The project applicant has indicated that the shrieks are the loudest of the three vocalizations but not by a wide margin. In order to conservatively assess maximum noise levels associated with shrieks, 5 dB was added to the documented worst-case yap noise levels of 81 dB at 3 feet, resulting in reference maximum noise level of 86 dB at 3 feet.

Median monkey vocalizations (twitters) were conservatively assumed to be 15 dB quieter than maximum yap noise levels, resulting in a reference noise level of 66 dB at 3 feet. Average male human conversation in a raised voice is approximately 65 dB at 3 feet, providing good agreement with the applicants' subjective similarity of the monkey twitter to human conversation. To provide a conservative assessment of median squirrel monkey noise generation (twitters) at the proposed facility, half (18) of the females were assumed to vocalizing simultaneously for the duration of an hour, resulting in a reference median noise level of 79 dB at 3 feet.

Predicted Noise Levels at Nearest Residential Outdoor Activity Areas

The reference noise levels discussed in the preceding paragraphs were projected to the nearest identified outdoor activity areas assuming normal spherical spreading of sound (6 dB decrease per doubling of distance from the noise source). Table 3 shows the predicted median and maximum noise levels at each of the six nearest residential outdoor activity areas to the proposed shelter for worst-case squirrel monkey vocalization noise generation. A conservative -6 dB offset was applied to the predicted noise levels presented in Table 3 in order to account for the attenuation provided by the proposed perimeter 8-foot tall security fence with suspended acoustic curtains (Acoustifence - http://www.acoustiblok.com/acoustical_fence.php). An example of the Acoustifence product utilized to successfully provide noise mitigation for a photovoltaic inverter project is provided in Appendix D.

Table 3
Predicted Squirrel Monkey Noise Levels at Nearest Outdoor Activity Areas
Squirrel Monkey Haven – Sacramento County, California

Residence[1]	APN	Distance (feet)[2]	Predicted Noise Levels (dBA)[3]	
			L_{50}	L_{max}
1	138-0090-108	520	28	35
2	138-0090-109	480	28	36
3	138-0090-019	640	26	33
4	138-0090-068	400	30	38
5	138-0090-071	840	24	31
6	138-0090-070	430	29	37
Sacramento County Daytime Standards:			**55**	**75**

Notes:
1. Nearest residential outdoor activity areas are illustrated on Figure 1.
2. Distances were scaled from the center of the nearest outdoor habitat area to nearest residential outdoor activity areas.
3. Predicted noise levels have been conservatively adjusted by -6 dB to account for the attenuation provided by the perimeter 8-foot tall noise barrier (vinyl curtains).

The Table 3 data indicate that predicted worst-case squirrel monkey noise levels generated by the proposed project would be satisfactory relative to the County's noise standards. Furthermore, predicted noise levels would be below measured ambient noise levels presented in Table 1. As a result, no further mitigation measures would be warranted for the project.

Predicted Noise Levels at Nearest Property Lines

Although the Sacramento County's noise level standards are applied at residential outdoor activity areas, monkey vocalization noise levels were also conservatively predicted at the nearest project property lines. The same methodology described in the previous section was utilized to predict monkey vocalization noise levels at the property lines. Those results are presented below in Table 4.

Table 4
Predicted Squirrel Monkey Noise Levels at Nearest Property Lines
Squirrel Monkey Haven – Sacramento County, California

Direction	APN	Distance (feet)[1]	Predicted Noise Levels (dBA)[2]	
			L_{50}	L_{max}
North	138-0090-109	110	41	49
East	138-0270-004	265	34	41
South	138-0090-070	135	39	47
West	138-0090-068	265	34	41
Sacramento County Daytime Standards:			**55**	**75**

Notes:
1. Distances were scaled from the nearest outdoor habitat area to the nearest property lines.
2. Predicted noise levels have been conservatively adjusted by -6 dB to account for the attenuation provided by the perimeter 8-foot tall noise barrier (vinyl curtains).

The Table 4 data indicate that predicted worst-case squirrel monkey noise levels generated by the proposed project would be satisfactory relative to the County's noise standards, even if they were assessed at the nearest project property lines rather than outdoor activity areas. Furthermore, predicted property line noise levels would be below the measured ambient noise levels presented in Table 1.

Single Event Analysis

As discussed previously, the Sound Exposure Level (SEL) represents the entire sound energy of a given single-event normalized into a one-second period regardless of event duration. According to the project applicant, about 3-5 episodes of social drama occur daily that involve shrieking with each episode lasting about 30-60 seconds. Given maximum shrieking noise levels of 86 dB at 3 feet and 60 seconds of continuous shrieking, the SEL for worst-case squirrel monkey vocalizations was calculated to be 104 dB at a distance of 3 feet. Table 5 shows the predicted interior SEL at each of the six nearest residences. A conservative -6 dB offset was applied to the predicted noise levels presented in Table 5 in order to account for the attenuation provided by the proposed perimeter 8-foot tall suspended acoustic curtains. The analysis also assumes a building façade transmission loss of 15 dB and 25 dB for bedroom windows in the open and closed positions, respectively.

Table 5
Predicted Squirrel Monkey Sound Exposure Levels within Nearest Residential Bedrooms
Squirrel Monkey Haven – Sacramento County, California

Residence[1]	APN	Distance (feet)[2]	Predicted SEL (dBA)[3,4]	
			Windows Open[5]	Windows Closed[6]
1	138-0090-108	510	38	28
2	138-0090-109	500	38	28
3	138-0090-019	670	36	26
4	138-0090-068	350	41	31
5	138-0090-071	810	34	24
6	138-0090-070	400	40	30
		Recommended Interior SEL Standard[7]:	**55**	**55**

Notes:

1. Nearest residences are illustrated on Figure 1.
2. Distances were scaled from the center of the nearest outdoor habitat area to nearest residential facade.
3. SEL = Sound Exposure Level
4. Predicted noise levels have been conservatively adjusted by -6 dB to account for the attenuation provided by the perimeter 8-foot tall noise barrier (vinyl curtains).
5. Predicted noise levels were adjusted by -15 dB to account for the transmission loss provided by the residential building facades with the bedroom windows in the open position.
6. Predicted noise levels were adjusted by -25 dB to account for the transmission loss provided by the residential building facades with the bedroom windows in the closed position.
7. No universal SEL criterion has been developed for environmental noise assessments. The Sacramento County General Plan does not contain an SEL standard.

The Table 5 data indicate that worst-case squirrel monkey sound exposure levels are predicted to be well below the recommended interior SEL standard of 55 dB. No further consideration of noise mitigation measures would be warranted for the project relative to the recommended interior SEL standard of 55 dB.

Comparison of Proposed Project Relative to Typical Dog Kennel

Due to the unique nature of this project, Sacramento County requested that noise generated by the squirrel monkeys be compared to the noise generation of a typical dog kennel operation. The primary noise source associated with a typical outdoor dog kennel is periodic dog barking. BAC has considerable experience in preparing noise studies for dog boarding facilities and, even under the most ideal boarding conditions with highly trained supervision, dogs occasionally still bark. Usually barking occurs in response to some stimuli, such as persons or other dogs entering the kennel area. The degree of barking depends largely on the experience of the staff and the level of stimuli the dogs receive.

To quantify noise levels associated with a typical outdoor dog kennel, BAC averaged data collected at the All Pets Boarding (Loomis), Sacramento SPCA, and Nadelhaus Kennels (Chico). The results of the barking dog noise measurements indicate that at a distance of approximately 200 feet from the dogs, the maximum noise level generated by the barking dogs was approximately 55 dB L_{max}. The average noise level measured at 200 feet with approximately 30-40 dogs barking intermittently was 50 dB L_{eq}. Because the county's standards are in terms

of the median noise level descriptor, and not average (L_{eq}), median barking dog noise levels were conservatively assumed to be 50 dB L_{50}. At the Nadelhaus Kennels, median noise levels were approximately 5 dB lower than average noise levels, therefore the assumed median noise level of 50 dB L_{50} for this comparative analysis would be considered conservative.

Table 6 shows the predicted squirrel monkey vocalization and barking dog noise levels at the outdoor activity areas of the six nearest residences. A conservative -6 dB offset was applied to the predicted noise levels presented in Table 6 in order to account for the attenuation provided by the proposed perimeter 8-foot tall suspended acoustic curtains.

Table 6
Comparison of Predicted Squirrel Monkey Noise Levels vs Typical Dog Kennel at Nearest Outdoor Activity Areas
Squirrel Monkey Haven – Sacramento County, California

			Predicted Noise Levels (dBA)[3]			
			Squirrel Monkeys		Dogs Barking	
Residence[1]	APN	Distance (feet)[2]	L_{50}	L_{max}	L_{50}	L_{max}
1	138-0090-108	520	28	35	36	41
2	138-0090-109	480	28	36	36	41
3	138-0090-019	640	26	33	34	39
4	138-0090-068	400	30	38	38	43
5	138-0090-071	840	24	31	32	37
6	138-0090-070	430	29	37	37	42

Notes:
1. Nearest residential outdoor activity areas are illustrated on Figure 1.
2. Distances were scaled from the center of the nearest outdoor habitat area to nearest residential outdoor activity areas.
3. Predicted noise levels have been conservatively adjusted by -6 dB to account for the attenuation provided by the perimeter 8-foot tall noise barrier (vinyl curtains).

As indicated above in Table 6, predicted median noise levels due to barking dogs are approximately 8 dB higher than squirrel monkey vocalizations. Predicted maximum barking dog noise levels are approximately 6 dB higher than maximum squirrel monkey vocalization noise levels.

Enclosed Kennel Discussion

The outdoor habitats are currently proposed to be constructed of a wire mesh material (open air) that would not provide any significant amount of noise level attenuation. However, the applicant proposes to suspend vinyl acoustic curtains from perimeter security fence, providing a visual and noise screen for the project. The vinyl curtains are conservatively predicted to provide 6 dB of attenuation of monkey vocalization noise-generation at the nearest residential outdoor activity areas. It should be noted that this analysis indicates full compliance with the applicable County noise standards even without the suspended acoustic curtains.

Sacramento County Planning staff have requested the anticipated noise levels of monkey vocalizations if the facility was completely enclosed. Provided that the outdoor habitats are completely enclosed and have an air tight seal with a forced air mechanical ventilation system, predicted monkey vocalization noise levels would be expected to be a minimum of 15 dB lower due to the transmission loss of the building façade. A more precise estimate could be provided once architectural plans are available.

Conclusions and Recommendations

This analysis concludes that noise generated by monkey vocalizations at the Squirrel Monkey Haven facility is predicted to satisfy the Sacramento County General Plan Noise Element standards. However, given the sensitivity of residential uses to new noise sources such as that proposed by this project, BAC recommends the following specific measures to reduce the potential for adverse public reaction to noise generated by the project:

1. All outdoor activities should be strictly limited to daytime hours (7 am – 10 pm).

2. Monkeys should be housed within the indoor shelter during nighttime hours.

3. In the event that legitimate concerns are expressed by the neighboring residences regarding squirrel monkey vocalization noise upon commencement of operations at this facility, follow-up noise level testing should be conducted to assess the state of compliance with the noise standards recommended herein and additional noise mitigation measures implemented if determined necessary to achieve compliance with those standards.

These conclusions are based on reference noise level data contained herein, on the proposed project site plans, and on the requirements of the Sacramento County General Plan. In addition, these conclusions are based on BAC site inspections, observations, and application of accepted noise propagation algorithms. Changes to project site plans or operation of the facility could result in actual noise levels differing from those described herein. BAC Staff is not responsible for such changes.

This concludes BAC's environmental noise assessment for the proposed Squirrel Monkey Haven facility in Galt (Sacramento County), California. Please contact Paul Bollard at (916) 663-0500 or paulb@bacnoise.com with any questions or for additional information.

Appendix A

Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
Loudness	A subjective term for the sensation of the magnitude of sound.
Masking	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
Noise	Unwanted sound.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the Maximum level, which is the highest RMS level.
RT_{60}	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.
SEL	A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy of the event into a 1-s time period.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.

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Appendix B-1
Squirrel Monkey Haven
Ambient Noise Monitoring Results - Site A
Thursday, June 08, 2017

Hour	Leq	Lmax	L50	L90
0:00	58	61	58	56
1:00	59	63	58	57
2:00	59	62	59	57
3:00	59	61	59	57
4:00	59	61	59	58
5:00	57	61	56	49
6:00	52	58	52	47
7:00	53	58	52	50
8:00	57	71	57	54
9:00	54	61	52	45
10:00	45	60	44	39
11:00	41	54	40	36
12:00	43	57	40	35
13:00	42	52	40	34
14:00	40	59	38	34
15:00	39	50	36	33
16:00	38	49	36	33
17:00	38	53	37	34
18:00	41	55	40	37
19:00	47	66	46	39
20:00	49	56	48	44
21:00	58	63	58	52
22:00	62	65	62	60
23:00	59	64	59	56

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	58	38	51	62	52	59
Lmax (Maximum)	71	49	58	65	58	62
L50 (Median)	58	36	44	62	52	58
L90 (Background)	54	33	40	60	47	55

Computed Ldn, dB	65
% Daytime Energy	21%
% Nighttime Energy	79%

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Appendix B-2
Squirrel Monkey Haven
Ambient Noise Monitoring Results - Site A
Friday, June 09, 2017

Hour	Leq	Lmax	L50	L90
0:00	60	65	59	57
1:00	62	66	60	58
2:00	59	62	59	57
3:00	58	61	57	54
4:00	55	60	55	51
5:00	56	60	56	48
6:00	49	57	49	45
7:00	52	66	50	47
8:00	57	67	56	53
9:00	54	61	53	49
10:00	50	58	48	43
11:00	44	51	43	39
12:00	43	57	41	38
13:00	39	54	38	35
14:00	41	58	39	35
15:00	39	60	37	34
16:00	42	63	38	35
17:00	40	52	39	36
18:00	42	59	39	36
19:00	47	63	43	39
20:00	52	59	51	44
21:00	62	67	60	57
22:00	61	65	60	59
23:00	59	62	59	58

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	62	39	53	62	49	59
Lmax (Maximum)	67	51	60	66	57	62
L50 (Median)	60	37	45	60	49	57
L90 (Background)	57	34	41	59	45	54

Computed Ldn, dB	65
% Daytime Energy	29%
% Nighttime Energy	71%

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Appendix B-3
Squirrel Monkey Haven
Ambient Noise Monitoring Results - Site A
Saturday, June 10, 2017

Hour	Leq	Lmax	L50	L90
0:00	59	62	58	57
1:00	58	62	58	55
2:00	60	65	57	55
3:00	55	60	55	52
4:00	54	59	53	49
5:00	59	78	51	47
6:00	58	83	48	45
7:00	59	74	56	47
8:00	55	64	55	52
9:00	52	59	51	48
10:00	48	54	47	43
11:00	48	60	45	41
12:00	44	57	42	38
13:00	42	54	40	37
14:00	40	51	39	36
15:00	38	51	37	34
16:00	42	59	38	35
17:00	40	50	39	36
18:00	41	52	41	37
19:00	45	56	44	40
20:00	48	58	46	43
21:00	59	62	59	55
22:00	58	61	58	55
23:00	57	60	57	55

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	59	38	52	60	54	58
Lmax (Maximum)	74	50	57	83	59	65
L50 (Median)	59	37	45	58	48	55
L90 (Background)	55	34	42	57	45	52

Computed Ldn, dB	64
% Daytime Energy	30%
% Nighttime Energy	70%

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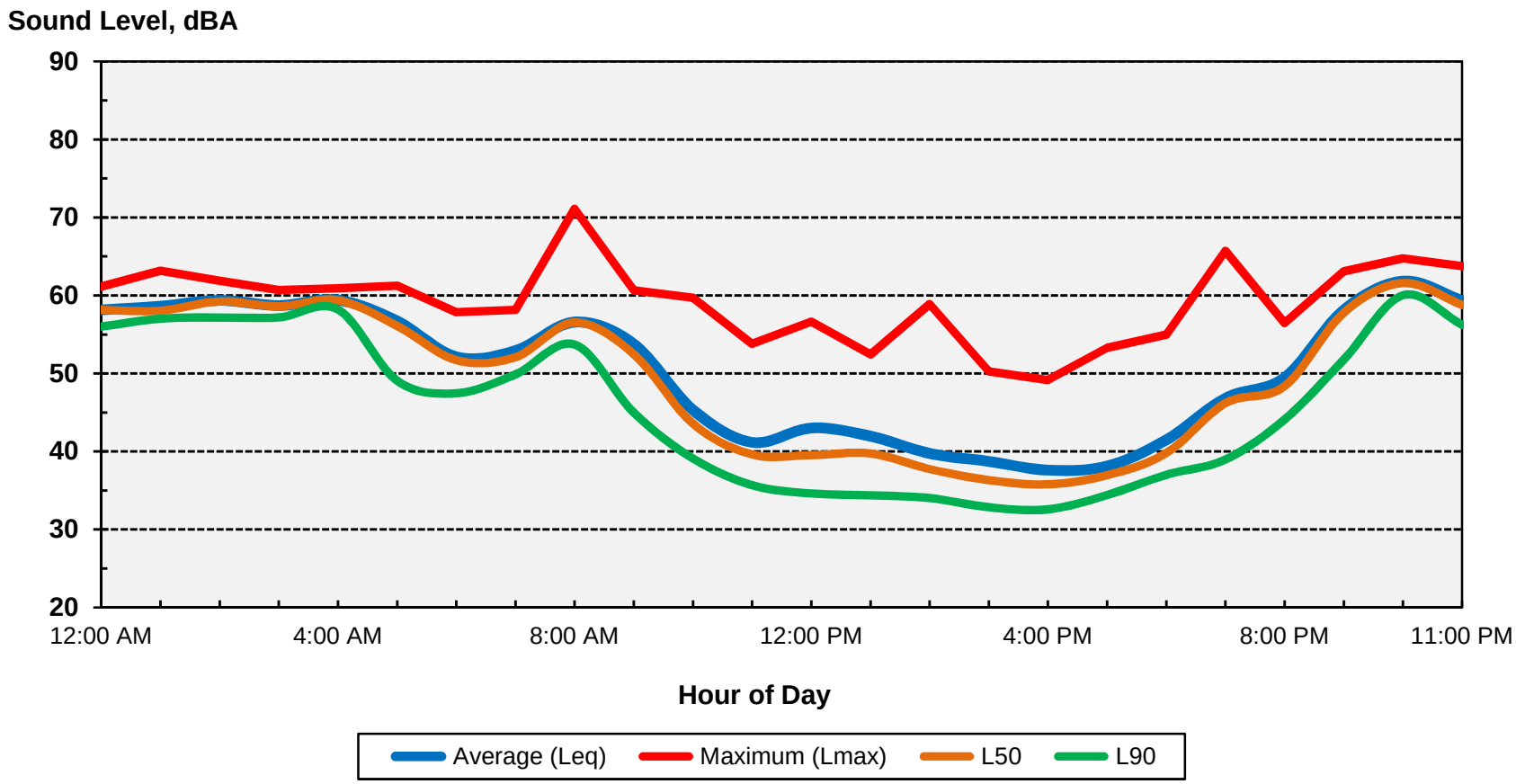
Appendix C-1
Squirrel Monkey Haven
Ambient Noise Monitoring Results - Site A
Thursday, June 08, 2017



Ldn: 65 dB

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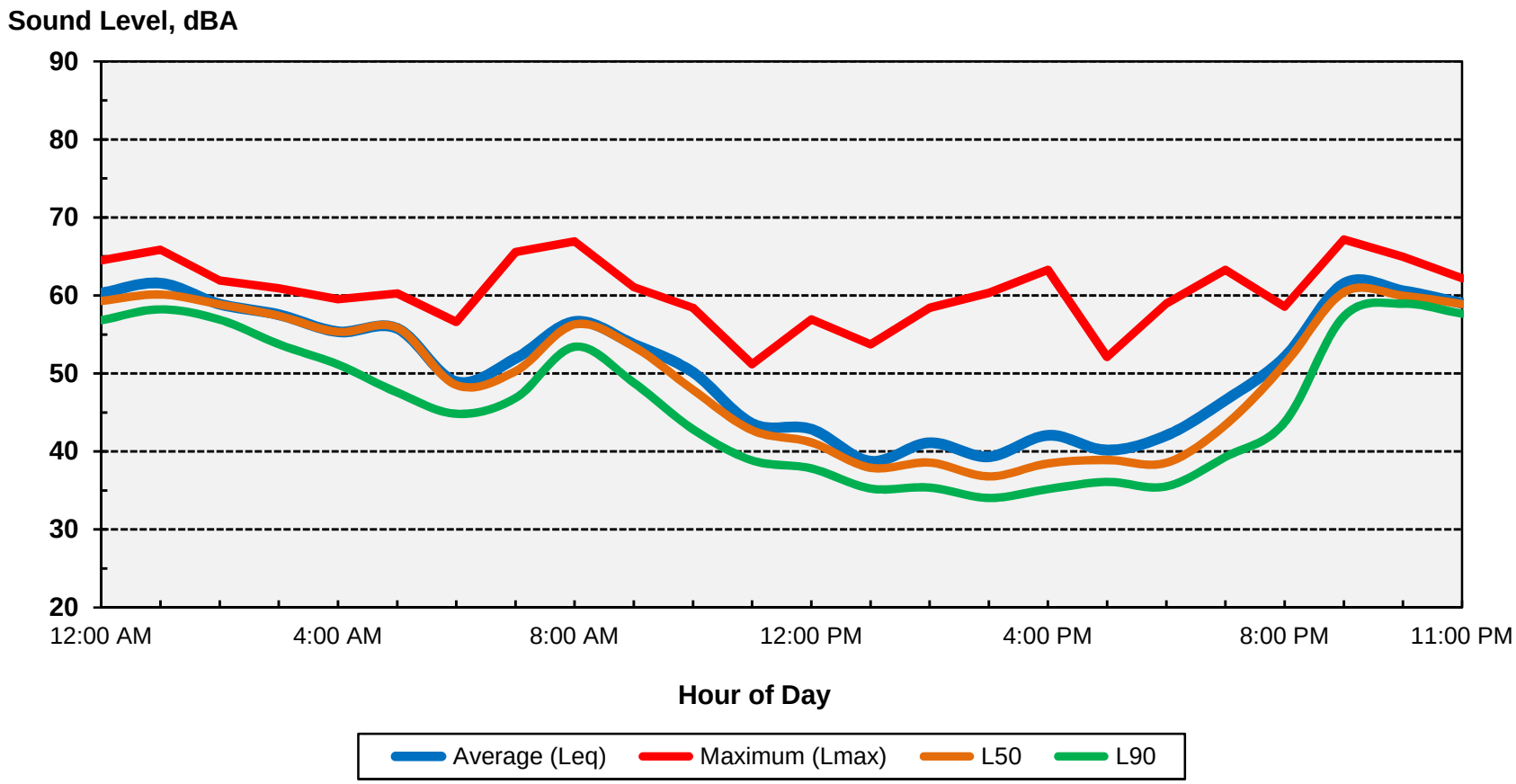
Appendix C-2
Squirrel Monkey Haven
Ambient Noise Monitoring Results - Site A
Friday, June 09, 2017



Ldn: 65 dB

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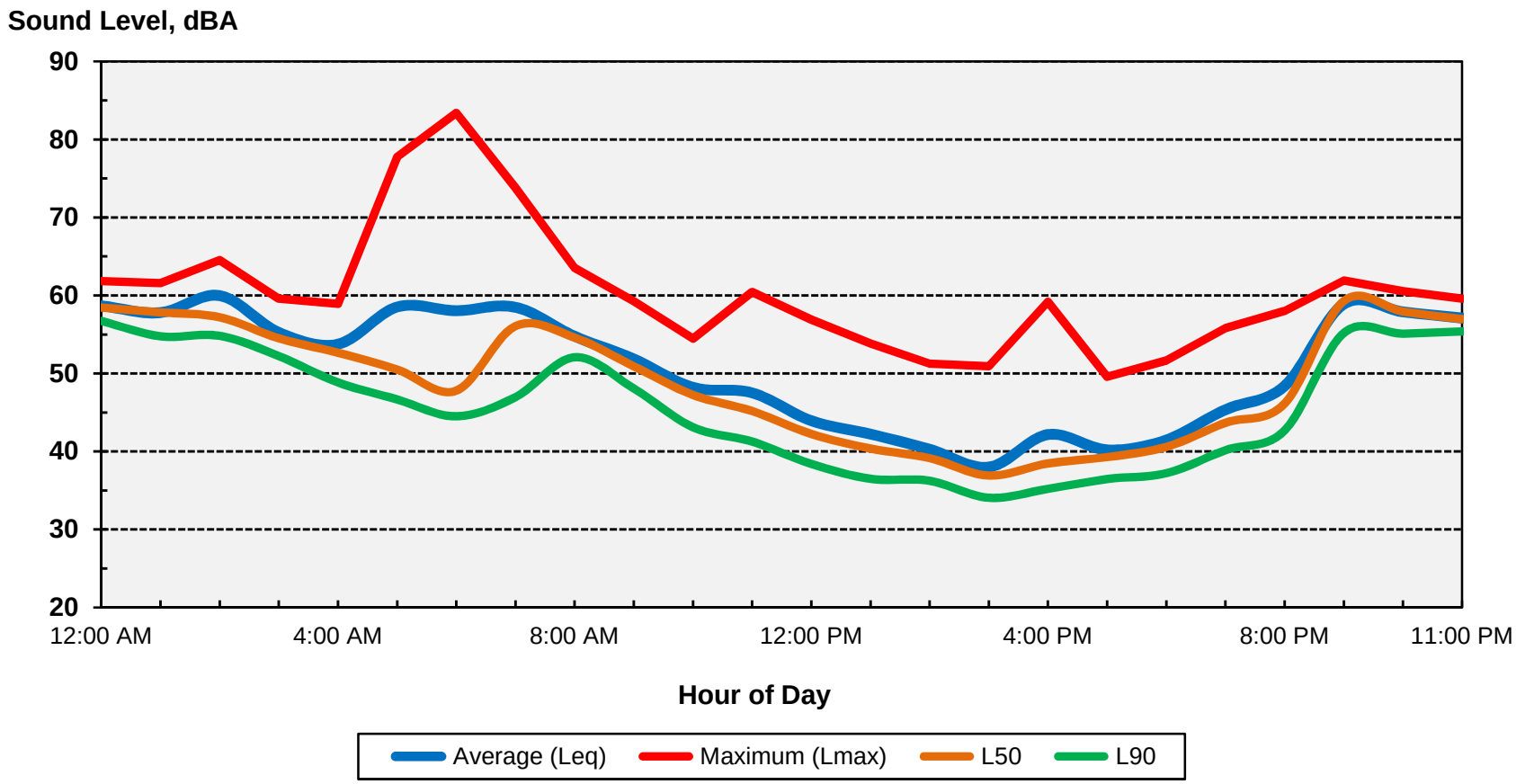
Appendix C-3
Squirrel Monkey Haven
Ambient Noise Monitoring Results - Site A
Saturday, June 10, 2017



Ldn: 64 dB

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Appendix D

Example of Acoustifence Product Used to Provide
Noise Mitigation at a Photovoltaic Inverter Facility

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IPaC **U.S. Fish & Wildlife Service**

Regulatory review / Endangered species / Species determinations

Species determinations

For listed species[1] not covered by determination keys, an impact analysis should be performed to reach a conclusion about how this project will impact the species. These conclusions will result in *determinations* for each species, which will be used in consultation with the U.S. Fish and Wildlife Service.

Reptiles

Giant Garter Snake Thamnophis gigas	None

Amphibians

California Red-legged Frog Rana draytonii	None
California Tiger Salamander Ambystoma californiense	None

Fishes

Delta Smelt Hypomesus transpacificus	None
Steelhead Oncorhynchus (=Salmo) mykiss	None

Insects

Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus	None

Crustaceans

Conservancy Fairy Shrimp Branchinecta conservatio	None
Vernal Pool Fairy Shrimp Branchinecta lynchi	None
Vernal Pool Tadpole Shrimp Lepidurus packardi	None

Flowering Plants

Fleshy Owl's-clover Castilleja campestris ssp. succulenta	None

Critical habitats

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

Office of Planning and Environmental Review
Leighann Moffitt, Director

County Executive
Navdeep S. Gill

Negative Declaration

Pursuant to Title 14, Division 6, Chapter 3, Article 6, Sections 15070 and 15071 of the California Code of Regulations and pursuant to the Procedures for Preparation and Processing of Environmental Documents adopted by the County of Sacramento pursuant to Sacramento County Ordinance No. SCC-116, the Environmental Coordinator of Sacramento County, State of California, does prepare, make, declare, publish, and cause to be filed with the County Clerk of Sacramento County, State of California, this Negative Declaration re: The Project described as follows:

1. **Control Number:** PLNP2017-00079

2. **Title and Short Description of Project:** Squirrel Monkey Haven
   A Conditional Use Permit (UPZ) to allow for the construction of an indoor-outdoor kennel to house up to a maximum of 55 squirrel monkeys on a property with a zoning designation of General Agricultural (A-5). The kennel includes a 2,700 square foot steel building with 18 attached outdoor habitats ranging in size from 240 to 288 square feet (~7,800 total square feet). The kennel will be surrounded by a security fence and landscape screening.
   In addition to a Conditional Use Permit from the County of Sacramento, the project will also require the following permits and inspections:
   Wild Animal Permit from the Sacramento County Department of Animal Care and Regulation;
   Inspections from the United States Department of Agriculture for compliance with the Animal Welfare Act; and
   Inspections form the California Department of Fish and Wildlife.
   The applicant has also indicated that they plan on becoming accredited by the Global Federation of Animal Sanctuaries which will also require regular inspections for compliance with animal welfare regulations.

3. **Assessor's Parcel Number:** 138-0090-069

4. **Location of Project:** The project site is located at 11859 N. Valensin Road on the east side of Colony Road in the Southeast Area community.

5. **Project Applicant:** Christine and Paul Buckmaster

6. Said project will not have a significant effect on the environment for the following reasons:
   a. It will not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.
   b. It will not have the potential to achieve short-term, to the disadvantage of long-term, environmental goals.
   c. It will not have impacts, which are individually limited, but cumulatively considerable.
   d. It will not have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly.

7. As a result thereof, the preparation of an environmental impact report pursuant to the Environmental Quality Act (Division 13 of the Public Resources Code of the State of California) is not required.

8. The attached Initial Study has been prepared by the Sacramento Office of County Planning and Environmental Review in support of this Negative Declaration. Further information may be obtained by contacting the Office Planning and Environmental Review at 827 Seventh Street, Room 225, Sacramento, California, 95814, or phone (916) 874-6141.

[Original Signature on File]
Tim Hawkins
Environmental Coordinator
County of Sacramento, State of California

COUNTY OF SACRAMENTO
OFFICE OF PLANNING AND ENVIRONMENTAL REVIEW DIVISION
INITIAL STUDY

PROJECT INFORMATION

CONTROL NUMBER: PLNP2017-00079

NAME: Squirrel Monkey Haven

LOCATION: The project site is located 11859 N. Valensin Road on the east side of Colony Road in the Southeast Area community.

ASSESSOR'S PARCEL NUMBER: 138-0090-069

OWNER/APPLICANT:

Christine and Paul Buckmaster
11859 N. Valensin Road
Galt, California 95632

PROJECT DESCRIPTION

A Conditional Use Permit (UPZ) to allow for the construction of an indoor-outdoor kennel to house up to a maximum of 55 squirrel monkeys on a property with a zoning designation of General Agricultural (A-5) (Plate IS-1). The kennel includes a 2,700 square foot steel building with 18 attached outdoor habitats ranging in size from 240 to 288 square feet (~7,800 total square feet). The kennel will be surrounded by a security fence and landscape screening.

In addition to a Conditional Use Permit from the County of Sacramento, the project will also require the following permits and inspections:

- Wild Animal Permit from the Sacramento County Department of Animal Care and Regulation;
- Inspections from the United States Department of Agriculture for compliance with the Animal Welfare Act; and
- Inspections form the California Department of Fish and Wildlife.

The applicant has also indicated that they plan on becoming accredited by the Global Federation of Animal Sanctuaries which will also require regular inspections for compliance with animal welfare regulations.

Plate IS-1 Regional Site Location Map and Zoning

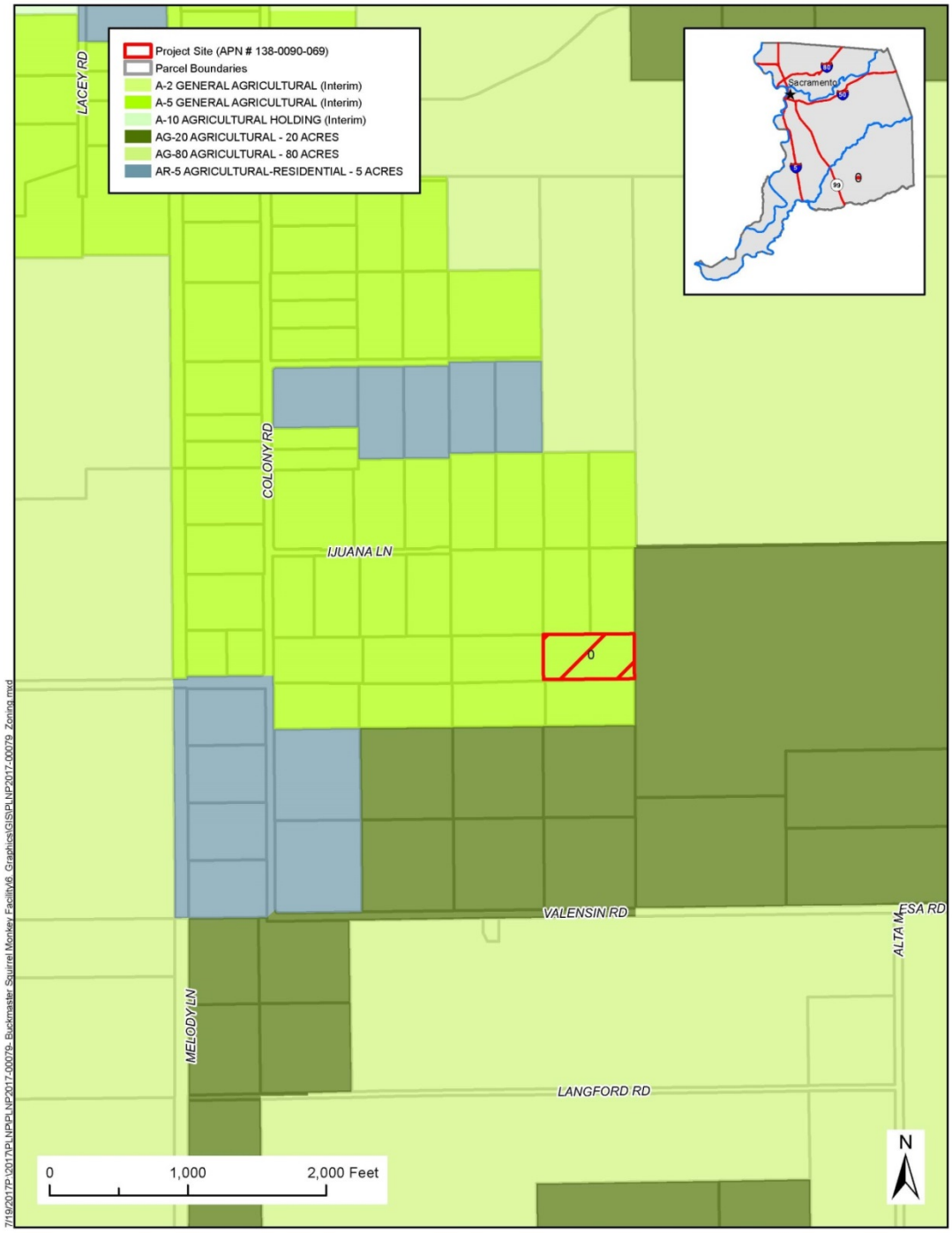


Plate IS-2 Project Site Aerial

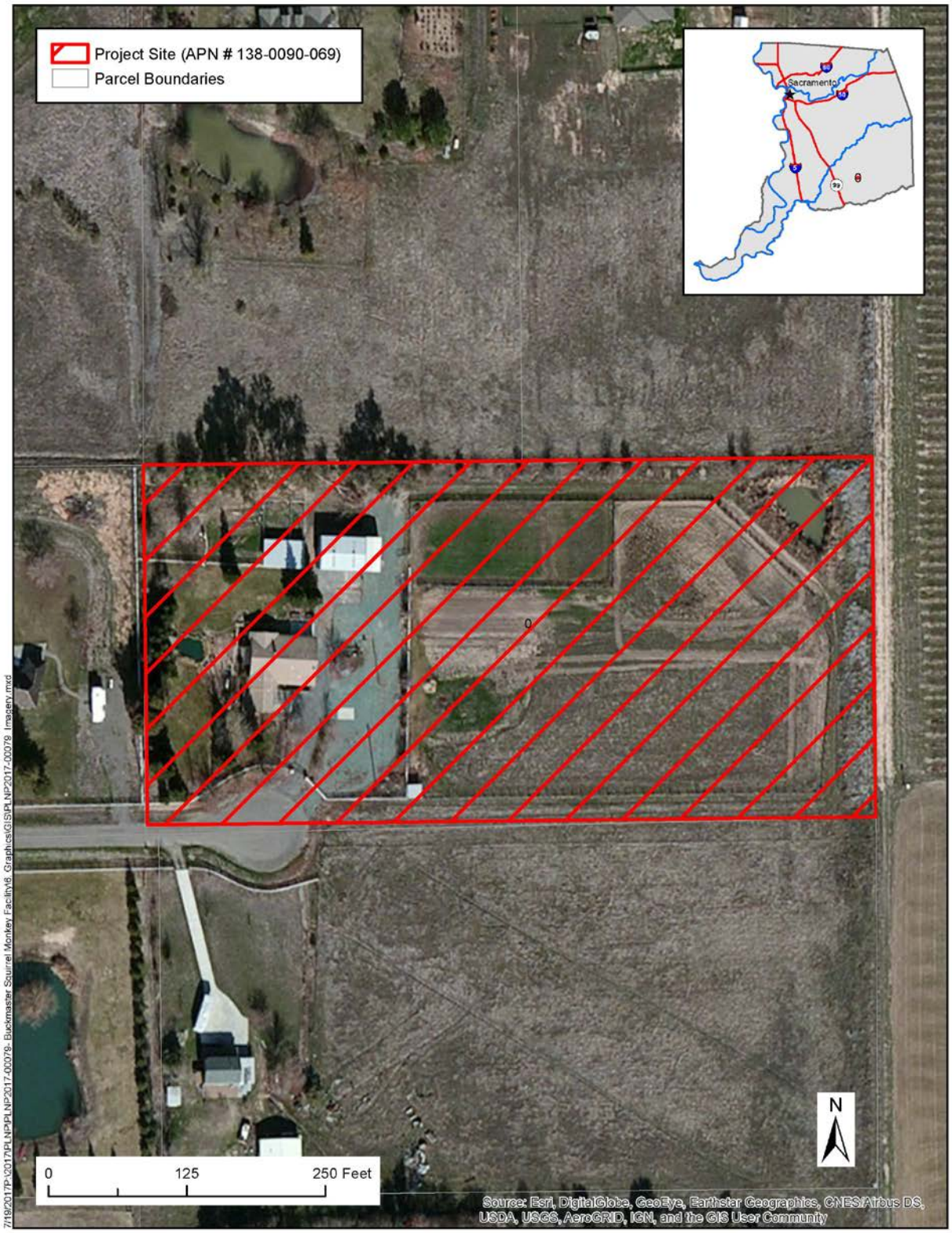
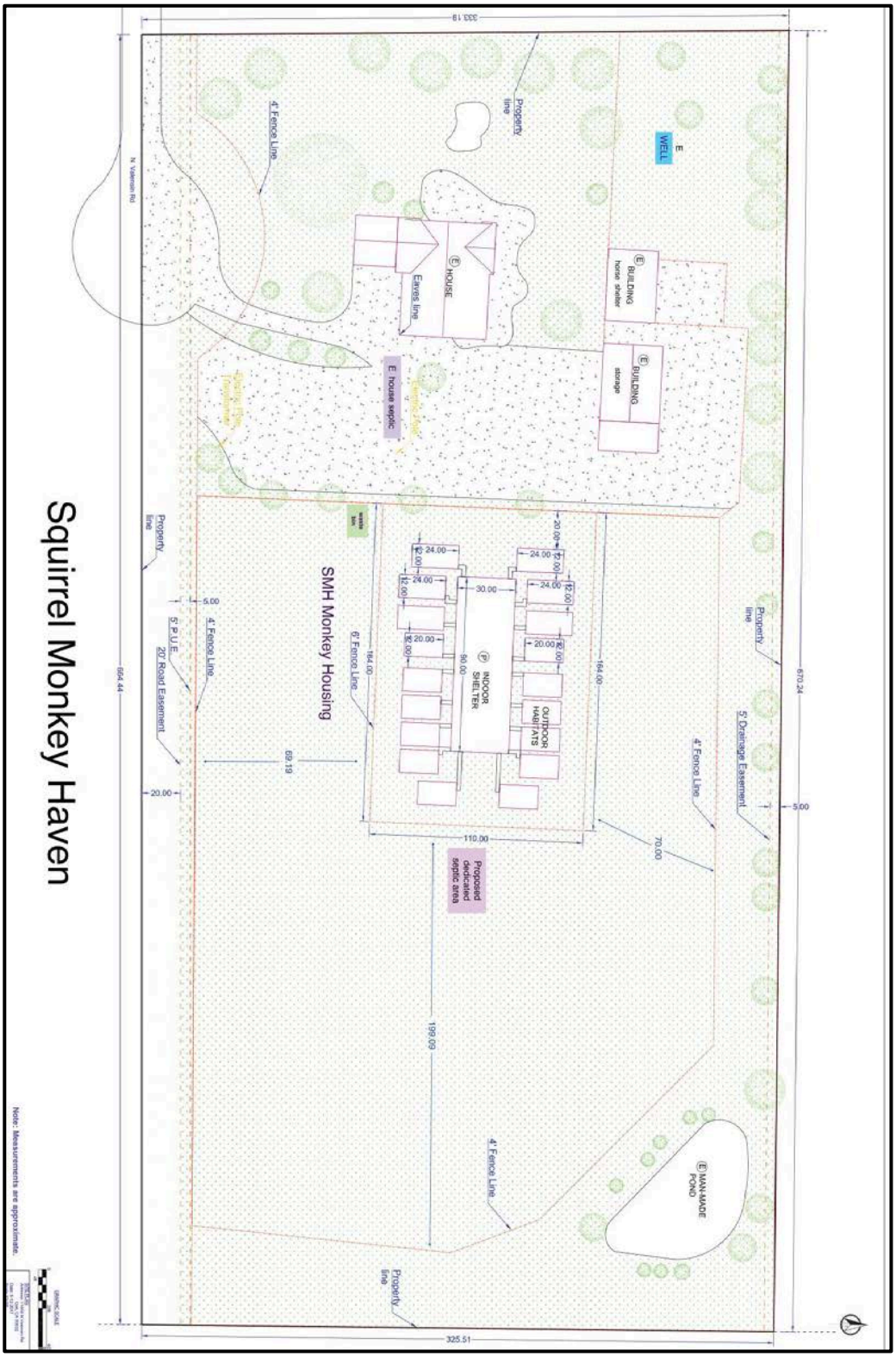


Plate IS-3 Site Plan



ENVIRONMENTAL SETTING

The five acre project site is located at the terminus of North Valensin Road in the southeast area of Sacramento County. The project site is developed with a home, barn and related accessory buildings on the western half of the site. The proposed kennel/monkey sanctuary will be located in the middle of the project site in an empty agricultural pasture of approximately two acres of fenced ground (Plate IS-2). The entire area is level. Vegetation, which has been mowed, consists of annual grass, star thistle, and similar annual plants that prefer disturbed soil areas. The project area appears to contain only Galt clay soils. Galt clay soils are dense, dark clay soils developed in basin areas originally subject to flooding. The nearest perennial water courses are Badger Creek, located approximately 0.8 miles north and Laguna Creek located about 0.75 miles to the southeast.

Surrounding land use is agricultural and rural residential. Land adjacent to the project site to the east is zoned General Agriculture (A-20) and is in agricultural production. The project site and other surrounding properties are designated as A-5 and are developed with homes and associated rural residential uses and structures.

ENVIRONMENTAL EFFECTS

Appendix G of the California Environmental Quality Act (CEQA) provides guidance for assessing the significance of potential environmental impacts. Based on this guidance, Sacramento County has developed an Initial Study Checklist (located at the end of this report). The Checklist identifies a range of potential significant effects by topical area. The topical discussions that follow are provided only when additional analysis beyond the Checklist is warranted.

LAND USE

This section supplements the Initial Study Checklist by analyzing if the proposed project would:

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to a general plan, specific plan or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

The project includes a Use Permit to allow a kennel (monkey sanctuary) on an approximately five acre site in the A-5 zone (Plate IS-3: Site Plan). The proposed facility would permanently house up to 55 squirrel monkeys (initial intake will be for 51 monkeys recently retired from research) and would involve constructing housing for them as follows:

- One steel agricultural building built to Sacramento County code that measures 30' W x 90' L x 12'H would provide indoor shelter for the monkeys. The building would have a cement floor with a central drain attached to a dedicated septic system. Caging that is professionally designed and constructed to fulfill regulations for the welfare of this species would be installed on the cement floor (See Appendix A: site plan, floor plan, and photo examples of similar facilities).

- In addition to the one building for shelter, there would be outdoor naturalistic habitats planted with trees and shrubs. There would be 18 habitats, 9 measuring 12' W x 20' L x 10' H and six measuring 12' W x 24' L x 10' H. These dimensions fulfill mandated minimum space requirements for this species. Access from the indoor shelter to the habitats is via industry standard aerial runway-tunnels.
- Site preparation is minimal. The housing would be built on a level pasture and no existing trees or shrubs would be removed. Extensive grading will not be required; pasture grasses would be removed by scraping, four to six inches of gravel applied, and a cement pad for the building foundation. The habitat enclosures will sit on level ground. Steel-posts at the corners would be anchored into the ground with cement. A heavy wire mesh guard at the bottom would surround each enclosure and be covered with soil. The enclosures would be mulched and planted.
- An eight foot tall security fence will be installed around the perimeter of the kennel building and outdoor habitats. The fence will include vinyl acoustic curtains to provide a visual and noise screen for the project. Trees and shrubs will be densely planted around the outer perimeter of the fence to provide additional screening of the kennel enclosure.

There is an existing residence, a 40' W x 30' L x 14' H shop, and a 3-stall horse shelter with paddock that will remain on the western end of the property and would be separate from the monkey housing. The existing shop would be used as a central facility to carry out all aspects of monkey care and the horse shelter would be used to store facility maintenance equipment.

Other improvements that are proposed for the site include a new septic system for the kennel, an ADA accessible parking space and path of travel from the existing parking area to the kennel facility.

In addition to the residents of the home the facility will employ up to two additional employees. The proposed facility has a nonprofit status as a 501(c)(3) organization and will seek accreditation/membership from the Global Federation of Animal Sanctuaries (GFAS) and the North American Primate Sanctuary Alliance. Accredited sanctuaries that are not permitted as zoos are prohibited from being open to the general public. Therefore, visitors to the site will be minimal and only by appointment (inspections, animal care providers, and facility sponsors/donors).

The project site is designated for Agricultural-Residential use by the Sacramento County General Plan, which provides for rural residential uses such as animal husbandry, small-scale agriculture, and other limited agricultural opportunities. This designation is typical of established rural communities where between one and ten acres per unit is allowed, resulting in a development density of 2.5 to 0.25 persons per acre. In addition, per Sacramento County Zoning Code Title IV (Interim Zones), those uses permitted in the A-5 zone shall be the same as those allowed in the AR-5 (Agricultural Residential) zoning district.

Kennels are considered a generally compatible use within agricultural and agricultural/residential areas. According to section 3.2.5; Table 3.1 of the Sacramento County Zoning Code, kennels; catteries; and, small animal boarding and training facilities in the A-5 land use zones are permitted subject to the issuance of a conditional use permit by the appropriate authority (in this case the Zoning Administrator).

The proposed project is not expected to significantly alter current land uses in the area; however, noise and odor are two potential nuisances that may arise from a kennel. The kennel includes a large building that will be the primary area that the squirrel monkeys are housed. The monkeys will have access to outdoor kennel areas between the hours of 7 a.m. to 8 p.m. on weekdays and 9 a.m. to 8 p.m. on weekends and holidays. Noise and odor issues are further addressed in the "Wells and Septic Systems", "Noise", and "Odor" sections of this document.

Kennel Standards

Chapter 8.26 of the Sacramento County Code requires that an applicant obtain a permit (to be renewed annually) from the Director of Animal Care and Regulation for the keeping of wild animals, in order to ensure that both public and animal health, safety, and welfare are protected. According to Chapter 8.26, the Director may approve an application for the keeping of wild animals upon demonstration that certain conditions have been met by the applicant. Among those conditions are the following:

- That the keeping of the wild animal does not violate any law or ordinance of Sacramento County or the State of California.
- That the keeping and maintenance of the establishment does not endanger the peace, health or safety of persons in the immediate vicinity, or in the County as a whole.
- That the premises and animal housing are maintained in a clean and sanitary condition and any animal kept therein is not subject to suffering, cruelty or abuse.
- That the keeping and maintenance of the kennel does not constitute an animal nuisance.

Each permit holder must demonstrate that the facilities comply with these standards on an ongoing basis, and failure to comply with the standards may be considered cause for revocation of the permit.

In addition, the proposed facility will require permits and regular inspections from the California Department of Fish and Wildlife and the United States Department of Agriculture (Animal Welfare Act). Both of these agencies have specific guidelines for the housing and care of new world primates such as squirrel monkeys that exceed the requirements of the County Code.

The low density rural character of this neighborhood generally provides a suitable environmental setting in which kennels are deemed compatible. Assuming compliance with the standards of Animal Care and Regulation, no significant impacts are expected. Potential land use related environmental impacts due to the project are expected to be ***less than significant.***

Public Services

This section supplements the Initial Study Checklist by analyzing if the proposed project would:

- The construction of new water supply or wastewater treatment and disposal facilities or expansion of existing facilities?

- The provision of electric or natural gas service?
- The provision of emergency services?

The project site is located outside the urban services boundary. Service providers were given the opportunity to review and comment on the proposed project. As a result, agencies such as the Environmental Management Department recommended conditions of approval for the project for the provision of services. The majority of public service providers did not have any comments on the proposed project. Therefore, no significant environmental impacts related to public services are expected as a result of this project.

Wells and Septic Systems

The parcel is outside the Urban Services Boundary, therefore no public water supply or sewer service is currently available. A new private septic system is proposed for the project to coincide with the existing well and septic system.

Private Wells

The project site contains an existing well. Neighbor's voiced concerns regarding well contamination, water usage required for the facility and available water supply (one neighbor stating his well has recently gone dry). The proposed facility plan indicates 41,000 gallons of water will be used every year which equates to approximately 112 gallons per day. On average, each person in a household uses about 100 gallons of water per day. The Environmental Management Department (EMD) reviewed the proposed project and indicated that the existing well is adequate to serve the existing home and the proposed monkey sanctuary. EMD also evaluated the location of the kennel facility from adjacent well sites and indicated that the proposed facility met all required setbacks (See Appendix A: Well Sites). As of October 2017, EMD did not have any verified reports of water supply issues in the immediate project area. Therefore, no significant environmental impacts related to private wells and water supply are expected as a result of this project.

Septic Systems/ Waste Disposal

The applicant has indicated that an additional septic system is to be constructed for the disposal of the waste generated by the kennel facility. However, the applicant also noted that monkey waste is to be bagged, placed in a covered bin and disposed of via Cal-Waste Management Recovery of Galt.

No significant impacts related to kennel waste is expected as a result of this project when waste is disposed of properly and if a septic system is installed that meets the County standards, no significant sewage disposal impacts related to the disposal of the monkey waste would be expected from this project.

Transportation/Traffic

This section supplements the Initial Study Checklist by analyzing if the proposed project would:

- Result in a substantial increase in vehicle trips that would exceed, either individually or cumulatively, a level of service standard established by the County?

Sacramento County has developed quantitative thresholds for determining the significance of project-related impacts due to an alteration in the traffic generating potential of the project site. If a proposed project is expected to increase p.m. peak hour vehicle trips by 100 or more over existing zoning or uses on the project site, a traffic study is typically required to further analyze impacts. If fewer than 100 new peak hour trips are expected, traffic and air quality impacts are typically less than significant.

The proposed project will have two employees in addition to the existing residents. The facility is not open to the public but will occasionally have visitors to the site for required inspections, animal care, deliveries, and facility donors. All visitation, except deliveries, will be by appointment only. The County Department of Transportation (DOT) reviewed the project and determined that a traffic study was not warranted. Table IS-1 below, which was provided by DOT, provides the anticipated daily maximum trip generation of the proposed use.

Table IS-1: Trip Generation Estimate

Condition	Zoning or Use (Area)	Source	Daily Trip Rate	Daily Trips
Proposed Project	Animal Shelter 2 Employees[1] 2 Visitors	applicant	3.00 VTE/Emp	6
			2.00 VTE/Visitor	4
Total Trips				10
Notes: VTE = Vehicle trip ends EMP = Employee 1 Assumed 3 daily trips per off-site employee				

As shown on the trip generation table above the expected uses of the site would generate at most an additional 10 trips on days when there are inspections or other visitors/deliveries with typical daily trips resulting in approximately 6 additional trips per day (employees only). DOT determined that the increase is minor and will not affect the capacity of the private roadway. Therefore, impacts related to traffic impacts are expected to be ***less than significant***.

ACCESS AND PARKING

Access to the property is currently provided by a driveway off of N. Valensin Road which is a private right-of-way serving eight parcels. The access easement for the private roadway does not preclude property owners from operating businesses.

There are no specific parking requirements for kennels in the County Zoning Code; however, Sacramento County Planning and Environmental Review staff reviewed the proposed project and have determined that because the amount of traffic to the site is expected to be minor due to the nature of the proposed use the existing driveway and paved areas adjacent to the existing home and barn are adequate to serve the proposed facility. The Building Department will require that an ADA compliant parking space be designated along with an accessible path of travel from the parking area to the kennel be provided. The Building Department requirements will be included as part of the project conditions if the project is approved.

Land Division and Site Improvement Review (LDSIR) staff reviewed the project and had no comments. DOT Staff reviewed the project and provided advisory conditions if additional driveway or gates were proposed in the future. Environmental impacts related to access and parking are expected to be ***less than significant.***

AIR QUALITY

This section supplements the Initial Study Checklist by analyzing if the proposed project would:

- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.
- Expose sensitive receptors to pollutant concentrations in excess of standards.
- Create objectionable odors affecting a substantial number of people.

The proposed project site is located in the Sacramento Valley Air Basin (SVAB). The SVAB's frequent temperature inversions result in a relatively stable atmosphere that increases the potential for pollution. Within the SVAB, the Sacramento Metropolitan Air Quality Management District (SMAQMD) is responsible for ensuring that emission standards are not violated. Project related air emissions would have a significant effect if they would result in concentrations that either violate an ambient air quality standard or contribute to an existing air quality violation (Table IS-3). Moreover, SMAQMD has established significance thresholds to determine if a proposed project's emission contribution significantly contributes to regional air quality impacts (Table IS-3).

Table IS-2: Air Quality Standards Attainment Status

Pollutant	Attainment with State Standards	Attainment with Federal Standards
Ozone	Non-Attainment Classification = Serious (1 hour Standard[1])	Non-Attainment, Classification = Severe -15* (1 hour[2] and 8 hour[3] Standards)
Particulate Matter 10 Micron	Non-Attainment (24 hour Standard and Annual Mean)	Attainment (24 hour standard)
Particulate Matter 2.5 Micron	Non-Attainment (Annual Standard)	Non-Attainment (24 hour Standard) and Unclassified/Attainment (Annual)
Carbon Monoxide	Attainment (1 hour and 8 hour Standards)	Attainment (1 hour and 8 hour Standards)
Nitrogen Dioxide	Attainment (1 hour Standard and Annual)	Unclassified/Attainment (1 hour and Annual)
Sulfur Dioxide[4]	Attainment (1 hour and 24 hour Standards)	Attainment (1 hour)
Lead	Attainment (30 Day Standard)	Attainment (3-month rolling average)
Visibility Reducing Particles	Unclassified (8 hour Standard)	No Federal Standard
Sulfates	Attainment (24 hour Standard)	No Federal Standard
Hydrogen Sulfide	Unclassified (1 hour Standard)	No Federal Standard

1. Per Health and Safety Code (HSC) § 40921.59(c), the classification is based on 1989-1001 data, and therefore does not change.

2. Air Quality meets Federal 1-hour Ozone standard (77 FR 64036). EPA revoked this standard, but some associated requirements still apply. The SMAQMD attained the standard in 2009. SMAQMD has requested EPA recognize attainment to fulfill the requirements.

3. For both that 1997 and the 2008 Standard.

4. Cannot be classified

*Federal designations based on information from http://www.gpo.gov/fdsys/pkg/CFR-2010-title40-vol17/pdf/CFR-2010-title40-vol17-sec81-305.pdf

*California Area Designations based on information from http://www.arb.ca.gov/desig/changes.htm#reports

Source: SMAQMD. "Air Quality Standards Attainment Status". *Air Quality Data*. December 23, 2013. Web. Accessed: July 6, 2015. http://www.airquality.org/aqdata/attainmentstat.shtml

Table IS-3: SMAQMD Significance Thresholds

	ROG[1] (lbs/day)	NO_x (lbs/day)	CO ($\mu g/m^3$)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Construction (short-term)	None	85	CAAQS[2]	80[3*]	82[3*]
Operational (long-term)	65	65	CAAQS	80[3*]	82[3*]

1. Reactive Organic Gas

2. California Ambient Air Quality Standards

3*. Only applies to projects for which all feasible best available control technology (BACT) and best management practices (BMPs) have been applied. Projects that fail to apply all feasible BACT/BMPs must meet a significance threshold of 0 lbs/day.

In order to use the non-zero thresholds of significance for operational PM emissions, SMAQMD requires project to employ the following Best Management Practices (BMPs). It should be noted that the implementation of Best Available Control Technologies (BACT) are only required for stationary source operational emissions. BACT can be determined through consultation with SMAQMD permitting staff.

The following list from Chapter 4 of the SMAQMD "Guide to Air Quality Assessment in Sacramento County" (December 2009, as amended, hereinafter called the SMAQMD Guide) identifies the BMPs for operational PM emissions for land use development projects:

1. Compliance with District rules that control operational PM and NOx emissions. Reference rules regarding wood burning devices, boilers, water heaters, generators and other PM control rules that may apply to equipment to be located at the project. Current rules can be found on the District's website: http://www.airquality.org/Businesses/Rules-Regulations
2. Compliance with mandatory measures in the California Building Energy Efficiency Standards (Title 24, Part 6) that pertain to efficient use of natural gas for space and water heating and other uses at a residential or non-residential land use. The current standards can be found on the California Energy Commissions website: http://www.energy.ca.gov/title24 /
3. Compliance with mandatory measures in the California Green Building Code (Title 24, Part 11). The California Building Standards Commission provides helpful checklists showing the required and voluntary measures for residential and non-residential projects on its website: http://www.bsc.ca.gov/Home/CALGreen.aspx.
4. Compliance with anti-idling regulations for diesel powered commercial motor vehicles (greater than 10,000 gross vehicular weight rating). This BMP focuses on non-residential land use projects (retail and industrial) that would attract these vehicles. The current requirements include limiting idling time to 5 minutes and installing technologies on the vehicles that support anti-idling. Information can be found on the California Air Resources Board's website: http://www.arb.ca.gov/msprog/truckidling/truck-idling.htm.

Construction Emissions/Short-Term Impacts

Short-term air quality impacts are mostly due to dust (PM_{10} and $PM_{2.5}$) generated by construction and development activities, and emissions from equipment and vehicle engines (NO_x) operated during these activities. Dust generation is dependent on soil type and soil moisture, as well as the amount of total acreage actually involved in clearing, grubbing and grading activities. Clearing and earthmoving activities comprise the major source of construction dust generation, but traffic and general disturbance of the soil also contribute to the problem. Sand, lime or other fine particulate materials may be used during construction, and stored on-site. If not stored properly, such materials could become airborne during periods of high winds. The effects of construction activities include increased dust fall and locally elevated levels of suspended particulates. PM_{10} and $PM_{2.5}$ are considered unhealthy because the particles are small enough to inhale and damage lung tissue, which can lead to respiratory problems.

Particulate Matter Emissions

The SMAQMD Guide includes screening criteria for construction-related particulate matter. Projects that are 35 acres or less in size will generally not exceed the SMAQMD's construction PM_{10} or $PM_{2.5}$ thresholds of significance provided that the project does not:

- Include buildings more than 4 stories tall;
- Include demolition activities;
- Include significant trenching activities;
- Have a construction schedule that is unusually compact, fast-paced, or involves more than 2 phases (i.e., grading, paving, building construction, and architectural coatings) occurring simultaneously;
- Involve cut-and-fill operations (moving earth with haul trucks and/or flattening or terracing hills); or,
- Require import or export of soil materials that will require a considerable amount of haul truck activity

Some PM_{10} and $PM_{2.5}$ emissions during project construction can be reduced through compliance with institutional requirements for dust abatement and erosion control. These institutional measures include the SMAQMD "District Rule 403-Fugitive Dust" and measures in the Sacramento County Code relating to land grading and erosion control [Title 16, Chapter 16.44, Section 16.44.090(K)].

The project site is less than 35 acres and does not involve buildings more than 4 stories tall; demolition activities; significant trenching activities; an unusually compact construction schedule; cut-and-fill operations; or, import or export of soil materials requiring a considerable amount of haul truck activity. Therefore, the project meets the SMAQMD Guide screening criteria for PM_{10} and $PM_{2.5}$. The SMAQMD Guide includes a list of Basic Construction Emissions Control Practices that should be implemented on all projects, regardless of size. Dust abatement practices are required pursuant to SMAQMD Rule 403 and California Code of Regulations, Title 13, sections 2449(d)(3) and 2485; the SMAQMD Guide simply lays out the basic practices needed to comply. Since these are already required by existing rules and regulations, it is not necessary to include them as mitigation.

Ozone Precursor Emissions (NO_x)

The SMAQMD Guide currently provides screening criteria for construction-related ozone precursor emissions (NO_x) similar to those which will be implemented for particulate matter. Projects that are 35 acres or less in size will generally not exceed the SMAQMD's construction NO_x thresholds of significance provided that the project does not:

- Include buildings more than 4 stories tall;
- Include demolition activities;
- Include significant trenching activities;
- Have a construction schedule that is unusually compact, fast-paced, or involves more than 2 phases (i.e., grading, paving, building construction, and architectural coatings) occurring simultaneously;
- Involve cut-and-fill operations (moving earth with haul trucks and/or flattening or terracing hills);
- Require import or export of soil materials that will require a considerable amount of haul truck activity; or,

The project site is less than 35 acres and does not involve buildings more than 4 stories tall; demolition activities; significant trenching activities; an unusually compact construction schedule; cut-and-fill operations; import or export of soil materials requiring a considerable amount of haul truck activity; or, soil disturbance that exceeds 15 acres per day. Therefore, the project does not exceed the SMAQMD's construction NO_x significance thresholds.

Operational Emissions/Long-Term Impacts

Once a project is completed, additional pollutants are emitted through the use, or operation, of the site. Land use development projects typically involve the following sources of emissions: motor vehicle trips generated by the land use; fuel combustion from landscape maintenance equipment; natural gas combustion emissions used for space and water heating; evaporative emissions of ROG associated with the use of consumer products; and, evaporative emissions of ROG resulting from the application of architectural coatings.

Ultimately, a project typically must have large acreages or intense uses in order to result in significant operational air quality impacts. For ozone precursor emissions the screening table in the SMAQMD Guide allows users to screen out projects. Because this project involves a use that is not specifically listed in the SMAQMD screening table the California Emissions Estimator Model (CalEEMod) was used to model project emissions (Appendix C). Based on the unique characteristics of the proposed monkey sanctuary, PER staff consulted with SMAQMD staff regarding the appropriate land use classification and variables to use in the model.

Table IS-4: CalEEMod Results-Construction Phase and Operational (Winter)

Construction Year	Constituent in pounds per day			
	ROG	NOx	PM_{10}	$PM_{2.5}$
Construction (short-term)	74.85	22.69	2.40	1.86
Operational (long-term)	0.34	0.82	0.49	0.14

As shown **Table IS-4**, the project will not exceed the ROG, NOx, PM10, or PM2.5 significance thresholds during the construction period or operation period. Since the proposed project is significantly below the construction and operational thresholds adopted by SMAQMD listed in **Table IS-3**, impacts to Air Quality are anticipated to be ***less than significant.***

ODOR

The facility proposes to have up to 51 squirrel monkeys initially; however the facility is designed to allow for a maximum of 55 monkeys. An evaluation on the amount of urine and waste produced by the proposed facility as compared to humans and livestock such as horses was conducted. As shown in Table IS-5, the proposed squirrel monkey sanctuary with 51 monkeys will produce significantly less waste than a single adult horse and about the same amount of urine as two adult humans and as much feces as three adult humans (at maximum capacity the change in waste output is negligible).

Table IS-5 Comparison of Waste Output[1]

	Estimated daily urine output (gal)	Estimated daily feces output (lb)
51 squirrel monkeys (value is total)	0.6	0.8
One adult human	0.4	0.3
One adult horse (1,000 lb)	2.4	37.0

In addition, the applicant has developed an odor control program to ensure that odors typically associated with the monkey sanctuary are minimized and will not result in a public nuisance. The plan includes the following:

- Absorbent bedding (e.g. wood shavings) would be used indoors on the cement floor of each cage to trap and deodorize feces and urine. Soiled bedding would be removed daily and all bedding would be removed weekly and refreshed after cages are sanitized.

[1] K.E. Friedl and W. N. Holmes, "The Effect of Relative Humidity on Osmoregulation in the Squirrel Monkey (Saimiri sciureus)," Primates, 27(4): 465-470 (October 1986); C. Rose, A. Parker, B Jefferson, and E. Cartmell, "The Characterization of Feces and Urine: A Review of the Literature to Inform Advanced Treatment Technology," Critical Reviews in Environmental Science and Technology, 45:1827-1879 (2015); Michael Westerdorf, Rutgers, The State University of New Jersey, "Animal Manure Management: How Much Manure Will a Horse Produce?" http://www.extension.org/animal_manaure_management (September 29, 2015).

- Indoor caging, floors, and walls would be cleaned and deodorized weekly with a sanitizing solution (e.g. Rescue).
- Outdoor habitats would be mulched and soiled areas cleaned and refreshed twice weekly.
- Aisles in the building would be swept and mopped daily with 1:32 bleach solution to keep area clean and prevent odors.
- Soiled bedding/mulch and animal waste would be put in heavy-duty plastic bags and disposed of in a commercial waste bin that has a heavy securable cover to prevent animal entry and odor escape. The bin will be stored next to the monkey housing area and will be picked up weekly by Cal-Waste Recover of Galt. Cal-waste has confirmed that they will schedule weekly pick-up to coordinate with building cleaning days such that waste will be picked-up within 24 hours of cleaning days. No special handling of the waste is required.
- All effluent from the facility would be directed to the dedicated septic system for the facility.

Based on the small amount of urine and waste that will be produced by the monkeys at the facility along with implementation of the odor control plan potential impacts associated with Odor are considered to be ***less than significant.***

NOISE

This section supplements the Initial Study Checklist by analyzing if the proposed project would:

- Result in exposure of persons to, or generation of, noise levels in excess of standards established by the local general plan, noise ordinance or applicable standards of other agencies.

NOISE FUNDAMENTALS AND TERMINOLOGY

Noise is often described as unwanted sound, and thus is a subjective reaction to the physical phenomenon of sound. Sound is variations in air pressure that the ear can detect. Sound levels are measured and expressed in decibels (dB), which is the unit for describing the amplitude of sound[2]. Because sound pressure levels are defined as logarithmic numbers, the values cannot be directly added or subtracted. For example, two sound sources, each producing 50 dB, will produce 53 dB when combined, not 100 dB. This is because two sources have two times the energy (not volume) of one source, which results in a 3 dB increase in noise levels.

Most environmental sounds consist of several frequencies, with each frequency differing in sound level. The intensities of each frequency combine to generate sound. Acoustical professionals quantify sounds by "weighting" frequencies based on how sensitive humans are to that particular frequency. Using this method, low and extremely high frequency sounds are given less weight, or importance, while mid-range frequencies are given more weight, because humans can hear mid-range frequencies much better than low and very high frequencies. This method is called "A" weighting, and the units of measurement are called dBA (A-weighted decibel level). In practice, noise is usually measured with a meter that includes an electrical

[2] Equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals.

"filter" that converts the sound to dBA. The threshold at which one hears sounds is considered to be zero (0) dBA. The range of sound in normal human experience is 0 to 140 dBA. Decibels and other technical terms are defined in Table IS-5.

Table IS-5: Acoustical Terminology

TERM	DEFINITION
Ambient Noise Level:	The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.
Intrusive Noise:	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.
Decibel, dB:	A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure.
Community Noise Equivalent Level, CNEL*:	The average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening form 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.
Day/Night Noise Level, L_{dn}*:	The average equivalent sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.
Equivalent Noise Level, L_{eq}:	The average noise level during the measurement or sample period. L_{eq} is typically computed over 1, 8 and 24-hour sample periods.
L_{max}, L_{min}:	The maximum or minimum sound level recorded during a noise event.
L_n :	The sound level exceeded "n" per percent of the time during a sample interval. L_{10} equals the level exceeded 10 percent of the time (L_{90}, L_{50} , etc.)
Noise Exposure Contours:	Lines drawn about a noise source indicating constant levels of noise exposure. CNEL and L_{dn} contours are frequently utilized to describe community exposure to noise.
Sound Exposure Level, SEL; or Single Event Noise Exposure Level, SENEL:	The level of noise accumulated during a single noise event, such as an aircraft overflight, with reference to a duration of one second. More specifically, it is the time integrated A-weighted squared sound pressure level for a stated time interval or event, based on a reference pressure of 20 micropascals and a reference duration of one second.
Sound Level, dBA:	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.

The ambient noise level is defined as the noise from all sources near and far, and refers to the noise levels that are present before a noise source being studied is introduced. A synonymous term is pre-project noise level.

Regulatory Setting

In order to limit population exposure to physically and/or psychologically damaging noise levels, the State of California and Sacramento County have established standards and ordinances to control noise.

COUNTY GENERAL PLAN NOISE ELEMENT

The goals of the Sacramento County General Plan Noise Element are to: (1) protect the citizens of Sacramento County from exposure to excess noise and (2) protect the economic base of Sacramento County by preventing incompatible land uses from encroaching upon existing planned noise-producing uses. The General Plan defines a noise sensitive outdoor area as the primary activity area associated with any given land use at which noise sensitivity exists. Noise sensitivity generally occurs in locations where there is an expectation of relative quiet, or where noise could interfere with the activity which takes place in the outdoor area. An example is a backyard, where loud noise could interfere with the ability to engage in normal conversation.

The Noise Element of the Sacramento County General Plan establishes noise exposure criteria to aid in determining land use compatibility by defining the limits of noise exposure for sensitive land uses. There are policies for noise receptors or sources, transportation or non-transportation noise, and interior and exterior noise. General Plan policies associated with noise that are relevant to this project include the following:

NO-6. Where a project would consist of or include non-transportation noise sources, the noise generation of those sources shall be mitigated so as not exceed the interior and exterior noise level standards of Table 2 at existing noise-sensitive areas in the project vicinity (Table IS-6).

NO-8. Noise associated with construction activities shall adhere to the County Code requirements. Specifically, Section 6.68.090(e) addresses construction noise within the County.

Non-Transportation Noise

As described above, the Sacramento County General Plan Noise Element contains thresholds and performance standards for noise. This item is being discussed because there are residential uses abutting the subject property to the north, south and east. Residential uses are considered a sensitive receptor, pursuant to General Plan Policy NO-6.

In addition to those standards set forth in the Noise Element, the Sacramento County Noise Control Ordinance sets limits for exterior noise levels on designated agricultural or residential property. The standards found in the County's Noise Control Ordinance are based on the duration of noise on private property over one-hour periods. The ordinance limits the duration of sound based on many factors, including the type of source, tonal characteristics of the source, ambient noise levels, time of day, etc., by utilizing a system of noise criteria not to be exceeded based on the duration of noise over any given hour. Table IS-7 summarizes the County's exterior noise standards as they apply to the project. (Note that the County's Noise Element standards contained in Table IS-6 for planning purposes are more stringent than the enforceable standards shown in Table IS-7).

Table IS-6: Noise Element Table 2
Non-Transportation Noise Standards Median (L_{50})/Maximum (L_{max})

New Land Use	Outdoor Area		Interior
	Daytime	Nighttime	Day and Night
All Residential	55 / 75	50 / 70	35 / 55
Transient lodging[4]	55 / 75	---	35 / 55
Hospitals and nursing homes[5,6]	55 / 75	---	35 / 55
Theaters and auditoriums[6]	---	---	30 / 50
Churches, meeting halls, schools, libraries, etc.[6]	55 / 75	---	35 / 60
Office buildings[6]	60 / 75	---	45 / 65
Commercial buildings[6]	---	---	45 / 65
Playgrounds, parks, etc[6]	65 / 75	---	---
Industry[6]	60 / 80	---	50 / 70

1. The Table 2 standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards of Table 2, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.
2. Sensitive areas are defined in the acoustic terminology section.
3. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
4. Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.
5. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
6. The outdoor activity areas of these uses (if any), are not typically utilized during nighttime hours.
7. Where median (L50) noise level data is not available for a particular noise source, average (Leq) values may be substituted for the standards of this table provided the noise source in question operates for at least 30 minutes of an hour. If the source in question operates less than 30 minutes per hour, then the maximum noise level standards shown would apply.

This project contains potential noise sources from the squirrel monkeys. Therefore, a site specific noise study was prepared for this project by Bollard Acoustical Consultants (Appendix C).

Table IS-7: Sacramento County Noise Ordinance Standards (exterior)

Cumulative Period of Time (minutes per hour)	Daytime 7:00 a.m. to 10:00 p.m.	Nighttime 10:00 p.m. to 7:00 a.m.
30	55	50
15	60	55
5	65	60
1	70	65
0	75	70

Note: A cumulative duration of 30 minutes in an hour is equivalent to the L_{50} for that hour. Likewise, a cumulative duration of 15 minutes in an hour is equivalent to the L_{25}, a cumulative duration of 5 minutes in an hour is equivalent to the $L_{8.3}$, and a cumulative duration of 1 minute in an hour is equivalent to the $L_{1.6}$. The noise level not to be exceeded at all in a given hour represents the maximum noise level or L_{max}.
SOURCE: Sacramento County, 1987.

The existing noise environment in the project vicinity is defined by noise sources typical in a rural setting. Noise sources contributing to measured ambient noise levels consisted of wind blowing through grass, wildlife, insects, birds, and intermittent traffic on North Valensin Road. To quantify existing background noise levels in the project vicinity, long-term ambient noise level measurements were conducted on the project site from Saturday, July 8 through Monday, July 10, 2017. Table IS-8 shows a summary of the ambient noise measurement results with detailed results provided in Appendices C.

Table IS-8: Measured Ambient Noise Level Summary

Squirrel Monkey Haven – Sacramento County, California					
		Measured Noise Level (dBA)			
		Daytime (7 AM to 10 PM)		Nighttime (7 AM to 10 PM)	
Site[1]	Date	L_{50}	L_{max}	L_{50}	L_{max}
1	Saturday, July 8, 2017	44	58	58	62
	Sunday, July 9, 2017	45	60	57	62
	Monday, July 10, 2017	45	57	55	65
	Average:	45	58	57	63
Sacramento County Standards (Table 1):		55	75	50	70

Notes:
1. Ambient noise level monitoring was conducted along the southern property line. Location is shown on Plate IS-5.

The existing ambient noise levels in the project vicinity were consistent from day-to-day and night-to-night. The measured ambient data from the three day monitoring period was averaged to determine the baseline noise level condition in the project vicinity. The calculated daytime and nighttime median noise levels were 45 dB and 57 dB, while daytime and nighttime maximum noise levels were 58 dB and 63 dB. The elevated

nighttime noise levels are believed to be attributable to the presence of increased insect activity during the nighttime hours

Project Noise Generation

The project parcel and majority of the surrounding parcels are large lot agriculturally zoned parcels containing single-family residences. According to the Noise Study, the monkeys sleep pattern is diurnal like humans, awake during daytime hours and asleep during nighttime hours. In addition, according to the applicant, the monkeys would be indoors within the proposed agricultural building during nighttime hours.

Description of Shelter

The monkeys would be housed within a new 2,700 square foot steel agricultural building. The building will have insulation on the ceiling and continue to approximately 4 feet down from the ceiling. Each end of the building will have a 10-foot sliding door that can be opened for airflow and a 4-foot walkthrough door. Indoor caging will be made of wire mesh/caging that is professionally designed and constructed for new world primates. The outdoor habitats will be made of similar wire mesh and connect to the indoor shelter via aerial wire mesh runways (Plate IS-4). The habitats will be heavily planted and the tops and sides will have shade netting for the warmer summer months. The perimeter of the monkey housing, visible on Plate IS-3 (Proposed Site Plan), will have an 8 foot tall security fence. The applicant proposes to suspend vinyl acoustic curtains from perimeter security fence, providing additional visual and noise screen for the project.

Reference Noise Levels for Squirrel Monkey Vocalizations

The primary noise source associated with this facility would be the vocalizations of the monkeys. The project applicant has indicated that the population of 51 monkeys will initially consist of 35 females and 16 males. The Noise Study indicates that most of the vocalizations from monkeys throughout the day are “conversational chit-chat” with limited episodes of shrieking, occurring approximately 3-5 times per day. Because the conversational chit-chat could potentially occur in excess of 30 minutes out of an hour, it is subject to the median (L_{50}) noise level standard of 55 dB. Because the shrieking typically occurs on limited occasions, it would be subject to the maximum (L_{max}) noise level standard of 75 dB.

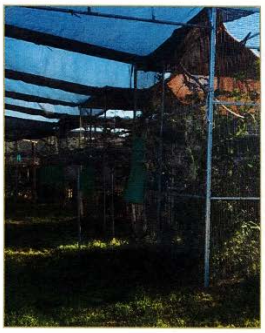
The County’s noise standards were applied at the outdoor activity areas of adjacent parcels. In instances where outdoor activity areas are not clearly defined, the General Plan indicates that noise level standards should be applied at a point 50 feet from the affected residence. The Nosie study analyzed the noise levels at both the property line and General Plan defined outdoor activity areas.

Plate IS-4 Examples of Facility

Ag Building Indoor Shelter

Closest neighbor view (building in center)

Aerial Runway-tunnels



Habitats

Double Locked Entry

The maximum squirrel monkey yap noise levels according to a journal article by Claudia Fichtel and Kurt Hammerschmidt were measured to be 76 dB ± 5 dB at a distance of 3 feet[3]. The worst- case maximum noise levels of yaps documented in the journal article were 81 dB at 3 feet. The project applicant has indicated that occasional monkey shrieks are louder than yaps, but not by a wide margin. In order to conservatively assess maximum noise levels associated with shrieks, the Noise study added 5 dB to the documented worst-case yap noise levels of 81 dB at 3 feet, resulting in reference maximum noise level of 86 dB at 3 feet.

Median monkey vocalizations (twitters) were conservatively assumed to be 15 dB quieter than maximum yap noise levels, resulting in a reference noise level of 66 dB at 3 feet. According to the study, average male human conversation in a raised voice is approximately 65 dB at 3 feet, providing good agreement with the applicants' subjective similarity of the monkey twitter to human conversation. To provide a conservative assessment of median squirrel monkey noise generation (twitters) at the proposed facility, the Nosie Study assumed that half (18) of the females were vocalizing simultaneously for the duration of an hour, resulting in a reference median noise level of 79 dB at 3 feet.

[3] Journal of the Acoustical Society of America; "Responses of Squirrel Monkeys to their Experimentally Modified Mobbing Calls"; (May 2003).

PREDICTED NOISE LEVELS AT NEAREST RESIDENTIAL OUTDOOR ACTIVITY AREAS

The reference noise levels discussed in the preceding paragraphs were projected to the nearest identified outdoor activity areas assuming normal spherical spreading of sound (6 dB decrease per doubling of distance from the noise source) and at the property lines adjacent to the kennel facility (Plates IS-5). Table IS-9 shows the predicted average and maximum noise levels at each of the six nearest residential outdoor activity areas to the proposed shelter for worst-case squirrel monkey vocalization noise generation. A conservative -6 dB offset was applied to the predicted noise levels presented in Tables IS-9 and IS-10 in order to account for the attenuation provided by the proposed perimeter 8-foot tall security fence with suspended acoustic curtains.

Plate IS-5 Noise Measurement Locations

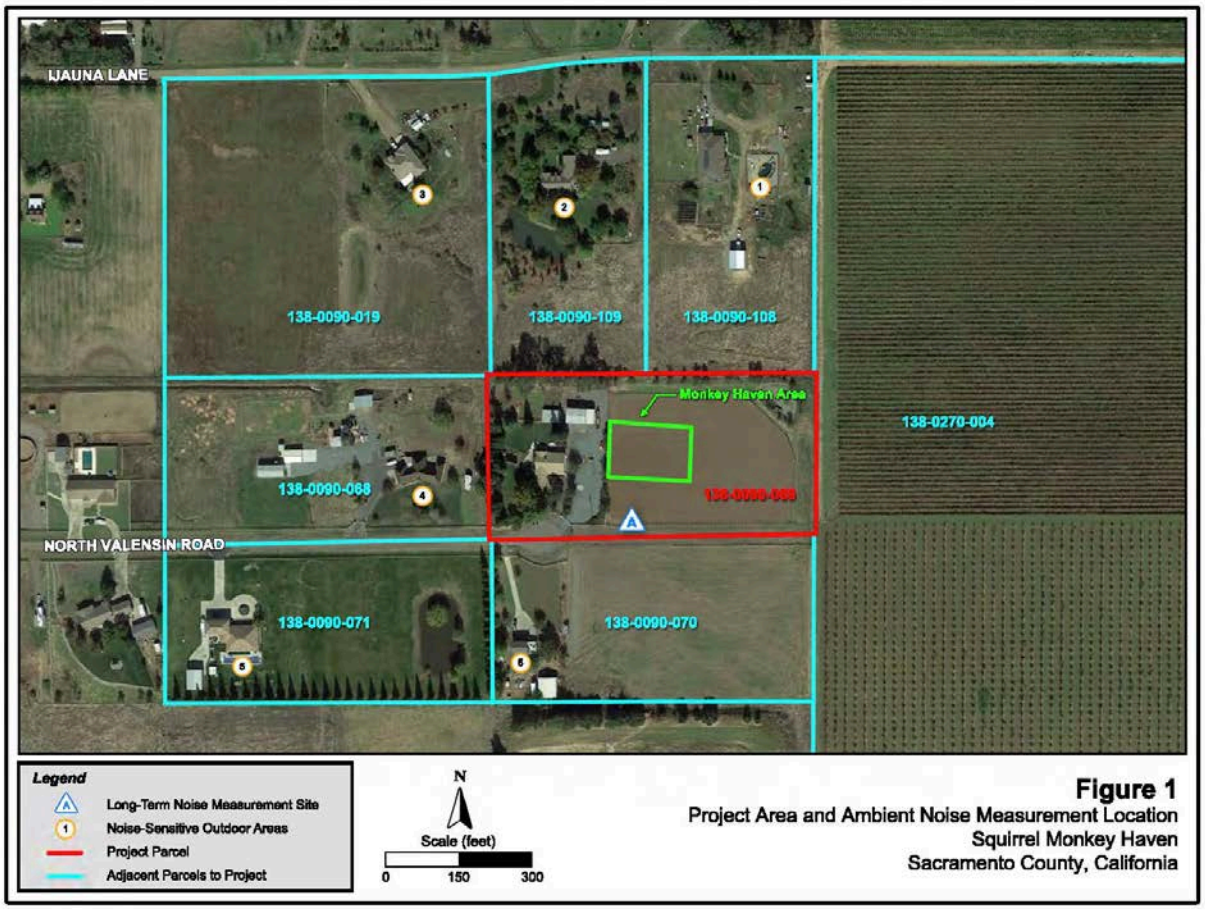


Table IS-9: Predicted Noise Levels at Nearest Outdoor Activity Areas (dBA)
Daytime (7 AM to 10 PM)

Residence[1]	APN	Distance (feet)[2]	L50[3]	Lmax[3]
1	138-0090-108	520	28	35
2	138-0090-109	480	28	36
3	138-0090-019	640	26	33
4	138-0090-068	4000	30	38
5	138-0090-071	840	24	31
6	138-0090-070	430	29	37
Sacramento County Daytime Standards			**55**	**75**

1. Nearest residential outdoor activity areas are illustrated on Plate IS-5
2. Distances were scaled from the center of the nearest outdoor habitat area to nearest residential outdoor activity areas.
3. Predicted noise levels have been conservatively adjusted by -6 dB to account for the attenuation provided by the perimeter 8-foot tall noise barrier (vinyl curtains).

The Table IS-9 data indicate that predicted worst-case squirrel monkey noise levels generated by the proposed project are significantly lower than the County's maximum noise thresholds. Furthermore, predicted noise levels would be below measured ambient noise levels presented in Table IS-8. As a result, no further mitigation measures would be warranted for the project.

Although the Sacramento County's noise level standards are applied at residential outdoor activity areas, monkey vocalization noise levels were also conservatively predicted at the nearest project property lines. The same methodology described in the previous section was utilized to predict monkey vocalization noise levels at the property lines. Those results are presented below in Table IS-10.

Table IS-10: Predicted Noise Levels at Nearest Property Lines (dBA)

Direction	APN	Distance (feet)[1]	L50[2]	Lmax[2]
North	138-0090-109	110	41	49
East	138-0270-004	265	34	41
South	138-0090-070	135	39	47
West	138-0090-068	265	34	41
Sacramento County Daytime Standards			**55**	**75**

1. Distances were scaled from the nearest outdoor habitat area to nearest property lines.
2. Predicted noise levels have been conservatively adjusted by -6 dB to account for the attenuation provided by the perimeter 8-foot tall noise barrier (vinyl curtains).

The Table IS-10 data indicate that predicted worst-case squirrel monkey noise levels generated by the proposed project are also significantly lower than the County's maximum noise thresholds, even if they were assessed at the nearest project property

lines rather than outdoor activity areas. Furthermore, predicted property line noise levels would be below the measured ambient noise levels presented in Table IS-8.

SINGLE EVENT ANALYSIS

As discussed previously, the Sound Exposure Level (SEL) represents the entire sound energy of a given single-event normalized into a one-second period regardless of event duration. According to the project applicant, about 3-5 episodes of social drama occur daily that involve shrieking with each episode lasting about 30-60 seconds. Given maximum shrieking noise levels of 86 dB at 3 feet and 60 seconds of continuous shrieking, the SEL for worst-case squirrel monkey vocalizations was calculated to be 104 dB at a distance of 3 feet. Table IS-11 shows the predicted interior SEL at each of the six nearest residences. A conservative -6 dB offset was applied to the predicted noise levels presented in Table IS-11 in order to account for the attenuation provided by the proposed perimeter 8-foot tall fence with suspended acoustic curtains. The analysis also assumes a building façade transmission loss of 15 dB and 25 dB for bedroom windows in the open and closed positions, respectively.

Table IS-11: Predicted Squirrel Monkey Sound Exposure Levels within Nearest Residential Bedrooms

Residence[1]	APN	Distance (feet)[2]	Predicted SEL (dBA)[3,4]	
			Windows Open[5]	Windows Closed[6]
1	138-0090-108	510	38	28
2	138-0090-109	500	38	28
3	138-0090-019	670	36	26
4	138-0090-068	350	41	31
5	138-0090-071	810	34	24
6	138-0090-070	400	40	30
Sacramento County Daytime Standards			**55**	**55**

1. Nearest residential outdoor activity areas are illustrated on Plate IS-5
2. Distances were scaled from the center of the nearest outdoor habitat area to nearest residential facade.
3. SEL = Sound Exposure Level
4. Predicted noise levels have been conservatively adjusted by -6 dB to account for the attenuation provided by the perimeter 8-foot tall noise barrier (vinyl curtains).
5. Predicted noise levels were adjusted by -15 dB to account for the transmission loss provided by the residential building facades with the bedroom windows in the open position.
6. Predicted noise levels were adjusted by -25 dB to account for the transmission loss provided by the residential building facades with the bedroom windows in the closed position.
7. No universal SEL criterion has been developed for environmental noise assessments. The Sacramento County General Plan does not contain an SEL standard.

The Table IS-11 data indicate that worst-case squirrel monkey sound exposure levels are predicted to be well below the recommended interior SEL standard of 55 dB. No further consideration of noise mitigation measures would be warranted for the project relative to the recommended interior SEL standard of 55 dB.

COMPARISON OF PROPOSED PROJECT RELATIVE TO TYPICAL DOG KENNEL

While this is the first proposed kennel facility for monkeys within the County, the County has permitted several dog kennel facilities, many of which are located in similar rural residential neighborhoods. Therefore, a comparative analysis of noise generated by the squirrel monkeys compared to the noise generation of a typical dog kennel operation was also prepared. The primary noise source associated with a typical outdoor dog kennel is periodic dog barking.

Noise measurements of barking dogs were taken in 1989 for the Sacramento County General Plan Noise Element using the Sacramento County Animal Shelter located at 4290 Bradshaw Road. Average noise levels of 80.5 and 66.2 dBA were measured at distances of 30 and 100 feet from the kennel, respectively, with several dogs barking. A Noise Analysis prepared in 2008 by J.C. Brennan and Associates for a dog kennel allowing up to 50 dogs in the southeast area of the County indicated that noise levels at a distance of 100 feet had a maximum noise level of 63dB Lmax and an average of 43 dB. The lower sound levels were due to the fact that fewer dogs were allowed in the outdoor kennel areas at a time as compared to the Sacramento County Animal Shelter.

The Nosie consultant for this project, BAC, has considerable experience in preparing noise studies for dog boarding facilities. Their analysis indicates that the degree of barking depends largely on the experience of the staff and the level of stimuli the dogs receive. However, even under the most ideal boarding conditions with highly trained supervision, dogs occasionally still bark. Usually barking occurs in response to some stimuli, such as persons or other dogs entering the kennel area.

To quantify noise levels associated with a typical outdoor dog kennel, BAC averaged data collected at the All Pets Boarding (Loomis), Sacramento SPCA, and Nadelhaus Kennels (Chico). The results of the barking dog noise measurements indicate that at a distance of approximately 200 feet from the dogs, the maximum noise level generated by the barking dogs was approximately 55 dB L_{max}. The average noise level measured at 200 feet with approximately 30-40 dogs barking intermittently was 50 dB L_{eq}. Because the county's standards are in terms of the median noise level descriptor, and not average (L_{eq}), median barking dog noise levels were conservatively assumed to be 50 dB L_{50}. At the Nadelhaus Kennels, median noise levels were approximately 5 dB lower than average noise levels, therefore the assumed median noise level of 50 dB L_{50} for this comparative analysis would be considered conservative.

Table IS-12 shows the predicted squirrel monkey vocalization and barking dog noise levels at the outdoor activity areas of the six nearest residences. A conservative -6 dB offset was applied to the predicted noise levels presented in Table 6 in order to account for the attenuation provided by the proposed perimeter 8-foot tall suspended acoustic curtains.

Table IS-12: Comparison of Predicted Squirrel Monkey Noise Levels vs Typical Dog Kennel at Nearest Outdoor Activity Areas

Residence[1]	APN	Distance (feet)[2]	Predicted Noise Levels (dBA)[3]			
			Squirrel Monkeys		Dogs Barking	
			L_{50}	L_{max}	L_{50}	L_{max}
1	138-0090-108	520	28	35	36	41
2	138-0090-109	480	28	36	36	41
3	138-0090-019	640	26	33	34	39
4	138-0090-068	400	30	38	38	43
5	138-0090-071	840	24	31	32	37
6	138-0090-070	430	29	37	37	42

Notes:

1. Nearest residential outdoor activity areas are illustrated on Figure 1.
2. Distances were scaled from the center of the nearest outdoor habitat area to nearest residential outdoor activity areas.
3. Predicted noise levels have been conservatively adjusted by -6 dB to account for the attenuation provided by the perimeter 8-foot tall noise barrier (vinyl curtains).

As indicated above in Table IS-12, predicted median noise levels due to barking dogs are approximately 8 dB higher than squirrel monkey vocalizations. Therefore the potential noise impacts of the proposed squirrel monkey sanctuary are less than a typical dog kennel facility.

The low density rural character of this southeast community neighborhood generally provides a suitable environmental setting in which kennels would be compatible. According to the project applicant, the kennel will be closed-up at night between 8 p.m. and 7 a.m. weekdays and 8 p.m. and 9 a.m. weekends and holidays; therefore limiting the potential for nighttime noise disturbance. Restrictions on outdoor activities have also been added as Mitigation Measures. The location of the kennel from sensitive receptors along with the typical noise level produced by this species of monkey reduces any anticipated noise impact to ***less than significant***.

HYDROLOGY AND WATER QUALITY

This section supplements the Initial Study Checklist by analyzing if the proposed project would:

- Create substantial sources of polluted runoff or otherwise substantially degrade ground or surface water quality.

WATER QUALITY

CONSTRUCTION WATER QUALITY: EROSION AND GRADING

Construction on undeveloped land exposes bare soil, which can be mobilized by rain or wind and displaced into waterways or become an air pollutant. Construction equipment can also track mud and dirt onto roadways, where rains will wash the sediment into storm drains and thence into surface waters. After construction is complete, various

other pollutants generated by site use can also be washed into local waterways. These pollutants include; but are not limited to: vehicle fluids, heavy metals deposited by vehicles, and pesticides or fertilizers used in landscaping.

Sacramento County has a National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit issued by Regional Water Board. The Municipal Stormwater Permit requires the County to reduce pollutants in stormwater discharges to the maximum extent practicable and to effectively prohibit non-stormwater discharges. The County complies with this permit in part by developing and enforcing ordinances and requirements to reduce the discharge of sediments and other pollutants in runoff from newly developing and redeveloping areas of the County.

The County has established a Stormwater Ordinance (Sacramento County Code 15.12). The Stormwater Ordinance prohibits the discharge of unauthorized non-stormwater to the County's stormwater conveyance system and local creeks. It applies to all private and public projects in the County, regardless of size or land use type. In addition, Sacramento County Code 16.44 (Land Grading and Erosion Control) requires private construction sites disturbing one or more acres or moving 350 cubic yards or more of earthen material to obtain a grading permit. To obtain a grading permit, project proponents must prepare and submit for approval an Erosion and Sediment Control (ESC) Plan describing erosion and sediment control best management practices (BMPs) that will be implemented during construction to prevent sediment from leaving the site and entering the County's storm drain system or local receiving waters. Construction projects not subject to SCC 16.44 are subject to the Stormwater Ordinance (SCC 15.12) described above.

In addition to complying with the County's ordinances and requirements, construction sites disturbing one or more acres are required to comply with the State's General Stormwater Permit for Construction Activities (CGP). CGP coverage is issued by the State Water Resources Control Board (State Board) http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml and enforced by the Regional Water Board. Coverage is obtained by submitting a Notice of Intent (NOI) to the State Board prior to construction and verified by receiving a WDID#. The CGP requires preparation and implementation of a site-specific Stormwater Pollution Prevention Plan (SWPPP) that must be kept on site at all times for review by the State inspector.

Applicable projects applying for a County grading permit must show proof that a WDID # has been obtained and must submit a copy of the SWPPP. Although the County has no enforcement authority related to the CGP, the County does have the authority to ensure sediment/pollutants are not discharged and is required by its Municipal Stormwater Permit to verify that SWPPPs include six minimum components.

The project must include an effective combination of erosion, sediment and other pollution control BMPs in compliance with the County ordinances and the State's CGP.

Erosion controls should always be the *first line of defense*, to keep soil from being mobilized in wind and water. Examples include stabilized construction entrances, tackified mulch, 3-step hydroseeding, spray-on soil stabilizers and anchored blankets. Sediment controls are the *second line of defense*; they help to filter sediment out of

runoff before it reaches the storm drains and local waterways. Examples include rock bags to protect storm drain inlets, staked or weighted straw wattles/fiber rolls, and silt fences.

In addition to erosion and sediment controls, the project must have BMPs in place to keep other construction-related wastes and pollutants out of the storm drains. Such practices include, but are not limited to: filtering water from dewatering operations, providing proper washout areas for concrete trucks and stucco/paint contractors, containing wastes, managing portable toilets properly, and dry sweeping instead of washing down dirty pavement.

It is the responsibility of the project proponent to verify that the proposed BMPs for the project are appropriate for the unique site conditions, including topography, soil type and anticipated volumes of water entering and leaving the site during the construction phase. In particular, the project proponent should check for the presence of colloidal clay soils on the site. Experience has shown that these soils do not settle out with conventional sedimentation and filtration BMPs. The project proponent may wish to conduct settling column tests in addition to other soils testing on the site, to ascertain whether conventional BMPs will work for the project.

If sediment-laden or otherwise polluted runoff discharges from the construction site are found to impact the County's storm drain system and/or Waters of the State, the property owner will be subject to enforcement action and possible fines by the County and the Regional Water Board.

Project compliance with requirements outlined above, as administered by the County and the Regional Water Board will ensure that project-related erosion and pollution impacts are *less than significant*.

OPERATION: STORMWATER RUNOFF

Development and urbanization can increase pollutant loads, temperature, volume and discharge velocity of runoff over the predevelopment condition. The increased volume, increased velocity, and discharge duration of stormwater runoff from developed areas has the potential to greatly accelerate downstream erosion and impair stream habitat in natural drainage systems. Studies have demonstrated a direct correlation between the degree of imperviousness of an area and the degradation of its receiving waters. These impacts must be mitigated by requiring appropriate runoff reduction and pollution prevention controls to minimize runoff and keep runoff clean for the life of the project.

The County requires that projects include source and/or treatment control measures on selected new development and redevelopment projects. Source control BMPs are intended to keep pollutants from contacting site runoff. Examples include "No Dumping-Drains to Creek/River" stencils/stamps on storm drain inlets to educate the public, and providing roofs over areas likely to contain pollutants, so that rainfall does not contact the pollutants. Treatment control measures are intended to remove pollutants that have already been mobilized in runoff. Examples include vegetated swales and water quality detention basins. These facilities slow water down and allow sediments and pollutants to settle out prior to discharge to receiving waters. Additionally, vegetated facilities provide filtration and pollutant uptake/adsorption. The project proponent should

consider the use of "low impact development" techniques to reduce the amount of imperviousness on the site, since this will reduce the volume of runoff and therefore will reduce the size/cost of stormwater quality treatment required. Examples of low impact development techniques include pervious pavement and bioretention facilities.

The County requires developers to utilize the *Stormwater Quality Design Manual for the Sacramento and South Placer Regions, 2007* (Design Manual) in selecting and designing post-construction facilities to treat runoff from the project. A post construction design regulation was approved by the Municipal Services Agency Administrator on May 18th 2006. This regulation defines the development standards that the County is implementing and is reflected in the Design Manual. Treatment control measures are required on new development and redevelopment projects that meet or surpass the thresholds defined in Table 3-2 of the Design Manual.

Updates and background on the County's requirements for post-construction stormwater quality treatment controls, along with several downloadable publications, can be found at the following websites:

http://www.waterresources.saccounty.net/stormwater/Pages/default.aspx

http://www.beriverfriendly.net/Newdevelopment/

The final selection and design of post-construction stormwater quality control measures is subject to the approval of the County Department of Water Resources; therefore, they should be contacted as early as possible in the design process for guidance. Project compliance with requirements outlined above will ensure that project-related stormwater pollution impacts are ***less than significant***.

BIOLOGICAL RESOURCES

This section supplements the Initial Study Checklist by analyzing if the proposed project would:

- Have a substantial adverse effect on any special status species, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, or threaten to eliminate a plant or animal community?

A "special status" species is one which has been identified as having relative scarcity and/or declining populations. Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for federal listing, and those classified as species of special concern. Also included are those species considered to be "fully protected" by the California Department of Fish and Wildlife (California Fish and Wildlife), those granted "special animal" status for tracking and monitoring purposes, and those plant species considered to be rare, threatened, or endangered in California by the California Native Plant Society (CNPS).

A California Fish and Wildlife California Natural Diversity Database (CNDDB) search was conducted. No special status species were identified within or adjacent to the

project site. Therefore, impacts to biological resources are considered to be ***less than significant.***

CULTURAL RESOURCES

This section supplements the Initial Study Checklist by analyzing if the proposed project would:

This section supplements the Initial Study Checklist by analyzing if the proposed project would:

- Have a substantial adverse effect on an archaeological resource?
- Cause a substantial adverse change in the significance of a historical resource?

The California Environmental Quality Act (CEQA), §15064.5. (a), generally defines significant cultural resources to be historical and archaeological resources that are listed in the California Register of Historical Resources (California Register), are listed in a local register or survey or eligible for listing, or that may be considered locally significant despite not being listed or eligible for listing. Historical resources could include the following:

Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California…(§15064.5 (a)(3) of the CEQA Guidelines 2000).

The significance criteria of the California Register include the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history. (Public Resources Code SS5024.1, Title 14 CCR, Section 4852).

Significance Criteria: California Register of Historical Resources (CRHR).

In order to be considered important cultural resources under the California Environmental Quality Act (CEQA), the site would need to be a historical or unique archaeological resource that meets significance criteria of the CRHR. Historical resources could include the following:

Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California…(§15064.5 (3) of the CEQA Guidelines 2000)

The significance criteria of the CRHR include the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history. (Public Resources Code SS5024.1, Title 14 CCR, Section 4852).

Public disclosure of site specific cultural resources information is expressly exempt from the California Public Records Act, Government Code Sections 6250-6270. Below is a general summary of the findings from the Cultural Resources Assessment that was prepared by PAR Environmental Services, Inc. (July 2017).

The investigation included a records search at the North Central Information Center of the CHRIS at California State University-Sacramento on July 6, 2017 and a Sacred Lands File search with the Native American Heritage Commission. The results of the records search indicated that none of the property had been previously surveyed for cultural resources. A field survey was conducted at the project site on July 12, 2017 and no evidence of prehistoric period or historic period cultural resources were identified within the project area.

No cultural resources were identified in the Project Area as a result of the records search and field survey. Therefore, no historic properties as defined by regulations implementing Section 106 of the NHPA and no historical resources as defined by CEQA regulations will be affected by the proposed Project.

Pursuant to AB52, Tribes that have requested notification of projects in accordance with Public Resources Code 21080.3.1(b)(1) were notified and provided an opportunity to request consultation. The Wilton Rancheria was the only Tribe that requested consultation. Documents were shared with the Tribe and a consultation meeting was determined not to be necessary.

There always remains the potential for ground-disturbing activities to expose previously unrecorded cultural resources. Both CEQA and Section 106 of the NHPA require the Lead Agency to address any unanticipated cultural resource discoveries during project construction. Therefore, ECORP recommended mitigation measures (Mitigation Measure B) be adopted and implemented to reduce potential adverse impacts to ***less than significant.***

GREENHOUSE GAS EMISSIONS / CLIMATE CHANGE

This section supplements the Initial Study Checklist by analyzing if the proposed project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

The principal greenhouse gases that enter the atmosphere because of human activities are CO_2 (carbon dioxide), CH_4 (methane), N_2O (nitrous oxide), and fluorinated gases. From 1750 to 2004, concentrations of CO_2, CH_4, and N_2O have increased globally by 35, 143, and 18 percent, respectively. "In order to stabilize the concentration of GHGs [greenhouse gases] in the atmosphere, emissions would need to peak and decline thereafter. The lower the stabilization level, the more quickly this peak and decline would need to occur. Mitigation efforts over the next two to three decades will have a large impact on opportunities to achieve lower stabilization levels." (IPCC 2007)

Assembly Bill 32

In September 2006, Assembly Bill (AB) 32 was signed by Governor Schwarzenegger of California. AB 32 requires that California GHG emissions be reduced to 1990 levels by the year 2020. It is a comprehensive bill that requires the California Air Resources Board (ARB) to adopt regulations requiring the reporting and verification of statewide greenhouse gas emissions, and it establishes a schedule of action measures. AB 32 also requires that a list of emission reduction strategies be published to achieve emissions reduction goals.

Senate Bill 375

On September 30, 2008, Senate Bill (SB) 375 was signed by Governor Schwarzenegger of California. SB 375 combines regional transportation planning with sustainability strategies in order to reduce greenhouse gas emissions in California's urbanized areas. Existing law requires each regional transportation planning agency, which in Sacramento County's case is the Sacramento Area Council of Governments (SACOG), to adopt a Metropolitan Transportation Plan. SB 375 required the California Air Resources Board (CARB) to set performance targets for reduction of passenger vehicle emissions per capita in each of 16 Metropolitan Planning Organizations (MPOs) in the state for 2020 and 2035. For the SACOG MPO, these targets were set at 7% below 2005 per capita emissions for 2020 and 16% below 2005 per capita emissions for 2035. MPOs are not required to meet the greenhouse gas emission targets established by ARB, but if they conclude it is not feasible to do so, they must prepare an Alternative Planning Scenario to demonstrate what further land use and/or transportation actions would be required to meet the targets. SB 375 also requires that the Metropolitan Transportation Plan for each MPO include a Sustainable Communities Strategy (SCS) that integrates the land use and transportation components, and amends CEQA to provide incentives for housing and mixed use projects that help to implement an MTP/SCS that meets the ARB targets.

Sacramento County General Plan

The Land Use Element of the Sacramento County General Plan contains the following applicable policy:

LU-115. It is the goal of the County to reduce greenhouse gas emissions to 1990 levels by the year 2020. This shall be achieved through a mix of State and local action.

Significance Criteria

CEQA Guidelines section 15064.4 states that an agency should make a "good faith effort . . . to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a

project". It is left to the lead agency's discretion to use a quantitative or qualitative approach. Factors that should be considered when determining significance are:

1. The extent to which the project may increase or decrease greenhouse gas emissions compared to the baseline;

2. whether the project exceeds any applicable significance threshold; and

3. the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions.

The guidelines do not include a numeric significance threshold, but instead defer to the lead agency to determine whether there are thresholds which apply to the project. With regard to the third item, statewide plans include AB 32 and SB 375, as described in the Regulatory setting. The underlying strategy and assumptions of the AB 32 Scoping Plan were used to develop County thresholds. AB 32 requires emissions be reduced to 1990 levels by the year 2020, which is estimated in the AB 32 Scoping Plan to be 15% below existing (2005) emissions.

As previously discussed, Sacramento County prepared a GHG emissions inventory for the County, and as an offshoot of that process has published a Draft Climate Action Plan. Thresholds have been developed based on the County inventory (see Table IS-2). As shown below, separate thresholds have been included for each sector. The purpose of this division is to provide additional information about the source of emissions. When making a final determination of significance, these thresholds can be combined to generate a total emissions threshold; it is this total threshold that will ultimately determine whether impacts are found to be significant.

Also note that the transportation sector is expressed in per capita, which is not applicable to non-residential projects. The determination was made that, in general, non-residential projects redistribute existing trips made by passenger vehicles – they do not generate new trips. The majority of trips to and from a commercial project are generated by residential uses. Residential projects are already being required to account for transportation emissions, so including them for commercial projects as well would result in double-counting. Therefore, only the truck-trips generated by a commercial project itself will be subject to analysis. An exception to this rule is any commercial project which is a regional draw or unique draw, and thus may cause the redistribution of existing trips in a manner that will increase total existing VMT.

Table IS-2: Greenhouse Gas Significance Thresholds (Annual Metric Tons CO_2e)

Sector	2005 Baseline	2020 Target	Thresholds
Residential Energy	1,033,142	878,275	1.33 per capita
Commercial & Industrial Energy	772,129	656,914	7.87 per Kft^2
Transportation	2,066,970	1,757,236	2.67 per capita
Trucks	*488,806*	*414,470*	*0.10 per 100 VMT*

METHODOLOGY

SMAQMD has established recommended thresholds that ensure that 90 percent of emissions from projects in the region are reviewed to determine the need for additional mitigation. According to SMAQMD's methodology, a land use development project with operational emissions that are less than 1,100 metric tons (MT) of carbon dioxide equivalent (CO_2e) per year will not result in a significant impact and will not require additional mitigation. SMAQMD assumes that projects with operational emissions below 1,100 MT of CO_2e /year will not exceed their construction GHG threshold of significance as long as the project does not include buildings that are more than four stories tall, significant trenching, demolition activities, a compact construction schedule, significant cut and fill operations, or significant truck activity.
SMAQMD has established an Operational Screening Levels table, which shows the size of development, by land use type, that SMAQMD has determined would not exceed the operational GHG emissions thresholds. Projects that are smaller than those listed in the table and, which meet the construction parameters listed above, are considered to have a less than significant impact related to Climate Change. For projects that exceed the development size listed in the table, SMAQMD recommends the use of CalEEMod to quantify the GHG emissions that would be generated by the project.

Pursuant to Sacramento County methodology, SMAQMD's threshold of 1,100 MT of CO_2e /year is used as an initial screening threshold. Projects which screen out using the screening threshold of 1,100 MT/year of CO_2e are considered to have a less than significant impact related to Climate Change and no further analysis is required. Projects which do not screen out using SMAQMD's GHG Operational screening levels table or SMAQMD's threshold of 1,100 MT of CO_2e /year must then be evaluated using the County's GHG thresholds (Table IS-2).

PROJECT IMPACTS

Pursuant to Sacramento County methodology, the project-related GHG emissions were first analyzed by comparing them to the SMAQMD threshold of 1,100 MT of CO_2e /year. Because this project involves a use that is not specifically listed in the SMAQMD screening table the California Emissions Estimator Model (CalEEMod) was used to estimate the annual metric tons of CO_2 equivalent (CO_2e) attributable to the construction and operation of the proposed project. (Appendix D). Based on the unique characteristics of the proposed monkey sanctuary; PER staff consulted with SMAQMD

staff regarding the appropriate land use classification and variables to use in the model. In addition, the defaults in CalEEMod were changed to reflect the emission anticipated for operation in the year 2018, and carbon intensity forecasts for the Sacramento Municipal Utility District (SMUD) based on SMUD's 2009 reporting year.

Table IS-13: Estimated GHG Emissions

	MT of CO_2e /Year
Estimated Construction GHG Emissions	17.4
Estimated Annual Operational GHG Emissions	108
SMAQMD GHG Emissions Threshold	1,100
Exceed SMAQMD Threshold	No

As shown in Table IS-13, the project's estimated GHG emissions for both project construction and annual operation are significantly below SMAQMD's threshold of 1,100 annual metric tons. Therefore, the project will not result in a significant impact related to Climate Change. Therefore, impacts are ***less than significant***.

ENVIRONMENTAL MITIGATION MEASURES

MITIGATION MEASURE A: NOISE

The analysis contained in the Noise Study (Appendix D) concluded that noise generated by monkey vocalizations at the Squirrel Monkey Haven facility is predicted to satisfy the Sacramento County General Plan Noise Element standards. However, given the sensitivity of residential uses to new noise sources such as that proposed by this project, the following mitigation measures are required in order to reduce the potential for adverse public reaction to noise generated by the project:

1. All outdoor activities associated with the kennel/monkey sanctuary should be strictly limited to daytime hours (7 am – 10 pm).

2. Monkeys should be housed within the indoor shelter during nighttime hours (10 pm – 7 am).

3. In the event that legitimate concerns are expressed by the neighboring residences regarding squirrel monkey vocalization noise upon commencement of operations at this facility, follow-up noise level testing should be conducted to assess the state of compliance with the noise standards recommended herein and additional noise mitigation measures implemented if determined necessary to achieve compliance with those standards.

MITIGATION MEASURE B: CULTURAL RESOURCES

To ensure protection of cultural resources, the following measure applies. This measure shall be included verbatim as a Construction Note on all Plans and Specifications for the project:

Should any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains be encountered during any development activities, work shall be suspended and the Planning and Environmental Review Division shall be immediately notified. At that time, the Planning and Environmental Review Division will coordinate any necessary investigation of the find with appropriate specialists as needed. The project proponent shall be required to implement any mitigation deemed necessary for the protection of the cultural resources. In addition, pursuant to Section 5097.97 of the State Public Resources Code and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, all work is to stop and the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains

NOTE: It is the opinion of the preparers of this Initial Study/Negative Declaration that a Mitigation Monitoring and Reporting Program is not required for this project at this time.

INITIAL STUDY CHECKLIST

Appendix G of the California Environmental Quality Act (CEQA) provides guidance for assessing the significance of potential environmental impacts. Based on this guidance, Sacramento County has developed the following Initial Study Checklist. The Checklist identifies a range of potential significant effects by topical area. The words "significant" and "significance" used throughout the following checklist are related to impacts as defined by the California Environmental Quality Act as follows:

1 Potentially Significant indicates there is substantial evidence that an effect MAY be significant. If there are one or more “Potentially Significant” entries an Environmental Impact Report (EIR) is required. Further research of a potentially significant impact may reveal that the impact is actually less than significant or less than significant with mitigation.

2 Less than Significant with Mitigation applies where an impact could be significant but specific mitigation has been identified that reduces the impact to a less than significant level.

3 Less than Significant or No Impact indicates that either a project will have an impact but the impact is considered minor or that a project does not impact the particular resource.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant or No Impact	Comments
1. **LAND USE** - Would the project:				
a. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to a general plan, specific plan or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	The project is consistent with environmental policies of the Sacramento County General Plan and Sacramento County Zoning Code.
b. Physically disrupt or divide an established community?			X	The project will not create physical barriers that substantially limit movement within or through the community.
2. **POPULATION/HOUSING -** Would the project:				
a. Induce substantial unplanned population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of infrastructure)?			X	The project will neither directly nor indirectly induce substantial unplanned population growth; the proposal is consistent with existing land use designations.
b. Displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere?			X	The project will not result in the removal of existing housing, and thus will not displace substantial amounts of existing housing.
3. **AGRICULTURAL RESOURCES** - Would the project:				
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance or areas containing prime soils to uses not conducive to agricultural production?			X	The project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance on the current Sacramento County Important Farmland Map published by the California Department of Conservation. The site does not contain prime soils and is listed as “Other” on the Important Farmland Map.
b. Conflict with any existing Williamson Act contract?			X	No Williamson Act contracts apply to the project site.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant or No Impact	Comments
c. Introduce incompatible uses in the vicinity of existing agricultural uses?			X	The project site is not used for agricultural purposes; however the project site is in an area where agricultural uses occur. The kennel facility will not interfere with any adjacent agricultural operations.
4. **AESTHETICS -** Would the project:				
a. Substantially alter existing viewsheds such as scenic highways, corridors or vistas?			X	The project does not occur in the vicinity of any scenic highways, corridors, or vistas.
b. Substantially degrade the existing visual character or quality of the site and its surroundings?			X	Construction will not substantially degrade the visual character or quality of the project site. It is acknowledged that aesthetic impacts are subjective and may be perceived differently by various affected individuals. Nonetheless, given the rural residential/agricultural environment in which the project is proposed, it is concluded that the project would not substantially degrade the visual character or quality of the project site or vicinity.
c. Create a new source of substantial light, glare, or shadow that would result in safety hazards or adversely affect day or nighttime views in the area?			X	The project will result in a new source of light located on the kennel building. However the lights will be motion activated and directed downward. Therefore the additional light source will not result in safety hazards or adversely affect day or nighttime views in the area. Refer to the Initial Study.
5. **AIRPORTS -** Would the project:				
a. Result in a safety hazard for people residing or working in the vicinity of an airport/airstrip?			X	The project occurs outside of any identified public or private airport/airstrip safety zones.
b. Expose people residing or working in the project area to aircraft noise levels in excess of applicable standards?			X	The project occurs outside of any identified public or private airport/airstrip noise zones or contours.
c. Result in a substantial adverse effect upon the safe and efficient use of navigable airspace by aircraft?			X	The project does not affect navigable airspace.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant or No Impact	Comments
d. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?			X	The project does not involve or affect air traffic movement.
6. **PUBLIC SERVICES -** Would the project:				
a. Have an adequate water supply for full buildout of the project?			X	EMD has reviewed the project and has indicated that the existing well is adequate to serve the existing residence and proposed kennel facility.
b. Have adequate wastewater treatment and disposal facilities for full buildout of the project?			X	Septic systems would be required. Refer to the Initial Study.
c. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	The Kiefer Landfill has capacity to accommodate solid waste until the year 2050.
d. Result in substantial adverse physical impacts associated with the construction of new water supply or wastewater treatment and disposal facilities or expansion of existing facilities?			X	The project will not require construction or expansion of new water supply, wastewater treatment, or wastewater disposal facilities.
e. Result in substantial adverse physical impacts associated with the provision of storm water drainage facilities?			X	Project construction would not require the addition of new stormwater drainage facilities.
f. Result in substantial adverse physical impacts associated with the provision of electric or natural gas service?			X	Minor extension of utility lines would be necessary to serve the proposed project. Existing utility lines are located along existing roadways and other developed areas, and the extension of lines would take place within areas already proposed for development as part of the project. No significant new impacts would result from utility extension.
g. Result in substantial adverse physical impacts associated with the provision of emergency services?			X	The project would incrementally increase demand for emergency services, but would not cause substantial adverse physical impacts as a result of providing adequate service.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant or No Impact	Comments
h. Result in substantial adverse physical impacts associated with the provision of public school services?			X	The project will not require the use of public school services
i. Result in substantial adverse physical impacts associated with the provision of park and recreation services?			X	The project will not require park and recreation services.
7. **TRANSPORTATION/TRAFFIC** - Would the project:				
a. Result in a substantial increase in vehicle trips that would exceed, either individually or cumulatively, a level of service standard established by the County?			X	The project will result in minor increases in vehicle trips, but this increase will not cause, either individually or cumulatively, a level of service standard established by the County to be exceeded. Refer to the Initial Study.
b. Result in a substantial adverse impact to access and/or circulation?			X	No changes to existing access and/or circulation patterns would occur as a result of the project.
c. Result in a substantial adverse impact to public safety on area roadways?			X	No changes to existing access and/or circulation patterns would occur as a result of the project; therefore no impacts to public safety on area roadways will result.
d. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?			X	The project does not conflict with alternative transportation policies of the Sacramento County General Plan, with the Sacramento Regional Transit Master Plan, or other adopted policies, plans or programs supporting alternative transportation.
8. **AIR QUALITY** - Would the project:				
a. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?			X	Compliance with existing dust abatement rules and standard construction mitigation for vehicle particulates will ensure that construction air quality impacts are less than significant. The Urban Emissions Model was used to analyze ozone precursor emissions; the project will not result in emissions that exceed standards.
b. Expose sensitive receptors to pollutant concentrations in excess of standards?			X	There are no sensitive receptors (i.e., schools, nursing homes, hospitals, daycare centers, etc.) adjacent to the project site. See Response 8.a.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant or No Impact	Comments
c. Create objectionable odors affecting a substantial number of people?			X	The project will not generate objectionable odors. The project could result in occasional or periodic odors. Refer to the Initial Study.
9. **NOISE -** Would the project:				
a. Result in exposure of persons to, or generation of, noise levels in excess of standards established by the local general plan, noise ordinance or applicable standards of other agencies?			X	The project is not in the vicinity of any uses that generate substantial noise, nor will the completed project generate substantial noise. The project will not result in exposure of persons to, or generation of, noise levels in excess of applicable standards. Refer to the Initial Study.
b. Result in a substantial temporary increase in ambient noise levels in the project vicinity?			X	Project construction will result in a temporary increase in ambient noise levels in the project vicinity. This impact is less than significant due to the temporary nature of the these activities, limits on the duration of noise, and evening and nighttime restrictions imposed by the County Noise Ordinance (Chapter 6.68 of the County Code).
10. **HYDROLOGY AND WATER QUALITY** - Would the project:				
a. Substantially deplete groundwater supplies or substantially interfere with groundwater recharge?			X	The project will not substantially increase water demand over the existing use. Refer to the Initial Study (Public Services – Wells).
b. Substantially alter the existing drainage pattern of the project area and/or increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?			X	The project does not involve any modifications that would substantially alter the existing drainage pattern and or/increase the rate or amount of surface runoff in a manner that would lead to flooding. Compliance with applicable requirements of the Sacramento County Floodplain Management Ordinance, Sacramento County Water Agency Code, and Sacramento County Improvement Standards will ensure that impacts are less than significant.
c. Develop within a 100-year floodplain as mapped on a federal Flood Insurance Rate Map or within a local flood hazard area?			X	The project site is in a local flood hazard area, but not in a federally mapped floodplain. Compliance with the County Floodplain Management Ordinance, County Drainage Ordinance, and Improvement Standards will assure less than significant impacts. Refer to the Initial Study.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant or No Impact	Comments
d. Place structures that would impede or redirect flood flows within a 100-year floodplain?			X	The project site is not within a 100-year FEMA floodplain.
e. Expose people or structures to a substantial risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	The project will not expose people or structures to a substantial risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.
f. Create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems?			X	The project does not propose any physical changes that would affect runoff from the site.
g. Create substantial sources of polluted runoff or otherwise substantially degrade ground or surface water quality?			X	Sacramento County Code Chapters 6.28 and 6.32 provide rules and regulations for water wells and septic systems that are designed to protect water quality. The Environmental Health Division of the County Environmental Management Department has permit approval authority for any new water wells and septic systems on the site. Compliance with existing regulations will ensure that impacts are less than significant.
11. **GEOLOGY AND SOILS** - Would the project:				
a. Expose people or structures to substantial risk of loss, injury or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?			X	Sacramento County is not within an Alquist-Priolo Earthquake Fault Zone. Although there are no known active earthquake faults in the project area, the site could be subject to some ground shaking from regional faults. The Uniform Building Code contains applicable construction regulations for earthquake safety that will ensure less than significant impacts.
b. Result in substantial soil erosion, siltation or loss of topsoil?			X	Compliance with the County's Land Grading and Erosion Control Ordinance will reduce the amount of construction site erosion and minimize water quality degradation by providing stabilization and protection of disturbed areas, and by controlling the runoff of sediment and other pollutants during the course of construction. Refer to the Initial Study. Mitigation has been included to ensure that impacts are less than significant.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant or No Impact	Comments
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, soil expansion, liquefaction or collapse?			X	The project is not located on an unstable geologic or soil unit. Pursuant to Title 16 of the Sacramento County Code and the Uniform Building Code, a soils report will be required prior to building construction. If the soils report indicates than soils may be unstable for building construction then site-specific measures (e.g., special engineering design or soil replacement) must be incorporated to ensure that soil conditions will be satisfactory for the proposed construction.
d. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available?			X	All septic systems must comply with the requirements of the County Environmental Management Department, Environmental Health Division, as set forth in Chapter 6.32 of the County Code. Compliance with County standards will ensure impacts are less than significant.
e. Result in a substantial loss of an important mineral resource?			X	The project is not located within an Aggregate Resource Area as identified by the Sacramento County General Plan Land Use Diagram, nor are any important mineral resources known to be located on the project site.
f. Directly or indirectly destroy a unique paleontological resource or site?			X	No known paleontological resources (e.g. fossil remains) or sites occur at the project location.
12. **BIOLOGICAL RESOURCES** - Would the project:				
a. Have a substantial adverse effect on any special status species, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, or threaten to eliminate a plant or animal community?			X	No special status species are known to exist on or utilize the project site, nor would the project substantially reduce wildlife habitat or species populations.
b. Have a substantial adverse effect on riparian habitat or other sensitive natural communities?			X	No sensitive natural communities occur on the project site, nor is the project expected to affect natural communities off-site.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant or No Impact	Comments
c. Have a substantial adverse effect on streams, wetlands, or other surface waters that are protected by federal, state, or local regulations and policies?			X	No protected surface waters are located on or adjacent to the project site.
d. Have a substantial adverse effect on the movement of any native resident or migratory fish or wildlife species?			X	The project site is already developed. Project implementation would not affect native resident or migratory species.
e. Adversely affect or result in the removal of native or landmark trees?			X	No native and/or landmark trees occur on the project site, nor is it anticipated that any native and/or landmark trees would be affected by off-site improvement required as a result of the project.
f. Conflict with any local policies or ordinances protecting biological resources?			X	The project is consistent with local policies/ordinances protecting biological resources.
g. Conflict with the provisions of an adopted Habitat Conservation Plan or other approved local, regional, state or federal plan for the conservation of habitat?			X	There are no known conflicts with any approved plan for the conservation of habitat.
13. **CULTURAL RESOURCES -** Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource?			X	No historical resources would be affected by the proposed project. Historical resources have been identified on the project site. Refer to the Initial Study.
b. Have a substantial adverse effect on an archaeological resource?			X	No known archaeological resources occur on-site. The Northern California Information Center was contacted regarding the proposed project. A record search indicated that the project site is not considered sensitive for archaeological resources. An archaeological survey was conducted on the project site. Refer to the Initial Study.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant or No Impact	Comments
c. Disturb any human remains, including those interred outside of formal cemeteries?			X	The project site is located outside any area considered sensitive for the existence of undiscovered human remains. No known human remains exist on the project site. Nonetheless, mitigation has been recommended to ensure appropriate treatment should remains be uncovered during project implementation.
d. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074?			X	No requests for tribal notification or consultation were received from California Native American Tribes pursuant to Public Resources Code 21080.3.1(b)(1). Tribal cultural resources were not identified in the project area.
14. **HAZARDS AND HAZARDOUS MATERIALS** - Would the project:				
a. Create a substantial hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	The project does not involve the transport, use, and/or disposal of hazardous material.
b. Expose the public or the environment to a substantial hazard through reasonably foreseeable upset conditions involving the release of hazardous materials?			X	The project does not involve the transport, use, and/or disposal of hazardous material.
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?			X	The project site is not located within ¼ mile of an existing /proposed school. The project does not involve the use or handling of hazardous material.
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, resulting in a substantial hazard to the public or the environment?			X	The project is not located on a known hazardous materials site.
e. Impair implementation of or physically interfere with an adopted emergency response or emergency evacuation plan?			X	The project would not interfere with any known emergency response or evacuation plan.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant or No Impact	Comments
15. GREENHOUSE GAS EMISSIONS – Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	The California Emissions Estimator Model (CalEEMod) was used to estimate the greenhouse gas emissions associated with the project. Based on the results, the annual metric tons of CO2e for the proposed project will not be exceeded. The project will not have the potential to interfere with the County meeting the goals of AB 32 (reducing greenhouse gas emissions to 1990 levels by 2020); therefore, the climate change impact of the project is considered less than significant.

SUPPLEMENTAL INFORMATION

LAND USE CONSISTENCY	CURRENT LAND USE DESIGNATION	CONSISTENT	NOT CONSISTENT	COMMENTS
General Plan	Agricultural Residential (AG-RES)	x		
Land Use Zone	General Agriculture (A-5)	x		With approval of the use permit the project is consistent.

INITIAL STUDY PREPARERS

Environmental Coordinator: Tim Hawkins

Section Manager: Chris Pahule

Project Leader: Wendy Hartman

Office Manager: Belinda Wekes-Batts

Administrative Support: Justin Maulit

APPENDICES

A. Proposed Project Exhibits
B. Memo From Sacramento Department of Transportation
C. CalEEMod Air Quality Summary and Winter Season Projections
D. Noise Analysis
E. CalEEMod Greenhouse Gas Emissions Summary

REFERENCES

Parcel Viewer: *http://gis.msa.saccounty.net/*

SACCO General Plan: http://www.per.saccounty.net/PlansandProjectsIn-Progress/Pages/GeneralPlan.aspx

SACCO Zoning Code: http://www.per.saccounty.net/LandUseRegulationDocuments/Pages/ZoningCodes.aspx

SACCO Planning and Community Maps: http://www.per.saccounty.net/Pages/PlanningandCommunityMaps.aspx

State Department of Conservation Farmland Mapper: http://maps.conservation.ca.gov/ciff/ciff.html

Prime Soils List: http://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/soils/SACRAMENTO_ssurgo.pdf

FEMA FIRM Map Center: https://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1

CDFW Bios: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

USFWS Species List Generator: http://www.fws.gov/sacramento/es_species/Lists/es_species_lists-overview.htm

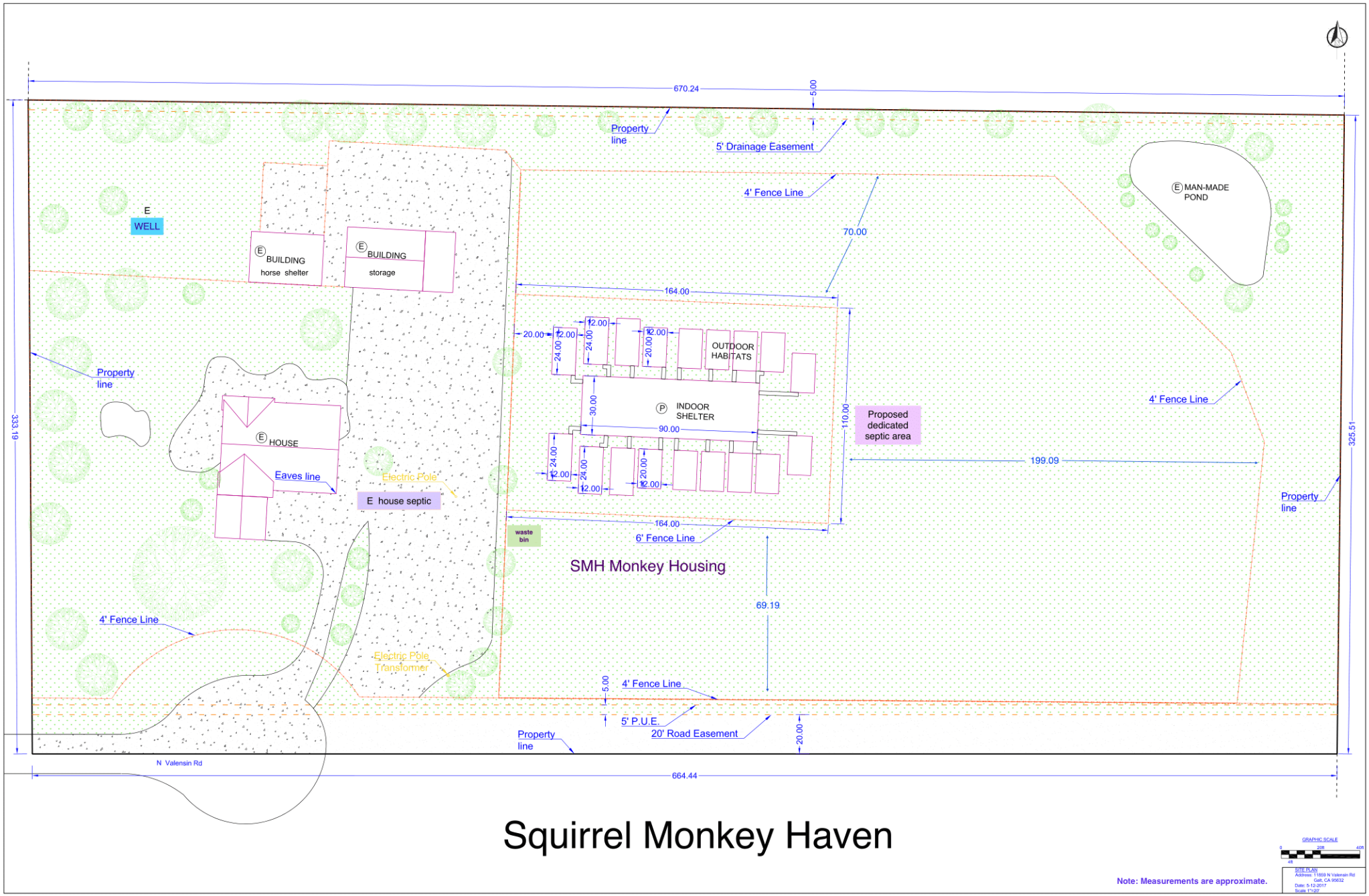
EnviroStor (State Toxic Substance Control): http://www.envirostor.dtsc.ca.gov/public/

GeoTracker (State Water Resources): https://geotracker.waterboards.ca.gov/

Department of Conservation-Naturally Occurring Asbestos: http://www.conservation.ca.gov/cgs/minerals/hazardous_minerals/asbestos/Pages/east_sacramento.aspx

Sacramento County EMD: http://www.emd.saccounty.net/

Intergovernmental Panel on Climate Change, United Nations (IPCC). "Climate Change 2007: Mitigation of Climate Change. Contribution of Working Group III to the Fourth Assessment Report of the IPCC", 2007.

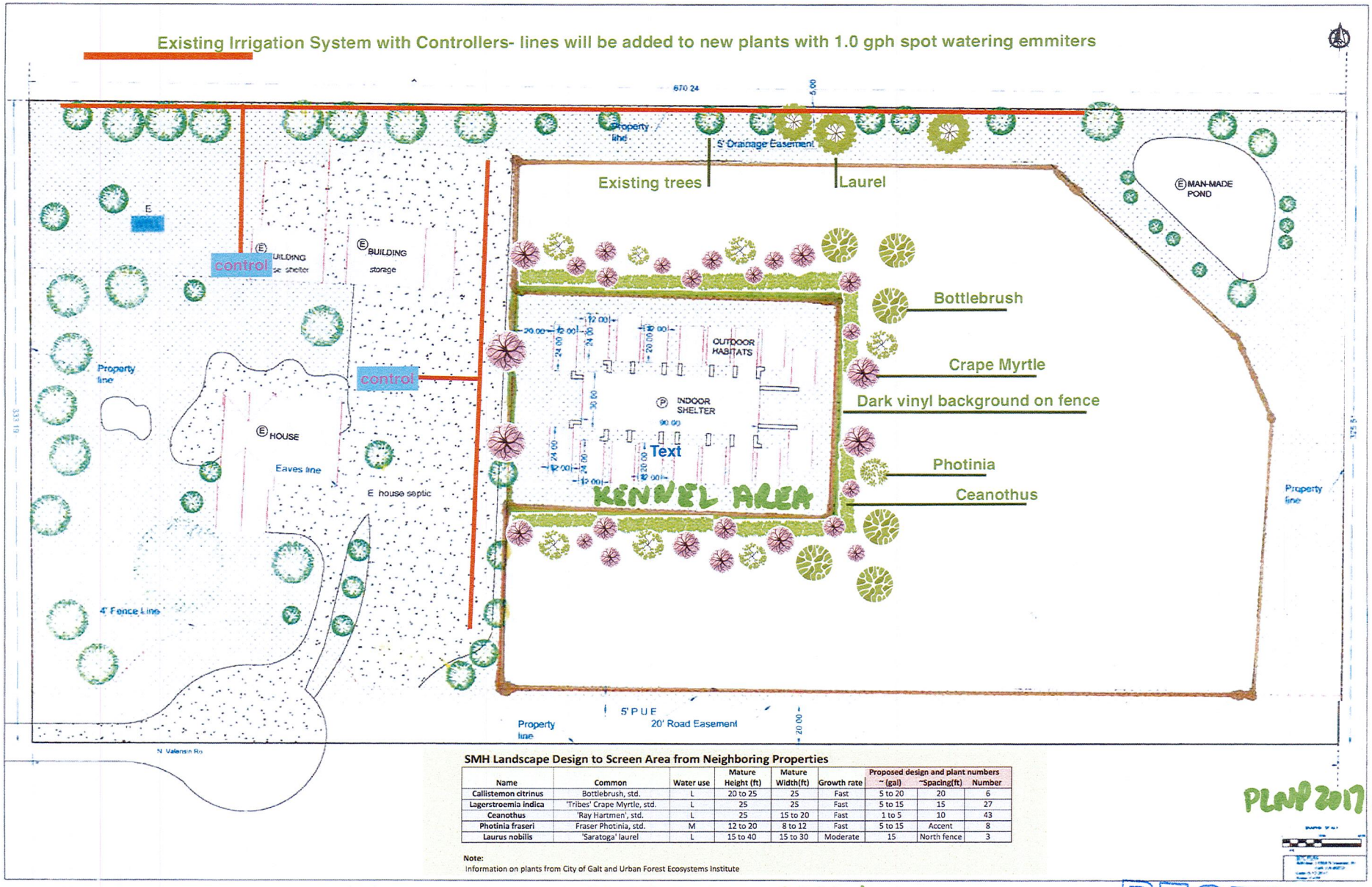


Squirrel Monkey Haven

Note: Measurements are approximate.

GRAPHIC SCALE

SITE PLAN
Address: 11859 N Valensin Rd
Galt, CA 95632
Date: 5-12-2017
Scale: 1"=20'



SMH Landscape Design to Screen Area from Neighboring Properties

Name	Common	Water use	Mature Height (ft)	Mature Width(ft)	Growth rate	Proposed design and plant numbers ~ (gal)	~Spacing(ft)	Number
Callistemon citrinus	Bottlebrush, std.	L	20 to 25	25	Fast	5 to 20	20	6
Lagerstroemia indica	'Tribes' Crape Myrtle, std.	L	25	25	Fast	5 to 15	15	27
Ceanothus	'Ray Hartmen', std.	L	25	15 to 20	Fast	1 to 5	10	43
Photinia fraseri	Fraser Photinia, std.	M	12 to 20	8 to 12	Fast	5 to 15	Accent	8
Laurus nobilis	'Saratoga' laurel	L	15 to 40	15 to 30	Moderate	15	North fence	3

Note:
Information on plants from City of Galt and Urban Forest Ecosystems Institute

SQUIRREL MONKEY HAVEN

PLNP 2017 00079

RECEIVED
JUL 26 2017
County of Sacramento
Department of Community Development
Planning and Envir...

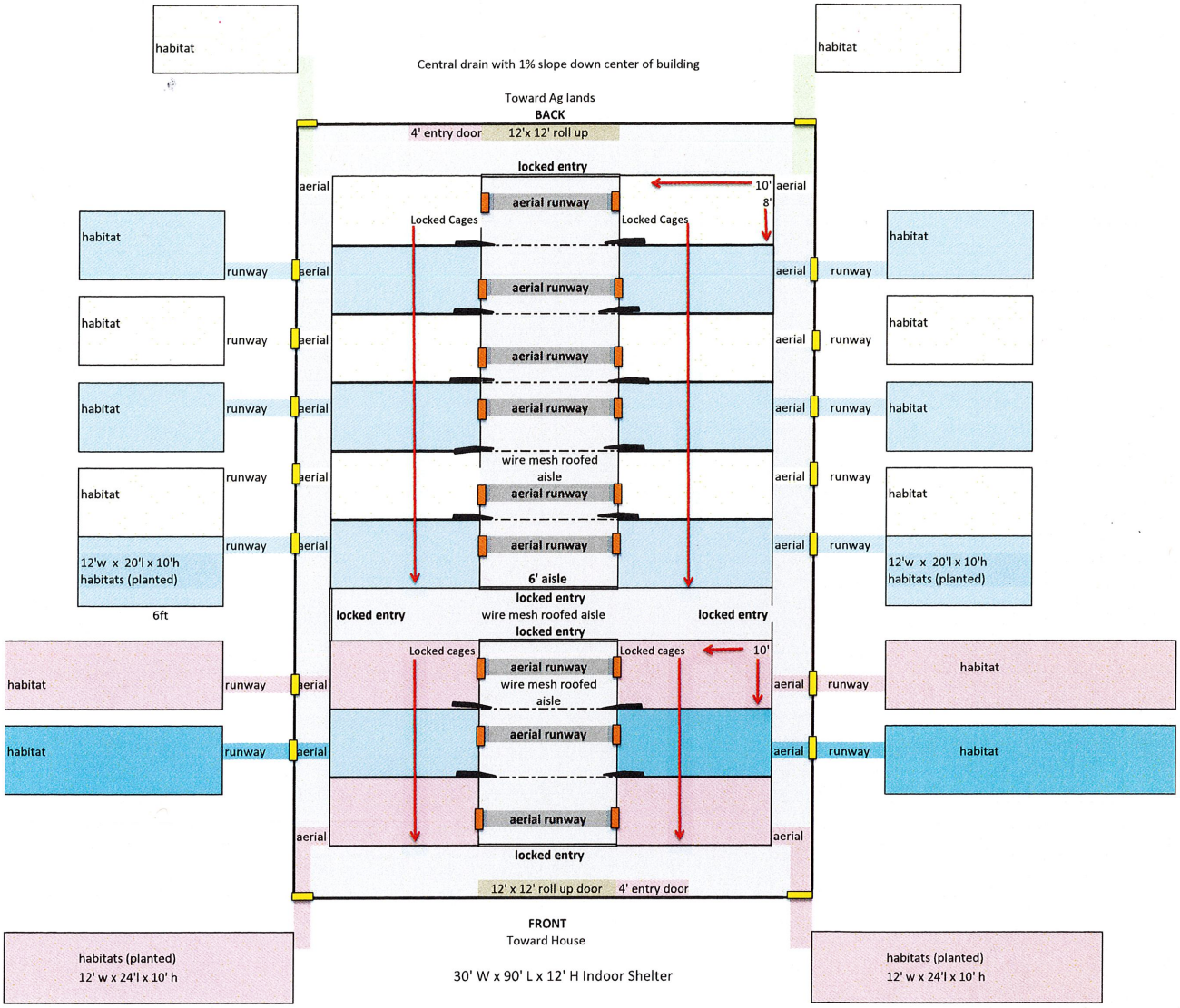
Q - 52

EXHIBIT 3

PLNP 2017 - 00079

EXHIBIT 3 Squirrel Monkey Haven Indoor Shelter and Habitat Conceptual Floorplan

30' W x 90' L x 12' H steel Agriculture building with 1% sloped cement floor to center drain.
Materials and space mandated by regulations.
Interior caging 1" x 1" mesh wire on aluminum tubing frame.
Habitats 1" x 1" heavy cauge wire mesh with steel tube frame and bottom perimeter guards.

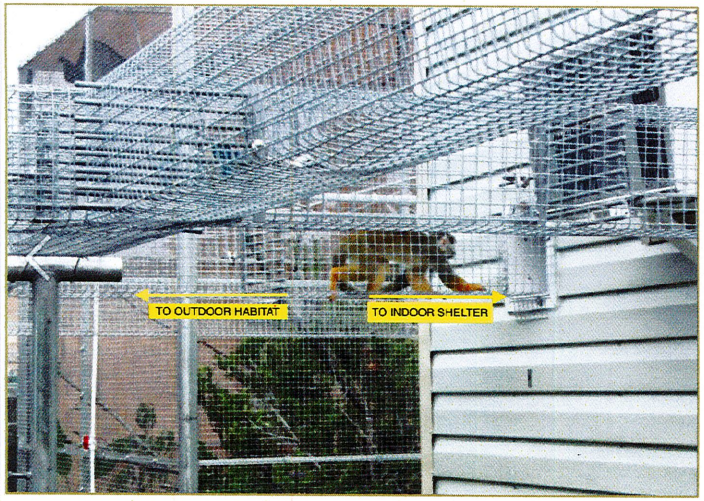


PLNP 2017 - 0 0 0 7 9

EXHIBIT 2 Example of Indoor and Habitat Design Components

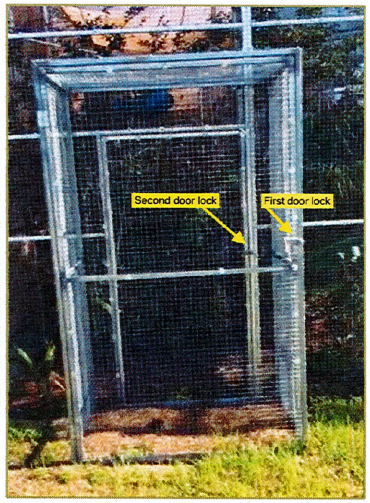
Ag Building Indoor Shelter

Closest neighbor view (building in center)



Aerial Runway-tunnels

Habitats



Double Locked Entry

Department of Transportation
Michael J. Penrose, Director

Divisions
Administration
Maintenance & Operations
Engineering & Planning

County of Sacramento

September 29, 2017

TO: Wendy Hartman
Office of Planning and Environmental Review

FROM: Kamal Atwal, P.E.
Department of Transportation

SUBJECT: **SQUIRREL MONKEY HAVEN UPZ**
Control No.: PLNP2017-00079
APN: 138-0090-069
Location: 11859 N. Valensin Road, Galt, CA 95632

The Department of Transportation has reviewed the application for the above referenced project. **Table 1** provides the trip generation expected for the proposed project. Please note that this trip generation analysis is preliminary and is not intended for use in a traffic study.

As shown on the trip generation table, the proposed project would generate less than 1,000 daily trips; therefore, a traffic study for the proposed project is not necessary.

If you have any questions, please call me at 875-2844.

KA:mp

Table 1: Trip Generation Estimates

Condition	Zoning or Use (Area)	Source	Daily Trip Rate	Daily Trips
Proposed Project	**Animal Shelter**			
	2 Employees[1]	Applicant	3.00 VTE/Emp	6
	2 Visitors	Applicant	2.00 VTE/Visitor	4
Total Trips				**10**

Notes: VTE = Vehicle trip ends EMP = Employee
[1] Assumed 3 daily trips per employee.

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Squirrell Monkey Haven

Sacramento, Summary Report

AQ Model Run with Project Settings

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	7.80	1000sqft	0.18	7,800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2018
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments

Only CalEEMod defaults were used.

Project Characteristics -

Land Use - Parking not added as portion of site is already developed with home and parking area for residents and 2 additional employees. Total parcel size is 5 acres. Project utilizies a small portion of project site.

Energy Use - No change made.

Construction Phase - Project does not include any demolition. Site is relatively flat and grading will consist of adding a gravel base to elevate building pad. Structure is a prefabricated building that is delivered in sections and therefore has a reduced construction period. Parking area alread exhits on developed portion of project site. Prefabricated building so architectural coatings expected to be very minimal.

Off-road Equipment - No demolition phase

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Commute Mitigation - 2 of the 4 employees live on the property - however system only provides ability to count up to 1.5 days per week.

Water Mitigation -

Water And Wastewater - Based on application project will use 2,230 gallons for water consumtpion by monkeys, 14,305 gallons for cleaning kennel, and 23,580 gallons for outdoor landscaping.

2.0 Peak Daily Emissions

Peak Daily Construction Emissions

Peak Daily Construction Emissions

		Unmitigated						Mitigated					
		ROG	NOX	CO	SO2	PM10	PM2.5	ROG	NOX	CO	SO2	PM10	PM2.5
Year	Phase	lb/day											
2018	Demolition	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S
2018	Site Preparation	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S
2018	Grading	1.1315 S	9.4811 W	8.3509 S	0.0133 S	1.4904 S	1.0391 S	1.1315 S	9.4811 W	8.3509 S	0.0133 S	1.4904 S	1.0391 S
2018	Building Construction	1.1113 S	11.1972 W	7.9708 S	0.0121 S	0.7523 W	0.6648 W	1.1113 S	11.1972 W	7.9708 S	0.0121 S	0.7523 W	0.6648 W
2018	Paving	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S
2018	Architectural Coating	72.6114 S	2.0109 W	1.9117 S	3.1000e-003 S	0.1620 S	0.1537 S	72.6114 S	2.0109 W	1.9117 S	3.1000e-003 S	0.1620 S	0.1537 S
	Peak Daily Total	72.6114 S	11.1972 W	8.3509 S	0.0133 S	1.4904 S	1.0391 S	72.6114 S	11.1972 W	8.3509 S	0.0133 S	1.4904 S	1.0391 S
	Air District Threshold												
	Exceed Significance?												

Peak Daily Operational Emissions

Peak Daily Operational Emissions

		Unmitigated						Mitigated					
		ROG	NOX	CO	SO2	PM10	PM2.5	ROG	NOX	CO	SO2	PM10	PM2.5
	Operational Activity	lb/day											
On-Site	Area	0.1868 S	1.0000e-005 S	8.1000e-004 S	0.0000 S	0.0000 S	0.0000 S	0.1868 S	1.0000e-005 S	8.1000e-004 S	0.0000 S	0.0000 S	0.0000 S
On-Site	Energy	8.2800e-003 S	0.0753 S	0.0632 S	4.5000e-004 S	5.7200e-003 S	5.7200e-003 S	8.2800e-003 S	0.0753 S	0.0632 S	4.5000e-004 S	5.7200e-003 S	5.7200e-003 S
Off-Site	Mobile	0.1844 S	0.7440 W	2.4762 S	6.2700e-003 S	0.4801 W	0.1336 W	0.1844 S	0.7440 W	2.4762 S	6.2700e-003 S	0.4801 W	0.1336 W
	Peak Daily Total	0.3795 S	0.8192 W	2.5402 S	6.7200e-003 S	0.4859 W	0.1393 W	0.3795 S	0.8192 W	2.5402 S	6.7200e-003 S	0.4859 W	0.1393 W
	Air District Threshold												
	Exceed Significance?												

3.0 Annual GHG Emissions

Annual GHG

Annual GHG

		Unmitigated				Mitigated			
		CO2	CH4	N2O	CO2e	CO2	CH4	N2O	CO2e
GHG Activity	Year	MT/yr							
Construction	2018	17.2295	5.0167e-003	0.0000	17.3549	17.2295	5.0167e-003	0.0000	17.3549
Operational	2018	122.0579	0.1219	6.0781e-004	125.2854	122.0579	0.1219	6.0781e-004	125.2854
	Total								
	Significance Threshold								
	Exceed Significance?								

Squirrell Monkey Haven

Sacramento County, Winter

AQ Model Run with Project Settings

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	7.80	1000sqft	0.18	7,800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2018
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Parking not added as portion of site is already developed with home and parking area for residents and 2 additional employees. Total parcel size is 5 acres. Project utilizies a small portion of project site.

Energy Use - No change made.

Construction Phase - Project does not include any demolition. Site is relatively flat and grading will consist of adding a gravel base to elevate building pad. Structure is a prefabricated building that is delivered in sections and therefore has a reduced construction period. Parking area alread exhits on developed portion of project site. Prefabricated building so architectural coatings expected to be very minimal.

Off-road Equipment - No demolition phase

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Commute Mitigation - 2 of the 4 employees live on the property - however system only provides ability to count up to 1.5 days per week.

Water Mitigation -

Water And Wastewater - Based on application project will use 2,230 gallons for water consumtpion by monkeys, 14,305 gallons for cleaning kennel, and 23,580 gallons for outdoor landscaping.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	100.00	0.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	5.00	1.00
tblConstructionPhase	NumDays	100.00	30.00
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	PhaseEndDate	1/31/2018	2/1/2018
tblConstructionPhase	PhaseEndDate	1/31/2018	3/14/2018
tblConstructionPhase	PhaseEndDate	1/31/2018	2/1/2018
tblOffRoadEquipment	LoadFactor	0.73	0.00
tblOffRoadEquipment	LoadFactor	0.40	0.00
tblOffRoadEquipment	LoadFactor	0.37	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSequestration	NumberOfNewTrees	0.00	38.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblWater	IndoorWaterUseRate	1,803,750.00	16,535.00
tblWater	OutdoorWaterUseRate	0.00	23,580.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2018	74.8519	22.6892	18.1062	0.0282	0.9203	1.4844	2.4048	0.4584	1.3991	1.8575	0.0000	2,784.5618	2,784.5618	0.6162	0.0000	2,799.9678
Maximum	**74.8519**	**22.6892**	**18.1062**	**0.0282**	**0.9203**	**1.4844**	**2.4048**	**0.4584**	**1.3991**	**1.8575**	**0.0000**	**2,784.5618**	**2,784.5618**	**0.6162**	**0.0000**	**2,799.9678**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2018	74.8519	22.6892	18.1062	0.0282	0.9203	1.4844	2.4048	0.4584	1.3991	1.8575	0.0000	2,784.5618	2,784.5618	0.6162	0.0000	2,799.9678
Maximum	**74.8519**	**22.6892**	**18.1062**	**0.0282**	**0.9203**	**1.4844**	**2.4048**	**0.4584**	**1.3991**	**1.8575**	**0.0000**	**2,784.5618**	**2,784.5618**	**0.6162**	**0.0000**	**2,799.9678**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	0.1868	1.0000e-005	8.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7100e-003	1.7100e-003	0.0000		1.8200e-003
Energy	8.2800e-003	0.0753	0.0632	4.5000e-004		5.7200e-003	5.7200e-003		5.7200e-003	5.7200e-003		90.3065	90.3065	1.7300e-003	1.6600e-003	90.8432
Mobile	0.1480	0.7440	2.2076	5.6400e-003	0.4726	7.5600e-003	0.4801	0.1264	7.1400e-003	0.1336		570.1456	570.1456	0.0320		570.9458
Total	**0.3431**	**0.8192**	**2.2716**	**6.0900e-003**	**0.4726**	**0.0133**	**0.4859**	**0.1264**	**0.0129**	**0.1393**		**660.4538**	**660.4538**	**0.0337**	**1.6600e-003**	**661.7908**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	0.1868	1.0000e-005	8.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7100e-003	1.7100e-003	0.0000		1.8200e-003
Energy	8.2800e-003	0.0753	0.0632	4.5000e-004		5.7200e-003	5.7200e-003		5.7200e-003	5.7200e-003		90.3065	90.3065	1.7300e-003	1.6600e-003	90.8432
Mobile	0.1480	0.7440	2.2076	5.6400e-003	0.4726	7.5600e-003	0.4801	0.1264	7.1400e-003	0.1336		570.1456	570.1456	0.0320		570.9458
Total	**0.3431**	**0.8192**	**2.2716**	**6.0900e-003**	**0.4726**	**0.0133**	**0.4859**	**0.1264**	**0.0129**	**0.1393**		**660.4538**	**660.4538**	**0.0337**	**1.6600e-003**	**661.7908**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/1/2018	1/31/2018	5	0	
2	Site Preparation	Site Preparation	2/1/2018	1/31/2018	5	1	
3	Grading	Grading	2/1/2018	2/1/2018	5	2	
4	Building Construction	Building Construction	2/1/2018	3/14/2018	5	30	
5	Paving	Paving	2/1/2018	1/31/2018	5	0	
6	Architectural Coating	Architectural Coating	2/1/2018	2/1/2018	5	1	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 11,700; Non-Residential Outdoor: 3,900; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Concrete/Industrial Saws	0	0.00	81	0.00
Demolition	Rubber Tired Dozers	0	0.00	247	0.00
Demolition	Tractors/Loaders/Backhoes	0	0.00	97	0.00
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	10.00	0.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	3.00	1.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Clean Paved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943		1,169.3502	1,169.3502	0.2254		1,174.9857
Total	**1.0643**	**9.4295**	**7.7762**	**0.0120**	**0.7528**	**0.6228**	**1.3755**	**0.4138**	**0.5943**	**1.0081**		**1,169.3502**	**1,169.3502**	**0.2254**		**1,174.9857**

3.4 Grading - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0654	0.0516	0.4800	1.1100e-003	0.1141	8.0000e-004	0.1149	0.0303	7.4000e-004	0.0310		110.4581	110.4581	3.6700e-003		110.5499
Total	**0.0654**	**0.0516**	**0.4800**	**1.1100e-003**	**0.1141**	**8.0000e-004**	**0.1149**	**0.0303**	**7.4000e-004**	**0.0310**		**110.4581**	**110.4581**	**3.6700e-003**		**110.5499**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857
Total	**1.0643**	**9.4295**	**7.7762**	**0.0120**	**0.7528**	**0.6228**	**1.3755**	**0.4138**	**0.5943**	**1.0081**	**0.0000**	**1,169.3502**	**1,169.3502**	**0.2254**		**1,174.9857**

3.4 Grading - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0654	0.0516	0.4800	1.1100e-003	0.1141	8.0000e-004	0.1149	0.0303	7.4000e-004	0.0310		110.4581	110.4581	3.6700e-003		110.5499
Total	**0.0654**	**0.0516**	**0.4800**	**1.1100e-003**	**0.1141**	**8.0000e-004**	**0.1149**	**0.0303**	**7.4000e-004**	**0.0310**		**110.4581**	**110.4581**	**3.6700e-003**		**110.5499**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520		1,146.5323	1,146.5323	0.3569		1,155.4555
Total	**1.0848**	**11.0316**	**7.7512**	**0.0114**		**0.7087**	**0.7087**		**0.6520**	**0.6520**		**1,146.5323**	**1,146.5323**	**0.3569**		**1,155.4555**

3.5 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.6600e-003	0.1501	0.0525	3.1000e-004	7.8600e-003	1.3200e-003	9.1900e-003	2.2600e-003	1.2700e-003	3.5300e-003		32.5894	32.5894	2.0100e-003		32.6397
Worker	0.0196	0.0155	0.1440	3.3000e-004	0.0342	2.4000e-004	0.0345	9.0700e-003	2.2000e-004	9.3000e-003		33.1374	33.1374	1.1000e-003		33.1650
Total	**0.0263**	**0.1656**	**0.1965**	**6.4000e-004**	**0.0421**	**1.5600e-003**	**0.0437**	**0.0113**	**1.4900e-003**	**0.0128**		**65.7269**	**65.7269**	**3.1100e-003**		**65.8046**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520	0.0000	1,146.5323	1,146.5323	0.3569		1,155.4555
Total	**1.0848**	**11.0316**	**7.7512**	**0.0114**		**0.7087**	**0.7087**		**0.6520**	**0.6520**	**0.0000**	**1,146.5323**	**1,146.5323**	**0.3569**		**1,155.4555**

3.5 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.6600e-003	0.1501	0.0525	3.1000e-004	7.8600e-003	1.3200e-003	9.1900e-003	2.2600e-003	1.2700e-003	3.5300e-003		32.5894	32.5894	2.0100e-003		32.6397
Worker	0.0196	0.0155	0.1440	3.3000e-004	0.0342	2.4000e-004	0.0345	9.0700e-003	2.2000e-004	9.3000e-003		33.1374	33.1374	1.1000e-003		33.1650
Total	**0.0263**	**0.1656**	**0.1965**	**6.4000e-004**	**0.0421**	**1.5600e-003**	**0.0437**	**0.0113**	**1.4900e-003**	**0.0128**		**65.7269**	**65.7269**	**3.1100e-003**		**65.8046**

3.6 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	72.3060					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	**72.6046**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.7 Architectural Coating - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	6.5400e-003	5.1600e-003	0.0480	1.1000e-004	0.0114	8.0000e-005	0.0115	3.0200e-003	7.0000e-005	3.1000e-003		11.0458	11.0458	3.7000e-004		11.0550
Total	**6.5400e-003**	**5.1600e-003**	**0.0480**	**1.1000e-004**	**0.0114**	**8.0000e-005**	**0.0115**	**3.0200e-003**	**7.0000e-005**	**3.1000e-003**		**11.0458**	**11.0458**	**3.7000e-004**		**11.0550**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	72.3060					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	**72.6046**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.7 Architectural Coating - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	6.5400e-003	5.1600e-003	0.0480	1.1000e-004	0.0114	8.0000e-005	0.0115	3.0200e-003	7.0000e-005	3.1000e-003		11.0458	11.0458	3.7000e-004		11.0550
Total	**6.5400e-003**	**5.1600e-003**	**0.0480**	**1.1000e-004**	**0.0114**	**8.0000e-005**	**0.0115**	**3.0200e-003**	**7.0000e-005**	**3.1000e-003**		**11.0458**	**11.0458**	**3.7000e-004**		**11.0550**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	0.1480	0.7440	2.2076	5.6400e-003	0.4726	7.5600e-003	0.4801	0.1264	7.1400e-003	0.1336		570.1456	570.1456	0.0320		570.9458
Unmitigated	0.1480	0.7440	2.2076	5.6400e-003	0.4726	7.5600e-003	0.4801	0.1264	7.1400e-003	0.1336		570.1456	570.1456	0.0320		570.9458

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Total	54.37	10.30	5.30	168,061	168,061

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	15.00	7.50	8.50	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.542099	0.043979	0.200930	0.130553	0.025071	0.005992	0.018223	0.020644	0.002135	0.002531	0.006123	0.000624	0.001096

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
NaturalGas Mitigated	8.2800e-003	0.0753	0.0632	4.5000e-004		5.7200e-003	5.7200e-003		5.7200e-003	5.7200e-003		90.3065	90.3065	1.7300e-003	1.6600e-003	90.8432
NaturalGas Unmitigated	8.2800e-003	0.0753	0.0632	4.5000e-004		5.7200e-003	5.7200e-003		5.7200e-003	5.7200e-003		90.3065	90.3065	1.7300e-003	1.6600e-003	90.8432

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
General Light Industry	767.605	8.2800e-003	0.0753	0.0632	4.5000e-004		5.7200e-003	5.7200e-003		5.7200e-003	5.7200e-003		90.3065	90.3065	1.7300e-003	1.6600e-003	90.8432
Total		**8.2800e-003**	**0.0753**	**0.0632**	**4.5000e-004**		**5.7200e-003**	**5.7200e-003**		**5.7200e-003**	**5.7200e-003**		**90.3065**	**90.3065**	**1.7300e-003**	**1.6600e-003**	**90.8432**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
General Light Industry	0.767605	8.2800e-003	0.0753	0.0632	4.5000e-004		5.7200e-003	5.7200e-003		5.7200e-003	5.7200e-003		90.3065	90.3065	1.7300e-003	1.6600e-003	90.8432
Total		**8.2800e-003**	**0.0753**	**0.0632**	**4.5000e-004**		**5.7200e-003**	**5.7200e-003**		**5.7200e-003**	**5.7200e-003**		**90.3065**	**90.3065**	**1.7300e-003**	**1.6600e-003**	**90.8432**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	0.1868	1.0000e-005	8.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7100e-003	1.7100e-003	0.0000		1.8200e-003
Unmitigated	0.1868	1.0000e-005	8.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7100e-003	1.7100e-003	0.0000		1.8200e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0198					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1669					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	8.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7100e-003	1.7100e-003	0.0000		1.8200e-003
Total	**0.1868**	**1.0000e-005**	**8.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.7100e-003**	**1.7100e-003**	**0.0000**		**1.8200e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0198					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1669					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	8.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7100e-003	1.7100e-003	0.0000		1.8200e-003
Total	**0.1868**	**1.0000e-005**	**8.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.7100e-003**	**1.7100e-003**	**0.0000**		**1.8200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

Use Water Efficient Landscaping

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Environmental Noise Assessment

Squirrel Monkey Haven

Sacramento County, California

BAC Job # 2017-128

Prepared For:

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Prepared By:

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December 21, 2017

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Introduction

The proposed Squirrel Monkey Sanctuary (project) is located at 11859 N. Valensin Road in Galt (Sacramento County), California. The project proposes the development of a sanctuary for 51 squirrel monkeys (Saimiri sciureus) that are retired from research. The project would include the construction of a new 2,700 square foot steel agricultural building that would house the squirrel monkeys. The project site and proposed site plan are depicted in Figures 1 and 2, respectively.

Sacramento County has requested a noise study be prepared to determine if project noise generation would be satisfactory relative to Sacramento County criteria for acceptable noise exposure. In response to that request, Bollard Acoustical Consultants, Inc. (BAC) was retained by the project applicant to prepare this analysis.

Acoustical Terminology

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that human hearing can detect. If the air pressure variations occur frequently enough (at least 20 times per second), they may be interpreted as sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz). Definitions of acoustical terminology are presented in Appendix A of this report.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. The decibel scale was devised to address this problem. The decibel scale uses the threshold of human hearing (generally 20 micropascals of pressure) as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers within a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in decibel levels correspond closely to human perception of relative loudness.

Figure 3 illustrates noise levels associated with common noise sources. The perceived loudness of sounds is dependent on many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by filtering the sound signal using the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard descriptor for environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels.

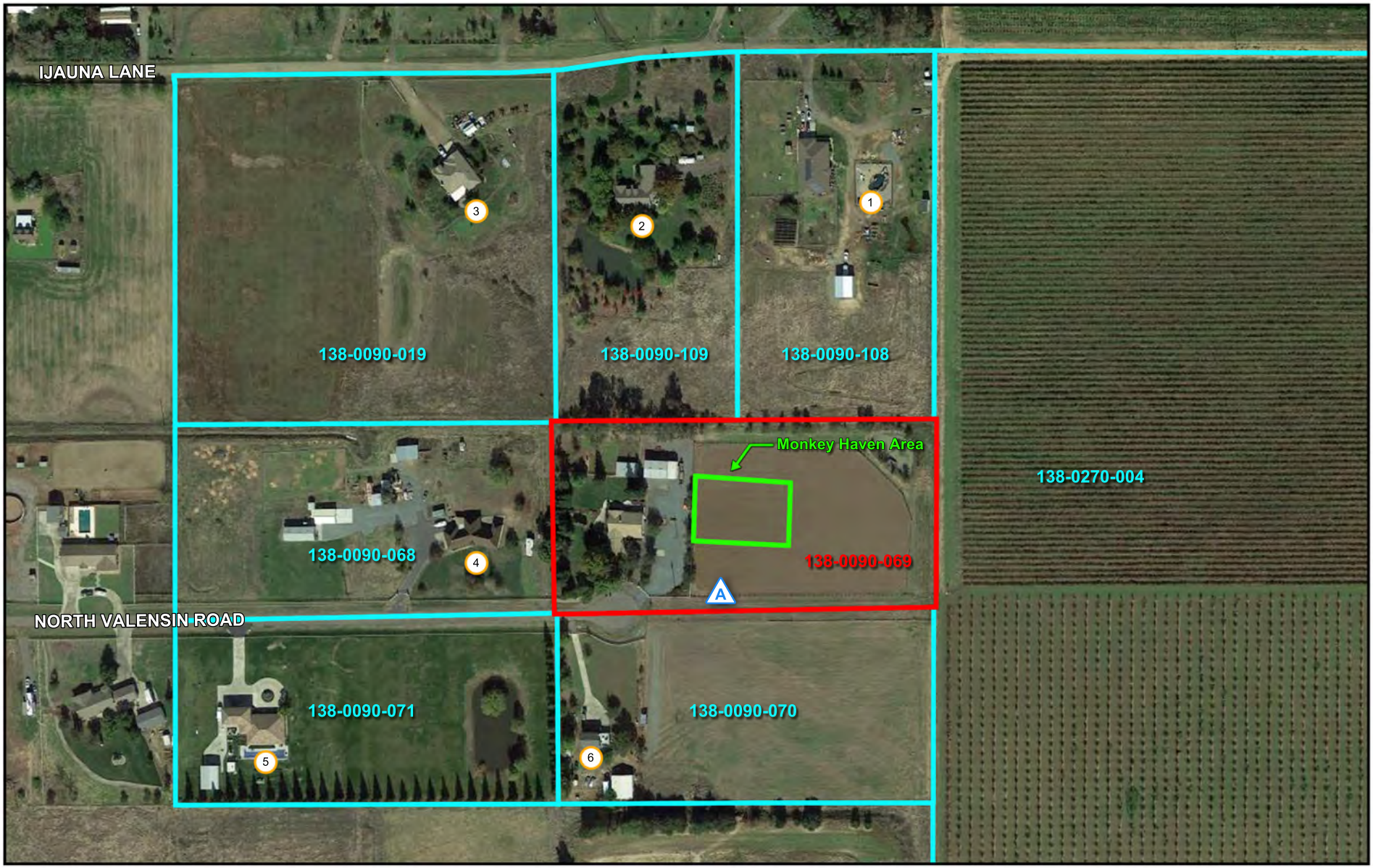
Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent sound level (L_{eq}). The Hourly L_{eq} (equivalent sound level over a 60 minute period) is the foundation of the Day-Night Average (L_{dn}) and shows very good correlation with community response to noise.

The Day-Night Average Level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment. L_{dn}-based noise standards are commonly used to assess noise impacts associated with traffic, railroad and aircraft noise sources.

A single noise event is an individual distinct loud activity, such as a train passage, or any other brief and discrete noise-generating activity. Extensive studies have been conducted regarding the effects of single-event noise on sleep disturbance, with the Sound Exposure Level (SEL) metric being a common metric used for such assessments. SEL represents the entire sound energy of a given single-event normalized into a one-second period regardless of event duration. As a result, the single-number SEL metric contains information pertaining to both event duration and intensity. Another descriptor utilized to assess single-event noise is the maximum, or L_{max}, noise level associated with the event. A problem with utilizing L_{max} to assess singe events is that the duration of the event is not considered.

There is currently no national consensus regarding the appropriateness of SEL criteria as a supplement or replacement for cumulative noise level metrics such as L_{dn} and CNEL. Nonetheless, because SEL describes a receiver's total noise exposure from a single impulsive event, SEL is often used to characterize noise from individual brief loud events.

Due to the wide variation in test subjects' reactions to noises of various levels (some test subjects were awakened by indoor SEL values of 50 dB, whereas others slept through indoor SEL values exceeding 80 dB), no universal criterion has been developed for environmental noise assessments.



Legend

- Long-Term Noise Measurement Site
- Noise-Sensitive Outdoor Areas
- Project Parcel
- Adjacent Parcels to Project

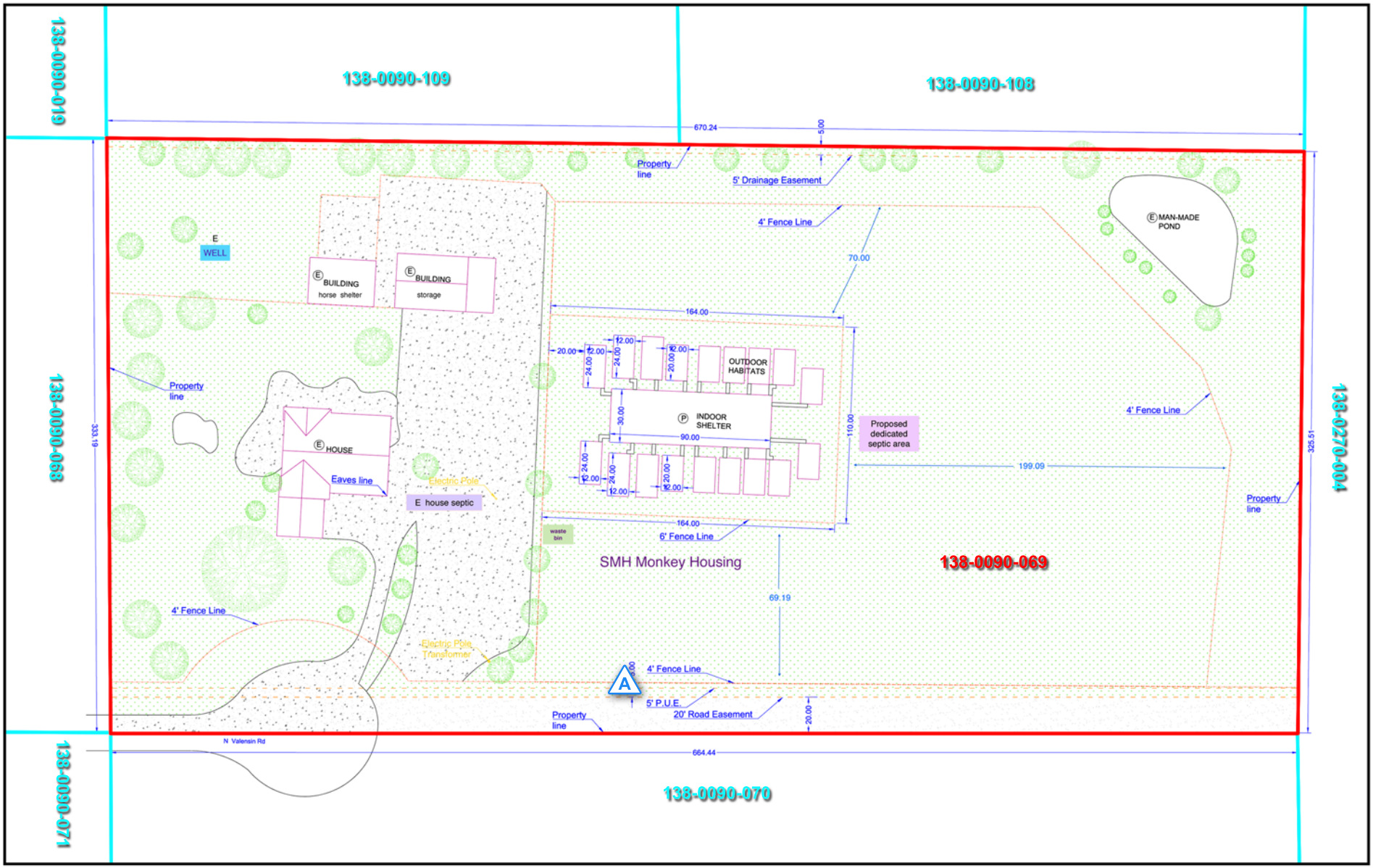
N

Scale (feet)

0 150 300

Figure 1

Project Area and Ambient Noise Measurement Location
Squirrel Monkey Haven
Sacramento County, California



Legend

- A — Long-Term Noise Measurement Site
- Project Parcel
- Adjacent Parcels to Project

N

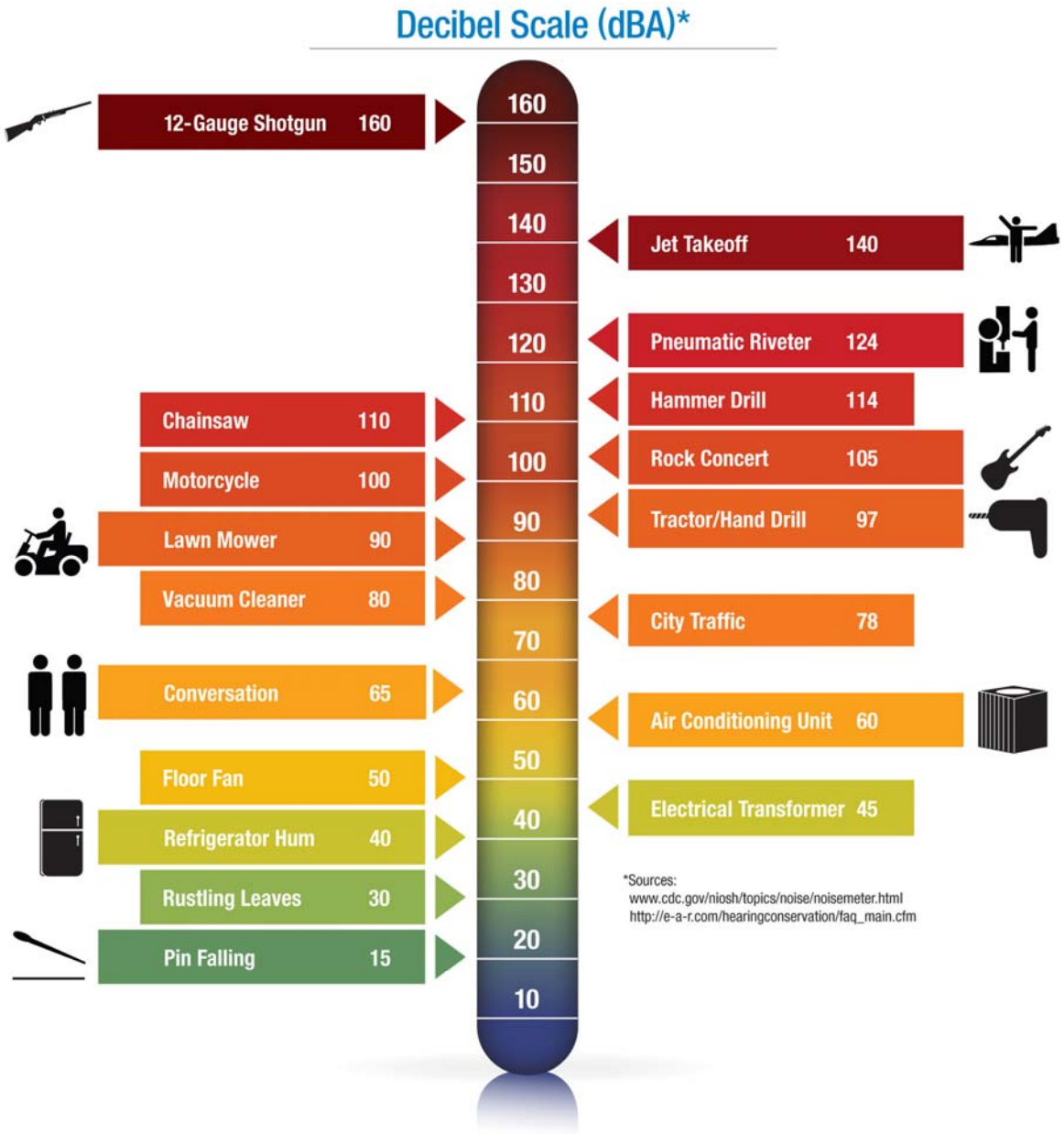
Scale (feet)

0 50 100

Figure 2

Project Site Plan
Squirrel Monkey Haven
Sacramento County, California

Figure 3
Typical A-Weighted Sound Levels of Common Noise Sources



Existing Ambient Noise Environment

The existing noise environment in the project vicinity is defined by noise sources typical in a rural setting. Noise sources contributing to measured ambient noise levels consisted of wind blowing through grass, wildlife, insects, birds, and intermittent traffic on North Valensin Road. To quantify existing background noise levels in the project vicinity, long-term ambient noise level measurements were conducted on the project site from Saturday, July 8 through Monday, July 10, 2017. Please see Figure 1 for the noise measurement location. Table 1 shows a summary of the ambient noise measurement results with detailed results provided in Appendices B and C.

A Larson-Davis Laboratories (LDL) Model 820 precision integrating sound level meter was used to complete the noise level measurement survey. The meter was calibrated in the field before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

Table 1
Measured Ambient Noise Level Summary
Squirrel Monkey Haven – Sacramento County, California

		Measured Noise Levels (dBA)			
		Daytime (7 AM to 10 PM)		Nighttime (7 AM to 10 PM)	
Site[1]	Date	L_{50}	L_{max}	L_{50}	L_{max}
1	Saturday, July 8, 2017	44	58	58	62
	Sunday, July 9, 2017	45	60	57	62
	Monday, July 10, 2017	45	57	55	65
	Average:	45	58	57	63
Sacramento County Standards (Table 1):		55	75	50	70

Notes:
1. Ambient noise level monitoring was conducted along the southern property line. Location is shown on Figure 1.

The Table 1 and Appendix B data indicate that existing ambient noise levels in the project vicinity were consistent from day-to-day and night-to-night. The measured ambient data from the three day monitoring period was averaged to determine the baseline noise level condition in the project vicinity. The calculated daytime and nighttime median noise levels were 45 dB and 57 dB, while daytime and nighttime maximum noise levels were 58 dB and 63 dB. The elevated nighttime noise levels are believed to be attributable to the presence of increased insect activity during the nighttime hours.

Criteria for Acceptable Noise Exposure

Sacramento County General Plan Noise Element

Sacramento County General Plan was adopted in 2011 and serves as the overall guiding policy document for land use, development, and environmental quality for the County. The Sacramento County Noise Element of the General Plan contains noise standards for transportation as well as non-transportation or "stationary" noise sources. The non-transportation criteria, shown in Table 2, would apply to the noise-generation of the monkeys.

Table 2
Non-Transportation Noise Standards
Sacramento County Noise Element
Median (L_{50}) / Maximum (L_{max})[1]

Receiving Land Use	Outdoor Area[2] Daytime (7 a.m. – 10 p.m.)	Outdoor Area[2] Nighttime (10 p.m. – 7 a.m.)	Interior[3] Day & Night	Notes
All Residential	55 / 75	50 / 70	35 / 55	
Transient Lodging	55 / 75	--	35 / 55	4
Hospitals & Nursing Homes	55 / 75	--	35 / 55	5,6
Theaters & Auditoriums	--	--	30 / 50	6
Churches, Meeting Halls Schools, Libraries, etc.	55 / 75	--	35 / 60	6
Office Buildings	60 / 75	--	45 / 65	6
Commercial Buildings	--	--	45 / 65	6
Playgrounds, Parks, etc.	65 / 75	--	--	6
Industry	60 / 80	--	50 / 70	6

Notes:

1. The Table 2 standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards of Table 2, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.
2. Sensitive areas are defined in the acoustic terminology section.
3. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
4. Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.
5. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
6. The outdoor activity areas of these uses (if any), are not typically utilized during nighttime hours.
7. Where median (L50) noise level data is not available for a particular noise source, average (Leq) values may be substituted for the standards of this table provided the noise source in question operates for at least 30 minutes of an hour. If the source in question operates less than 30 minutes per hour, then the maximum noise level standards shown would apply.

Source: Sacramento County General Plan Noise Element (Amended 2011)

For residential land uses, the county requires that the exterior noise level standards above be applied at the "sensitive outdoor areas". The county defines sensitive outdoor areas as the primary outdoor activity area associated with any given land use at which noise-sensitivity exists (e.g. backyards, patio/deck areas). However, where the location of the outdoor activity areas for large lot residential properties cannot be determined, the County's exterior noise level standards are applied within 50 feet of the rear of the residence.

Sacramento County Noise Ordinance

Section 6.68 of the Sacramento County Code (noise control) establishes standards for acceptable noise exposure at residential uses. Because the County's Noise Ordinance standards are consistent with the County's General Plan Noise Element standards, compliance with the Table 2 standards would ensure that both the Noise Element and Noise Ordinance standards of Sacramento County have been satisfied.

Noise Standards Applied to the Project

The project parcel and surrounding parcels are large lot agriculturally zoned parcels containing single-family residences. The monkeys sleep pattern is diurnal like humans, awake during daytime hours and asleep during nighttime hours. Furthermore, the monkeys would be indoors within the proposed agricultural building during nighttime hours. Because noise-generation from the monkeys is not anticipated during nighttime hours, only the Sacramento County General Plan daytime (7 a.m. to 10 p.m.) noise level standards would be applicable to the project.

According to footnote 7 of Table 2, the median (L_{50}) noise level standards are applicable to noise sources present in excess of 30 minutes out of the hour while the maximum (L_{max}) noise level standards are applicable to noise sources present less than 30 minutes out of the hour. It is our understanding that most of the vocalizations from monkeys throughout the day are "conversational chit-chat" with limited episodes of shrieking, occurring approximately 3-5 times per day. Because the conversational chit-chat could potentially occur in excess of 30 minutes out of an hour, it would be subject to the median (L_{50}) noise level standard of 55 dB. Because the shrieking would only occur on limited occasions, it would be subject to the maximum (L_{max}) noise level standard of 75 dB.

The county's noise standards would be applied at the outdoor activity areas of the adjacent parcels. The location of the identified outdoor activity areas have been identified on Figure 1. As required by the county's general plan, in instances where the outdoor activity area was not clearly defined, the noise level standards were applied at a point 50 feet from the residence. Satisfaction with the county's noise level standards would ensure that the project would not result in a substantial increase in the project vicinity.

The Sacramento County General Plan utilizes an exterior maximum (L_{max}) noise level descriptor to assess individual distinct loud activities. The maximum noise level descriptor, however, does not account for the duration of the event. Alternatively, the Sound Exposure Level (SEL) noise level descriptor factors the duration of a distinct loud activity since it represents the entire sound energy of a given single-event normalized into a one second period regardless of the event duration. Although the SEL descriptor factors the duration of a loud event, it is typically utilized

for sleep disturbance assessments where the SEL is assessed indoors (bedroom). Noise-generation due to the project is not anticipated during nighttime hours, and therefore no sleep disturbance is anticipated. Nonetheless, a recommended indoor SEL of 55 dB was conservatively applied to the project.

Project Noise Generation

Description of Shelter

The monkeys would be housed within a new 2,700 square foot steel agricultural building. The building will have insulation on the ceiling and continue to approximately 4 feet down from the ceiling. Each end of the building will have a 10-foot sliding door that can be opened for airflow and a 4-foot walkthrough door. Indoor caging will be made of wire mesh. The outdoor habitats will be made of similar wire mesh and connect to the indoor shelter via aerial wire mesh runways. The habitats will be heavily planted and the tops and sides will have shade netting for the warmer summer months. The perimeter of the monkey housing, visible on Figure 2, will have an 8 foot tall security fence. The applicant proposes to suspend vinyl acoustic curtains from perimeter security fence, providing a visual and noise screen for the project.

Reference Noise Levels for Squirrel Monkey Vocalizations

The primary noise source associated with this facility would be the vocalizations of the monkeys. The project applicant has indicated that the population of 51 monkeys will consist of 35 females and 16 males. The males are not heard vocalizing very often. If they do it is either a happy twitter at feeding time or a brief cackle to threaten a neighboring male. The females chit chat a lot throughout the day. The conversational chit chat (e.g., purrs, chirps, chucks) occur between monkeys when they are close to each another. According to the project applicant, these types of vocalizations are similar in sound level to average human conversation. Other vocalizations, which are the loudest, are given in reaction to specific events that are scary (alarm call yap) or annoying (cackle, shrieks). About 3-5 episodes of social drama occur daily that involve shrieking. These episodes are momentary and last about 30-60 seconds. Squirrel monkeys vocalize for specific reasons and do not vocalize impulsively or repetitively like dogs barking at strangers, out of boredom, or to protect territory.

The journal article published by the Acoustical Society of America titled, “Responses of Squirrel Monkeys to their Experimentally Modified Mobbing Calls,” by Claudia Fichtel and Kurt Hammerschmidt (May 2003), provides reference noise levels for squirrel monkey vocalizations. Specifically, the article provides reference noise levels for the alarm call yap. The yap, according to the article, serves to inform members of the same species about the presence of a mammalian predator and is often uttered in a chorus as a mobbing reaction. The maximum squirrel monkey yap noise levels were measured to be 76 dB ± 5 dB at a distance of 3 feet. Therefore, the worst-case maximum noise levels of for yaps documented in the journal article were 81 dB at 3 feet. As indicated previously, the loudest types of monkey vocalizations are alarm call yaps, cackles and shrieks. The project applicant has indicated that the shrieks are the loudest of the three vocalizations but not by a wide margin. In order to conservatively assess maximum noise levels associated with shrieks, 5 dB was added to the documented worst-case yap noise levels of 81 dB at 3 feet, resulting in reference maximum noise level of 86 dB at 3 feet.

Median monkey vocalizations (twitters) were conservatively assumed to be 15 dB quieter than maximum yap noise levels, resulting in a reference noise level of 66 dB at 3 feet. Average male human conversation in a raised voice is approximately 65 dB at 3 feet, providing good agreement with the applicants' subjective similarity of the monkey twitter to human conversation. To provide a conservative assessment of median squirrel monkey noise generation (twitters) at the proposed facility, half (18) of the females were assumed to vocalizing simultaneously for the duration of an hour, resulting in a reference median noise level of 79 dB at 3 feet.

Predicted Noise Levels at Nearest Residential Outdoor Activity Areas

The reference noise levels discussed in the preceding paragraphs were projected to the nearest identified outdoor activity areas assuming normal spherical spreading of sound (6 dB decrease per doubling of distance from the noise source). Table 3 shows the predicted median and maximum noise levels at each of the six nearest residential outdoor activity areas to the proposed shelter for worst-case squirrel monkey vocalization noise generation. A conservative -6 dB offset was applied to the predicted noise levels presented in Table 3 in order to account for the attenuation provided by the proposed perimeter 8-foot tall security fence with suspended acoustic curtains (Acoustifence - http://www.acoustiblok.com/acoustical_fence.php). An example of the Acoustifence product utilized to successfully provide noise mitigation for a photovoltaic inverter project is provided in Appendix D.

Table 3
Predicted Squirrel Monkey Noise Levels at Nearest Outdoor Activity Areas
Squirrel Monkey Haven – Sacramento County, California

Residence[1]	APN	Distance (feet)[2]	Predicted Noise Levels (dBA)[3]	
			L_{50}	L_{max}
1	138-0090-108	520	28	35
2	138-0090-109	480	28	36
3	138-0090-019	640	26	33
4	138-0090-068	400	30	38
5	138-0090-071	840	24	31
6	138-0090-070	430	29	37
Sacramento County Daytime Standards:			**55**	**75**

Notes:
1. Nearest residential outdoor activity areas are illustrated on Figure 1.
2. Distances were scaled from the center of the nearest outdoor habitat area to nearest residential outdoor activity areas.
3. Predicted noise levels have been conservatively adjusted by -6 dB to account for the attenuation provided by the perimeter 8-foot tall noise barrier (vinyl curtains).

The Table 3 data indicate that predicted worst-case squirrel monkey noise levels generated by the proposed project would be satisfactory relative to the County's noise standards. Furthermore, predicted noise levels would be below measured ambient noise levels presented in Table 1. As a result, no further mitigation measures would be warranted for the project.

Predicted Noise Levels at Nearest Property Lines

Although the Sacramento County's noise level standards are applied at residential outdoor activity areas, monkey vocalization noise levels were also conservatively predicted at the nearest project property lines. The same methodology described in the previous section was utilized to predict monkey vocalization noise levels at the property lines. Those results are presented below in Table 4.

Table 4
Predicted Squirrel Monkey Noise Levels at Nearest Property Lines
Squirrel Monkey Haven – Sacramento County, California

Direction	APN	Distance (feet)[1]	Predicted Noise Levels (dBA)[2]	
			L_{50}	L_{max}
North	138-0090-109	110	41	49
East	138-0270-004	265	34	41
South	138-0090-070	135	39	47
West	138-0090-068	265	34	41
Sacramento County Daytime Standards:			**55**	**75**

Notes:
1. Distances were scaled from the nearest outdoor habitat area to the nearest property lines.
2. Predicted noise levels have been conservatively adjusted by -6 dB to account for the attenuation provided by the perimeter 8-foot tall noise barrier (vinyl curtains).

The Table 4 data indicate that predicted worst-case squirrel monkey noise levels generated by the proposed project would be satisfactory relative to the County's noise standards, even if they were assessed at the nearest project property lines rather than outdoor activity areas. Furthermore, predicted property line noise levels would be below the measured ambient noise levels presented in Table 1.

Single Event Analysis

As discussed previously, the Sound Exposure Level (SEL) represents the entire sound energy of a given single-event normalized into a one-second period regardless of event duration. According to the project applicant, about 3-5 episodes of social drama occur daily that involve shrieking with each episode lasting about 30-60 seconds. Given maximum shrieking noise levels of 86 dB at 3 feet and 60 seconds of continuous shrieking, the SEL for worst-case squirrel monkey vocalizations was calculated to be 104 dB at a distance of 3 feet. Table 5 shows the predicted interior SEL at each of the six nearest residences. A conservative -6 dB offset was applied to the predicted noise levels presented in Table 5 in order to account for the attenuation provided by the proposed perimeter 8-foot tall suspended acoustic curtains. The analysis also assumes a building façade transmission loss of 15 dB and 25 dB for bedroom windows in the open and closed positions, respectively.

Table 5
Predicted Squirrel Monkey Sound Exposure Levels within Nearest Residential Bedrooms
Squirrel Monkey Haven – Sacramento County, California

Residence[1]	APN	Distance (feet)[2]	Predicted SEL (dBA)[3,4]	
			Windows Open[5]	Windows Closed[6]
1	138-0090-108	510	38	28
2	138-0090-109	500	38	28
3	138-0090-019	670	36	26
4	138-0090-068	350	41	31
5	138-0090-071	810	34	24
6	138-0090-070	400	40	30
		Recommended Interior SEL Standard[7]:	**55**	**55**

Notes:

1. Nearest residences are illustrated on Figure 1.
2. Distances were scaled from the center of the nearest outdoor habitat area to nearest residential facade.
3. SEL = Sound Exposure Level
4. Predicted noise levels have been conservatively adjusted by -6 dB to account for the attenuation provided by the perimeter 8-foot tall noise barrier (vinyl curtains).
5. Predicted noise levels were adjusted by -15 dB to account for the transmission loss provided by the residential building facades with the bedroom windows in the open position.
6. Predicted noise levels were adjusted by -25 dB to account for the transmission loss provided by the residential building facades with the bedroom windows in the closed position.
7. No universal SEL criterion has been developed for environmental noise assessments. The Sacramento County General Plan does not contain an SEL standard.

The Table 5 data indicate that worst-case squirrel monkey sound exposure levels are predicted to be well below the recommended interior SEL standard of 55 dB. No further consideration of noise mitigation measures would be warranted for the project relative to the recommended interior SEL standard of 55 dB.

Comparison of Proposed Project Relative to Typical Dog Kennel

Due to the unique nature of this project, Sacramento County requested that noise generated by the squirrel monkeys be compared to the noise generation of a typical dog kennel operation. The primary noise source associated with a typical outdoor dog kennel is periodic dog barking. BAC has considerable experience in preparing noise studies for dog boarding facilities and, even under the most ideal boarding conditions with highly trained supervision, dogs occasionally still bark. Usually barking occurs in response to some stimuli, such as persons or other dogs entering the kennel area. The degree of barking depends largely on the experience of the staff and the level of stimuli the dogs receive.

To quantify noise levels associated with a typical outdoor dog kennel, BAC averaged data collected at the All Pets Boarding (Loomis), Sacramento SPCA, and Nadelhaus Kennels (Chico). The results of the barking dog noise measurements indicate that at a distance of approximately 200 feet from the dogs, the maximum noise level generated by the barking dogs was approximately 55 dB L_{max}. The average noise level measured at 200 feet with approximately 30-40 dogs barking intermittently was 50 dB L_{eq}. Because the county's standards are in terms

of the median noise level descriptor, and not average (L_{eq}), median barking dog noise levels were conservatively assumed to be 50 dB L_{50}. At the Nadelhaus Kennels, median noise levels were approximately 5 dB lower than average noise levels, therefore the assumed median noise level of 50 dB L_{50} for this comparative analysis would be considered conservative.

Table 6 shows the predicted squirrel monkey vocalization and barking dog noise levels at the outdoor activity areas of the six nearest residences. A conservative -6 dB offset was applied to the predicted noise levels presented in Table 6 in order to account for the attenuation provided by the proposed perimeter 8-foot tall suspended acoustic curtains.

Table 6
Comparison of Predicted Squirrel Monkey Noise Levels vs Typical Dog Kennel at Nearest Outdoor Activity Areas
Squirrel Monkey Haven – Sacramento County, California

			Predicted Noise Levels (dBA)[3]			
			Squirrel Monkeys		Dogs Barking	
Residence[1]	APN	Distance (feet)[2]	L_{50}	L_{max}	L_{50}	L_{max}
1	138-0090-108	520	28	35	36	41
2	138-0090-109	480	28	36	36	41
3	138-0090-019	640	26	33	34	39
4	138-0090-068	400	30	38	38	43
5	138-0090-071	840	24	31	32	37
6	138-0090-070	430	29	37	37	42

Notes:
1. Nearest residential outdoor activity areas are illustrated on Figure 1.
2. Distances were scaled from the center of the nearest outdoor habitat area to nearest residential outdoor activity areas.
3. Predicted noise levels have been conservatively adjusted by -6 dB to account for the attenuation provided by the perimeter 8-foot tall noise barrier (vinyl curtains).

As indicated above in Table 6, predicted median noise levels due to barking dogs are approximately 8 dB higher than squirrel monkey vocalizations. Predicted maximum barking dog noise levels are approximately 6 dB higher than maximum squirrel monkey vocalization noise levels.

Enclosed Kennel Discussion

The outdoor habitats are currently proposed to be constructed of a wire mesh material (open air) that would not provide any significant amount of noise level attenuation. However, the applicant proposes to suspend vinyl acoustic curtains from perimeter security fence, providing a visual and noise screen for the project. The vinyl curtains are conservatively predicted to provide 6 dB of attenuation of monkey vocalization noise-generation at the nearest residential outdoor activity areas. It should be noted that this analysis indicates full compliance with the applicable County noise standards even without the suspended acoustic curtains.

Sacramento County Planning staff have requested the anticipated noise levels of monkey vocalizations if the facility was completely enclosed. Provided that the outdoor habitats are completely enclosed and have an air tight seal with a forced air mechanical ventilation system, predicted monkey vocalization noise levels would be expected to be a minimum of 15 dB lower due to the transmission loss of the building façade. A more precise estimate could be provided once architectural plans are available.

Conclusions and Recommendations

This analysis concludes that noise generated by monkey vocalizations at the Squirrel Monkey Haven facility is predicted to satisfy the Sacramento County General Plan Noise Element standards. However, given the sensitivity of residential uses to new noise sources such as that proposed by this project, BAC recommends the following specific measures to reduce the potential for adverse public reaction to noise generated by the project:

1. All outdoor activities should be strictly limited to daytime hours (7 am – 10 pm).

2. Monkeys should be housed within the indoor shelter during nighttime hours.

3. In the event that legitimate concerns are expressed by the neighboring residences regarding squirrel monkey vocalization noise upon commencement of operations at this facility, follow-up noise level testing should be conducted to assess the state of compliance with the noise standards recommended herein and additional noise mitigation measures implemented if determined necessary to achieve compliance with those standards.

These conclusions are based on reference noise level data contained herein, on the proposed project site plans, and on the requirements of the Sacramento County General Plan. In addition, these conclusions are based on BAC site inspections, observations, and application of accepted noise propagation algorithms. Changes to project site plans or operation of the facility could result in actual noise levels differing from those described herein. BAC Staff is not responsible for such changes.

This concludes BAC's environmental noise assessment for the proposed Squirrel Monkey Haven facility in Galt (Sacramento County), California. Please contact Paul Bollard at (916) 663-0500 or paulb@bacnoise.com with any questions or for additional information.

Appendix A

Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
Loudness	A subjective term for the sensation of the magnitude of sound.
Masking	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
Noise	Unwanted sound.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the Maximum level, which is the highest RMS level.
RT_{60}	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.
SEL	A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy of the event into a 1-s time period.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.

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Appendix B-1
Squirrel Monkey Haven
Ambient Noise Monitoring Results - Site A
Thursday, June 08, 2017

Hour	Leq	Lmax	L50	L90
0:00	58	61	58	56
1:00	59	63	58	57
2:00	59	62	59	57
3:00	59	61	59	57
4:00	59	61	59	58
5:00	57	61	56	49
6:00	52	58	52	47
7:00	53	58	52	50
8:00	57	71	57	54
9:00	54	61	52	45
10:00	45	60	44	39
11:00	41	54	40	36
12:00	43	57	40	35
13:00	42	52	40	34
14:00	40	59	38	34
15:00	39	50	36	33
16:00	38	49	36	33
17:00	38	53	37	34
18:00	41	55	40	37
19:00	47	66	46	39
20:00	49	56	48	44
21:00	58	63	58	52
22:00	62	65	62	60
23:00	59	64	59	56

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	58	38	51	62	52	59
Lmax (Maximum)	71	49	58	65	58	62
L50 (Median)	58	36	44	62	52	58
L90 (Background)	54	33	40	60	47	55

Computed Ldn, dB	65
% Daytime Energy	21%
% Nighttime Energy	79%

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Appendix B-2
Squirrel Monkey Haven
Ambient Noise Monitoring Results - Site A
Friday, June 09, 2017

Hour	Leq	Lmax	L50	L90
0:00	60	65	59	57
1:00	62	66	60	58
2:00	59	62	59	57
3:00	58	61	57	54
4:00	55	60	55	51
5:00	56	60	56	48
6:00	49	57	49	45
7:00	52	66	50	47
8:00	57	67	56	53
9:00	54	61	53	49
10:00	50	58	48	43
11:00	44	51	43	39
12:00	43	57	41	38
13:00	39	54	38	35
14:00	41	58	39	35
15:00	39	60	37	34
16:00	42	63	38	35
17:00	40	52	39	36
18:00	42	59	39	36
19:00	47	63	43	39
20:00	52	59	51	44
21:00	62	67	60	57
22:00	61	65	60	59
23:00	59	62	59	58

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	62	39	53	62	49	59
Lmax (Maximum)	67	51	60	66	57	62
L50 (Median)	60	37	45	60	49	57
L90 (Background)	57	34	41	59	45	54

Computed Ldn, dB	65
% Daytime Energy	29%
% Nighttime Energy	71%

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Appendix B-3
Squirrel Monkey Haven
Ambient Noise Monitoring Results - Site A
Saturday, June 10, 2017

Hour	Leq	Lmax	L50	L90
0:00	59	62	58	57
1:00	58	62	58	55
2:00	60	65	57	55
3:00	55	60	55	52
4:00	54	59	53	49
5:00	59	78	51	47
6:00	58	83	48	45
7:00	59	74	56	47
8:00	55	64	55	52
9:00	52	59	51	48
10:00	48	54	47	43
11:00	48	60	45	41
12:00	44	57	42	38
13:00	42	54	40	37
14:00	40	51	39	36
15:00	38	51	37	34
16:00	42	59	38	35
17:00	40	50	39	36
18:00	41	52	41	37
19:00	45	56	44	40
20:00	48	58	46	43
21:00	59	62	59	55
22:00	58	61	58	55
23:00	57	60	57	55

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	59	38	52	60	54	58
Lmax (Maximum)	74	50	57	83	59	65
L50 (Median)	59	37	45	58	48	55
L90 (Background)	55	34	42	57	45	52

Computed Ldn, dB	64
% Daytime Energy	30%
% Nighttime Energy	70%

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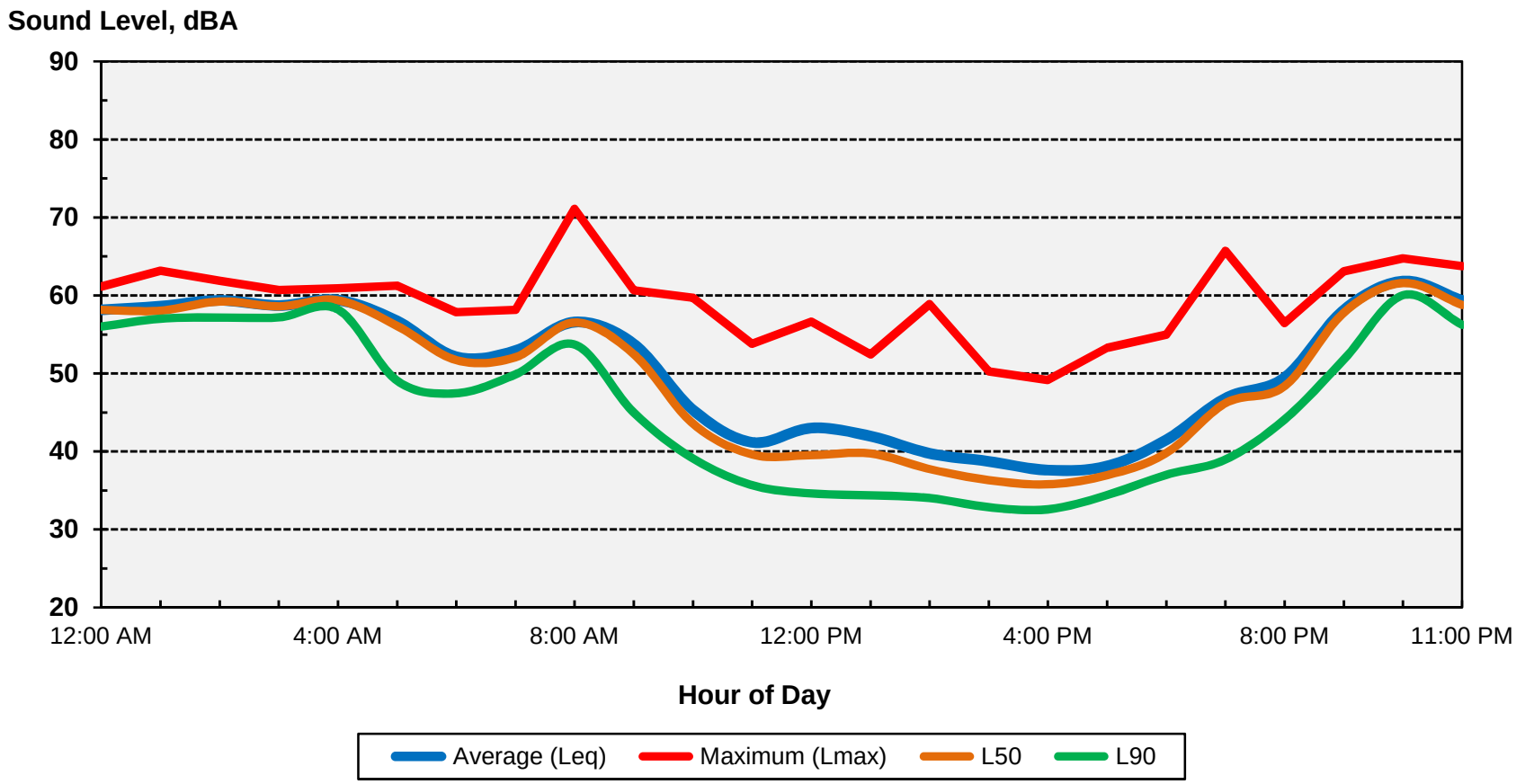
Appendix C-1
Squirrel Monkey Haven
Ambient Noise Monitoring Results - Site A
Thursday, June 08, 2017



Ldn: 65 dB

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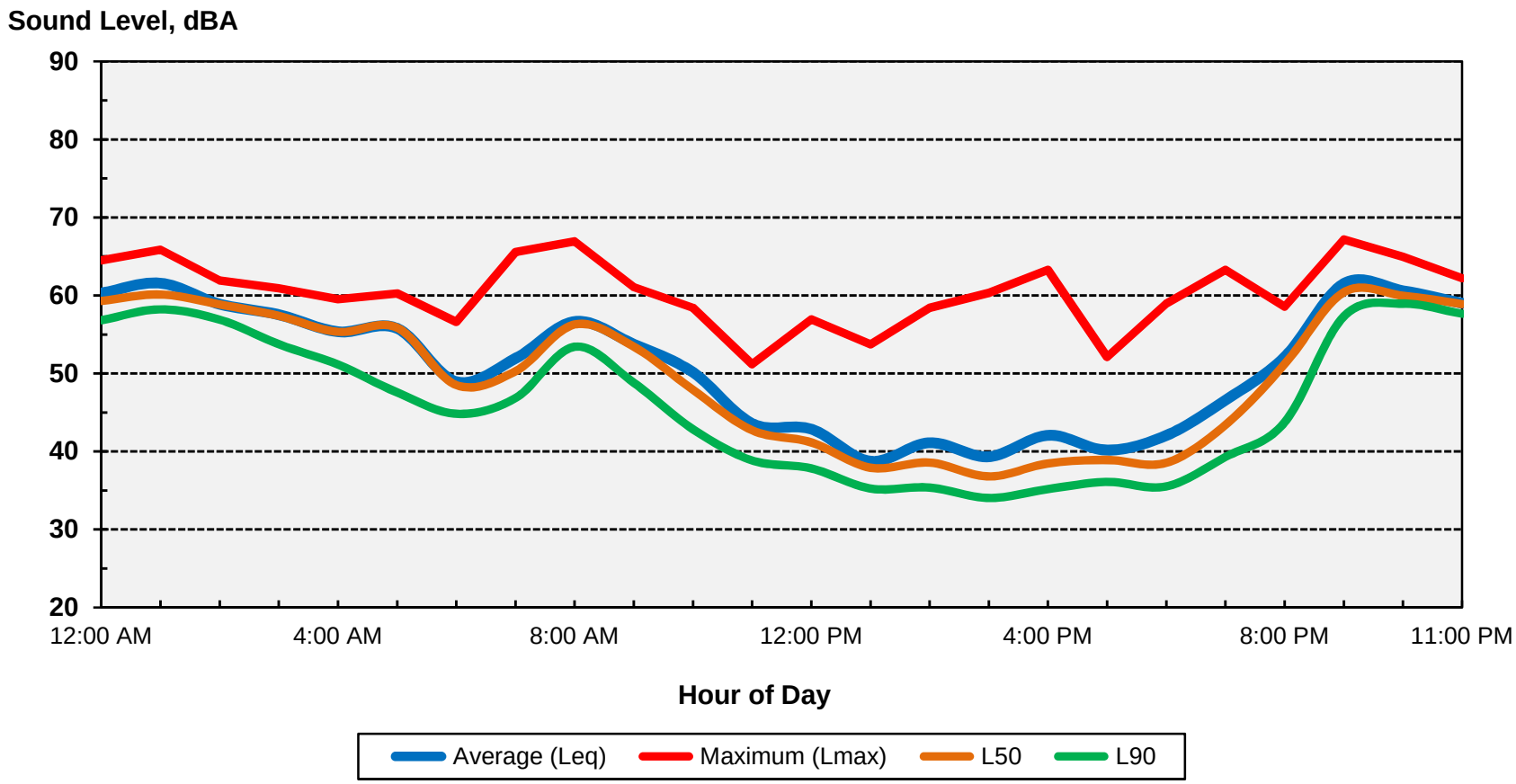
Appendix C-2
Squirrel Monkey Haven
Ambient Noise Monitoring Results - Site A
Friday, June 09, 2017



Ldn: 65 dB

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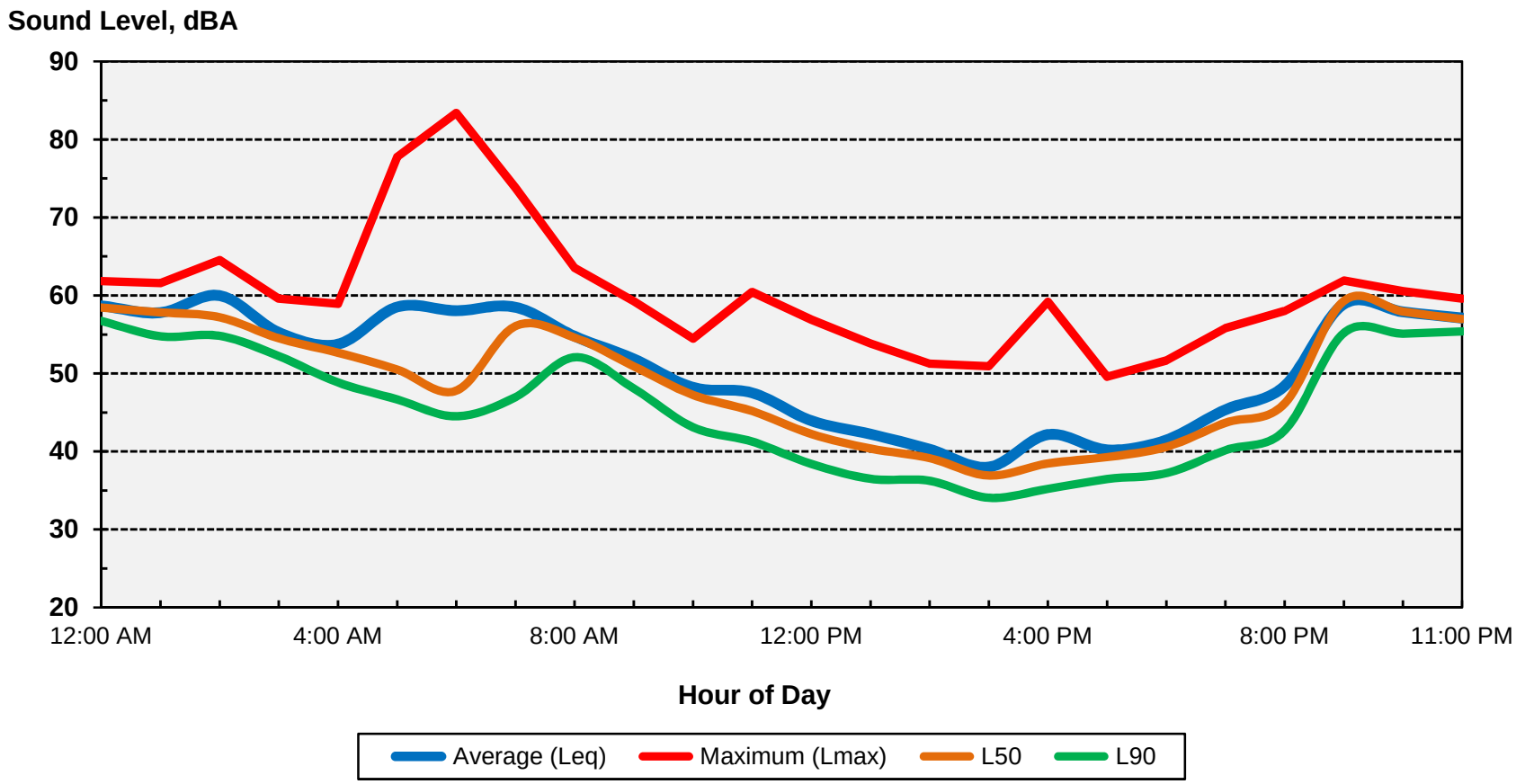
Appendix C-3
Squirrel Monkey Haven
Ambient Noise Monitoring Results - Site A
Saturday, June 10, 2017



Ldn: 64 dB

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Appendix D

Example of Acoustifence Product Used to Provide
Noise Mitigation at a Photovoltaic Inverter Facility

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Squirrell Monkey Haven

Sacramento County, Annual

GHG Model Run with Project Settings

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	7.80	1000sqft	0.18	7,800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2020
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	352.74	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - GHG analysis input defualt CO2 intensity factor and 2020 operational year

Land Use - PArking not added as portion of site is already developed with home and parking area for residents and 2 additional employees. Total parcel size is 5 acres. Project utilizies a small portion of project site.

Energy Use - No change made.

Construction Phase - Project does not include any demolition. Site is relatively flat and grading will consist of adding a gravel base to elevate building pad. Structure is a prefabricated building that is delivered in sections and therefore has a reduced construction period. Parking area alread exhits on developed portion of project site. Prefabricated building so architectural coatings expected to be very minimal.

Off-road Equipment - No demolition phase

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Commute Mitigation - 2 of the 4 employees live on the property - however system only provides ability to count up to 1.5 days per week.

Water Mitigation -

Water And Wastewater - Based on application project will use 2,230 gallons for water consumtpion by monkeys, 14,305 gallons for cleaning kennel, and 23,580 gallons for outdoor landscaping.

Squirrell Monkey Haven - Sacramento County, Annual

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	100.00	0.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	5.00	1.00
tblConstructionPhase	NumDays	100.00	30.00
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	2.00	1.00
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	PhaseEndDate	1/31/2018	2/1/2018
tblConstructionPhase	PhaseEndDate	1/31/2018	3/14/2018
tblConstructionPhase	PhaseEndDate	1/31/2018	2/1/2018
tblOffRoadEquipment	LoadFactor	0.73	0.00
tblOffRoadEquipment	LoadFactor	0.40	0.00
tblOffRoadEquipment	LoadFactor	0.37	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	590.31	352.74
tblProjectCharacteristics	OperationalYear	2018	2020
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSequestration	NumberOfNewTrees	0.00	38.00
tblWater	IndoorWaterUseRate	1,803,750.00	16,535.00
tblWater	OutdoorWaterUseRate	0.00	23,580.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018																17.3548
Maximum																**17.3548**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018																17.3548
Maximum																**17.3548**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																2.1000e-004
Energy																34.5219
Mobile																68.8227
Waste																4.8631
Water																0.0367
Total																**108.2447**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																2.1000e-004
Energy																34.5219
Mobile																68.8227
Waste																4.8631
Water																0.0367
Total																**108.2447**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	26.9040
Vegetation Land Change	-2.1550
Total	**24.7490**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/1/2018	1/31/2018	5	0	
2	Site Preparation	Site Preparation	2/1/2018	1/31/2018	5	1	
3	Grading	Grading	2/1/2018	2/1/2018	5	1	
4	Building Construction	Building Construction	2/1/2018	3/14/2018	5	30	
5	Paving	Paving	2/1/2018	1/31/2018	5	0	
6	Architectural Coating	Architectural Coating	2/1/2018	2/1/2018	5	1	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 11,700; Non-Residential Outdoor: 3,900; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Concrete/Industrial Saws	0	0.00	81	0.00
Demolition	Rubber Tired Dozers	0	0.00	247	0.00
Demolition	Tractors/Loaders/Backhoes	0	0.00	97	0.00
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	3.00	1.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Clean Paved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust																0.0000
Off-Road																0.5330
Total																**0.5330**

3.4 Grading - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																0.0516
Total																**0.0516**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust																0.0000
Off-Road																0.5330
Total																**0.5330**

3.4 Grading - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																0.0516
Total																**0.0516**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																15.7232
Total																**15.7232**

3.5 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.4493
Worker																0.4646
Total																**0.9140**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																15.7232
Total																**15.7232**

3.5 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.4493
Worker																0.4646
Total																**0.9140**

3.6 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating																0.0000
Off-Road																0.1280
Total																**0.1280**

3.7 Architectural Coating - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																5.1600e-003
Total																**5.1600e-003**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating																0.0000
Off-Road																0.1280
Total																**0.1280**

3.7 Architectural Coating - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																5.1600e-003
Total																**5.1600e-003**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																68.8227
Unmitigated																68.8227

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	54.37	10.30	5.30	168,061	168,061
Total	54.37	10.30	5.30	168,061	168,061

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	15.00	7.50	8.50	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.551662	0.040953	0.203778	0.123762	0.021802	0.005583	0.018466	0.022043	0.002076	0.002280	0.006004	0.000618	0.000971

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated																19.4818
Electricity Unmitigated																19.4818
NaturalGas Mitigated																15.0401
NaturalGas Unmitigated																15.0401

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	280176																15.0401
Total																	**15.0401**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	280176																15.0401
Total																	**15.0401**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	120900				19.4818
Total					**19.4818**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	120900				19.4818
Total					**19.4818**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																2.1000e-004
Unmitigated																2.1000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Landscaping																2.1000e-004
Total																**2.1000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Landscaping																2.1000e-004
Total																**2.1000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

Use Water Efficient Landscaping

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				0.0367
Unmitigated				0.0367

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.016535 / 0.02358				0.0367
Total					**0.0367**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.016535 / 0.02358				0.0367
Total					**0.0367**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				4.8631
Unmitigated				4.8631

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	9.67				4.8631
Total					**4.8631**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	9.67				4.8631
Total					**4.8631**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated				24.7490

11.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Grassland	2 / 1.5				-2.1550
Total					**-2.1550**

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	38				26.9040
Total					**26.9040**

MOORE BIOLOGICAL CONSULTANTS

March 13, 2018

RECEIVED
MAR 13 2018
County of Sacramento
Planning and Environmental Review

Sacramento County
Office of Planning and Environmental Review
827 7th Street, Room 225
Sacramento, California 95814

Subject: Squirrel Monkey Haven (PLNP2017-00079)

Ladies and Gentlemen:

The evaluation of potential project impacts to biological resources is inadequate, failing to describe the project setting, provide a meaningful analysis of project impacts, and identify appropriate mitigation measures. With no supporting documentation, "less than significant" is checked in all of the biological resources boxes on the CEQA checklist (IS/MND Pg. IS-52). The "supplement" to the checklist included on Pg. IS-35 to Is-36 of the IS/MND is three sentences, discounting all project impacts by a database search:

> "A California Fish and Wildlife California Natural Diversity Database (CNDDB) search was conducted. No special status species were identified within or adjacent to the project site. Therefore, impacts to biological resources are considered to be less than significant".

This area is very sensitive and there are numerous special-status species within a few miles of the site. The attached maps from California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB) show the site with respect to special-status species that have been voluntarily report to the CNDDB. The CNDDB is not an

10330 Twin Cities Rd., Ste. 30 • Galt, CA 95632
(209) 745-1159 • Fax (209) 745-7513
e-mail: mooreblo@softcom.net

exhaustive inventory of every special-status plant and wildlife species and there may be special-status species in or near the site.

The attached United States Fish and Wildlife Service (USFWS) map shows that the site is within a few miles of designated critical habitat of several federally listed species, including California tiger salamander (*Ambystoma californiense*). The proximity of the site to designated critical habitat further illustrates the potential for special-status species such as California tiger salamander to occur in the site.

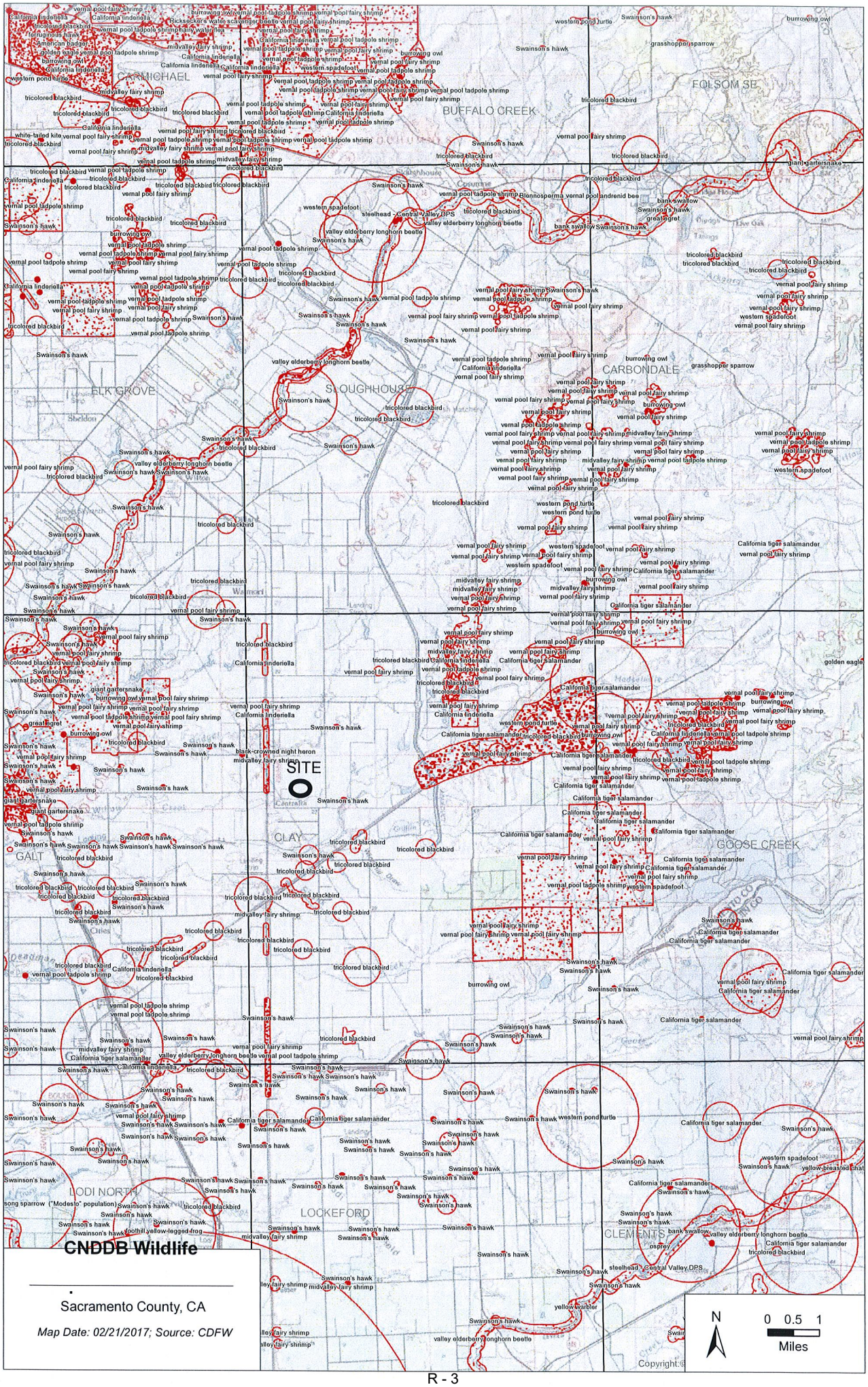
Finally, I have attached a marked up Google Earth photograph of the site, showing a notable pond in the northeast corner. This pond, whether created or not, could be regulated by the U.S. Army Corps of Engineers as a jurisdictional Water of the U.S. and/or the Regional Water Quality Control Board as a Water of the State. Further, this pond appears suitable for listed species including California tiger salamander and/or vernal pool fairy shrimp (*Branchinecta lynchi*).

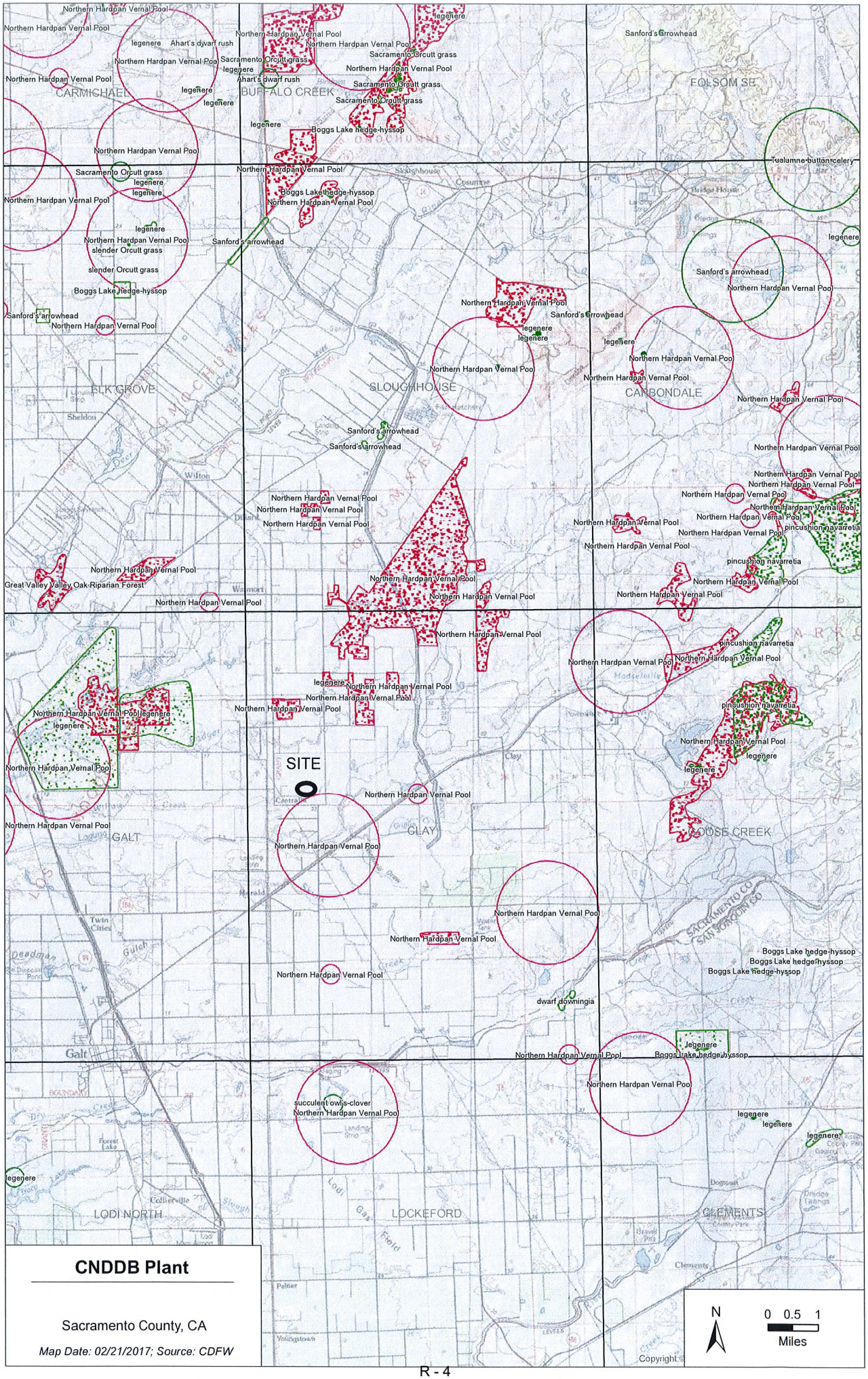
I hope this information is useful and helps the County understand the inadequacy of the Initial Study/Negative prepared for this project. A thorough and appropriate analysis should be conducted, likely in the framework of an Environmental Impact Report.

Please call me at (209) 745-1159 with any questions.

Sincerely,

Diane S. Moore, M.S.
Principal Biologist

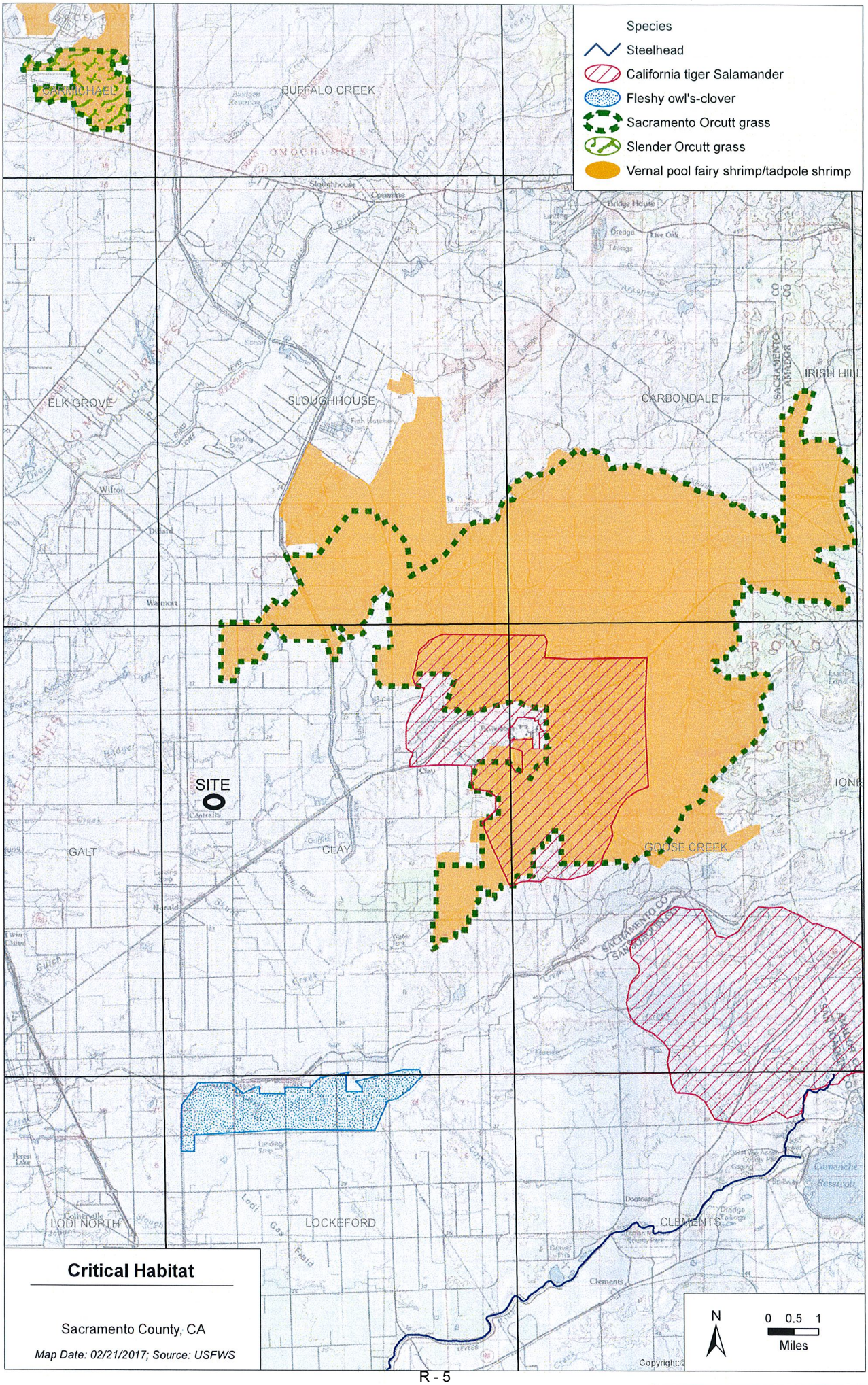

CARMICHAEL
FOLSOM SE
BUFFALO CREEK
ELK GROVE
SLOUGHHOUSE
CARBONDALE
CLAY
GOOSE CREEK
GALT
LODI NORTH
LOCKEFORD
CLEMENTS
SITE
CNDDB Wildlife
Sacramento County, CA
Map Date: 02/21/2017; Source: CDFW
N
0 0.5 1
Miles
Copyright:©



CNDDB Plant

Sacramento County, CA

Map Date: 02/21/2017; Source: CDFW


Species
Steelhead
California tiger Salamander
Fleshy owl's-clover
Sacramento Orcutt grass
Slender Orcutt grass
Vernal pool fairy shrimp/tadpole shrimp
CARMICHAEL
BUFFALO CREEK
ELK GROVE
SLOUGHHOUSE
CARBONDALE
IRISH HILL
SACRAMENTO CO
AMADOR CO
SITE
GALT
CLAY
GOOSE CREEK
IONE
LODI NORTH
LOCKEFORD
CLEMENTS
Critical Habitat
Sacramento County, CA
Map Date: 02/21/2017; Source: USFWS
N
0 0.5 1
Miles


Seasonal Pond - may be jurisdictional and/or support special-status species
N Valensin Rd
R-6
Google Earth
©2018 Google
300 ft
N

RECEIVED

MAR 13 2018

County of Sacramento
Planning and Environmental Review

3/12/2018

I am writing this letter in response to the Monkey Haven proposed for our street. Upon reading your information on the study documents it is apparent that you have not taken into consideration several key factors.

1. Odor

You acknowledge the fact that there is an odor issue but you have no plan in place other than the removal of soiled animal bedding, you are well aware of this issue but this is by no means a satisfactory plan to mitigate the issue. This will be a confined exotic animal facility and should be treated as such. I am demanding additional review on this issue.

2. Noise

Once again you acknowledge this will be an issue but you are asking for a limitation on the hours of outside time for the animals as the mitigation. The basis for any further mitigation then is after the facility is in place to wait and see if there are any "nuisance noise complaints" and then you may possibly seek further mitigation measures. This is once again, not acceptable. I am demanding additional review and study devoted to real time and realistic mitigation considerations.

3. Endangered Species

Although you mention the Fish and Game Database as the basis for your information, it is not all encompassing nor comprehensive. I have been in contact with a Biological Consultant and there are several endangered species known to be supported by this property and you have not done your due diligence to address this. There is also a seasonal pond that may be regulated. Once again I am demanding more review to address this issue.

We look forward to hearing your response.

WES SEARS
11807 N. VALENSIN RD.
GALT CA 95652
(916) 687-4577

RECEIVED
MAR 13 2018
County of Sacramento
Planning and Environmental Review

3/11/2018

Sac County planning commission,

We are sending you our comments on the negative declaration that you have arrived at for the Monkey Haven. Some of your details seem to leave out some facts, if the safety plan show no intervention other than herding the or coaxing theses animals, does this seem like a realistic capture to you? Evidently these people have little or no experience with actual animals!!! But does it make for a safety plan that may satisfy the unwise? I was not aware that monkeys are the same as dogs. There was no mention of the fact that all this area is prone to flooding, but we are to believe that an enclosure on the native soil will not leach any animal feces into our well when they are outside in their enclosure with nothing stopping this from occurring and the animals are free to release while standing in water. Adjusting to the surrounding neighborhood is one of the requirements for Sacramento county, not forcing the existing neighbors to adjust to the wishes of one couple. If there are so many different agencies needing to approve this facility, does that not give you cause for concern? Please consider this like it was your family and neighborhood at stake.

We are requesting additional studies that address the biological and zoonotic disease hazardous potential. There are many modes of transmission from these animals to surrounding properties. for example, mosquitos, blood borne Pathogens, fleas, and various other hosts that can and will transmit disease.

Sincerely,
Sherri Palmer
Don Palmer

11887 Iguana Ln.
Galt, CA. 95632

Attn. Sacramento County Environmental Coordinator 3/12/2018

I am writing this letter in opposition to the proposed monkey sanctuary on North Valensin Road. Although there has been a considerable amount of energy spent on the environmental study for this proposed project, the analysis is incomplete and leaves unresolved items including noise, odor, road impacts, biological resources, and environmental health. There has also been little or no consideration given to the impact of this facility if allowed in our residential neighborhood. We live on a privately maintained road consisting of 5 acre parcels zoned AR5, there are 8 parcels on this road and discounting the opinion of the Buckmasters 5 of the remaining residents are strongly opposed to the project.

In the appendices of your report you mention that this is the first time Sacramento County has been asked to consider such a facility and with the majority of our street and many other neighbors opposed also, quite honestly I'm shocked it is actually being considered. Also mentioned in your study is the comparison to a "dog kennel" when this is by no stretch of the imagination a dog kennel?! In actuality a dog kennel was proposed many years ago on the neighboring street (Ijuana) and never went to the point of permitting as it also was firmly and strongly denied by the surrounding neighborhood, but at least those people were considerate of their neighbors and much less entitled.

The comparison to the dog kennel raises a key point on the inadequacy of the environmental review. First, the example of an acceptable noise standard is living next to a kennel of barking dogs – and this facility is expected to be about as bad. Nobody would want to live next to a kennel, which is why kennel projects are controversial. Further, "mitigation measure A" does not mitigate the noise impact. It states:

> "In the event that legitimate concerns are expressed by the neighboring residences regarding squirrel monkey vocalization noise upon commencement of operations at this facility, follow-up noise level testing should be conducted to assess the state of compliance with the noise standards recommended herein and additional noise mitigation measures implemented if determined necessary to achieve compliance with those standards"

What are "legitimate concerns" and who will be doing the testing? And what additional "noise mitigation measures" would be done? This mitigation measure does not resolve this inadequately analyzed noise impacts to residences.

Odor impacts are also not adequately addressed in the environmental review document. Page IS-17 states:

> "In addition, the applicant has developed an odor control program to ensure that odors typically associated with the monkey sanctuary are minimized and will not result in a public nuisance"

This statement follows a discussion comparing human and horse urine and feces to that of monkeys. Human wastes are not applied on the ground and horses are very different from monkeys. How can we be assured monkey excrement in not horribly odorous like that of bats (an even smaller animal)? This statement also clarifies that odors are TYPICALLY associated a monkey sanctuary. So odors are to be expected, yet there is no mitigation. The vaguely described "Odor Control Program" is not adequate. Who will be overseeing this program to ensure the odors are not a public nuisance?

Monkeys are not an agricultural species and are considered a wild and exotic animal. The very fact that they require special permitting from so many agencies should be enough by its own weight to stop this facility from being allowed in a residential setting. If Sacramento County is willing to approve this project, are they also willing to accept any and all responsibility financial or otherwise that will occur from any incidence related to this facility, as the Buckmasters will be sheltered under the umbrella of the 501-C-3 status? And if so, this will need to be in a written document that is submitted to and approved by the board of supervisors.

Also mentioned in the study is the off hauling of waste that is generated by the facility, I'm not sure if you have actually witnessed the condition of our road but it is in need of maintenance now and additional truck traffic such as garbage trucks, delivery trucks and such are proven to do the most damage and has not been considered in your study.

The document also dismisses impacts to biological resources and does not even acknowledge the pond in the corner of the parcel. This pond could be regulated as a wetland and could support California tiger salamander or fairy shrimp, which are known to occur near the parcel. Limiting the analysis to a check of a database or reported observations is entirely inadequate for this part of the county.

Hours of operation mentioned in this document state 7AM-10PM as daylight hours for the monkeys to be outside. This is not even remotely acceptable, those of us on our street use this as a RESIDENTIAL NEIGHBORHOOD and we typically need to sleep and conduct activities that are not business related during normal hours (typical business hours are 9AM-5PM). To quote Mrs. Buckmaster,"It is my right to build whatever I want on my property." I was not aware that the rights of one entitled new property owner could supersede the rights of many other long-standing local residents.

We as a group have retained counsel already and are fully prepared to enlist any and all means that we can to influence this project. One of our group has been in contact with the board of supervisors and our local assemblyman and we will continue to seek help from others also. At a minimum, we need to see an adequate and thorough analysis of impacts and meaningful, effective, and enforceable mitigation measures. I am imploring you to consider the impact of what allowing this facility will do to our neighborhood and also the impression this will leave with residents after the media is brought into play.

Thank you.

Don Claunch

H 916-687-7059

C 916-717-8613

dclaunch@frontier.com

LAW OFFICE OF DONALD B. MOONEY
417 Mace Boulevard, Suite J-334
Davis, CA 95618
530-758-2377
dbmooney@dcn.org

March 13, 2018

Via Electronic Mail
CEQA@saccounty.net

Tim Hawkins
Environmental Coordinator
Office of Planning and Environmental Review
Sacramento County
827 7th Street, Room 225
Sacramento, CA 95814

Re: Squirrel Monkey Haven (PLNP2017-00079)

Dear Mr. Hawkins:

This office represents Don and Zina Claunch regarding the Squirrel Monkey Haven Project (PLNP2016-00461). The Claunchs object to the Project and object to the approval of the Negative Declaration (ND) for the Project on the grounds that the ND/Initial Study fail to comply with the requirements of the California Environmental Quality Act ("CEQA"), Public Resources Code section 21000 *et seq*. The Claunchs respectfully request that that the County deny the application for a Conditional Use Permit and Special Development Permit.

The County's approval of the Project, based on a negative declaration instead of an environmental impact report (EIR) violates CEQA as substantial evidence supports a fair argument that the Project may have potentially significant impacts. CEQA was enacted to ensure environmental protection and encourage governmental transparency. (*Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal. 3d 553, 564.) CEQA requires full disclosure of a project's significant environmental effects so that decision makers and the public are informed of consequences *before* a project is approved, to ensure that government officials are held accountable for these consequences. (*Laurel Heights Improvement Ass'n of San Francisco v. Regents of the University of California* (1988) 47 Cal.3d 376, 392.) In the present case, substantial evidence supports a fair argument that the Project may have potentially significant impacts to noise and public safety.

An agency must prepare an EIR instead of a ND whenever a proposed project may have a significant impact on the environment. (Pub. Resources Code. § 21082.2(d) ["If there is substantial evidence, in light of the whole record before the lead agency, that a project may have a significant effect on the environment, an environmental impact report shall be prepared."]) An agency's decision not to prepare an EIR is judged by the "fair argument" standard of review. Under this standard, an EIR must be prepared "whenever it can be fairly argued on the basis of substantial evidence that the project *may* have

significant environmental impact." (*No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 75, emphasis added; *Laurel Heights Improvement Assn. v. Regents of University of California* (1993) 6 Cal.4th 1112, 1123.) The County must prepare an EIR instead of an ND if there is any substantial evidence in the record supporting a fair argument that a project may have a significant effect on the environment, even if other substantial evidence supports the opposite conclusion. (Pub. Resources Code, § 21151(a); CEQA Guidelines § 15064(f)(1)-(2); *No Oil, supra,* 13 Cal.3d 68, 75; *Architectural Heritage Ass'n v. County of Monterey* (2004) 122 Cal.App.4th 1095, 1109.) It is the function of an EIR, not a negative declaration, to resolve these conflicting claims. (See *No Oil, supra,* 13 Cal.3d at p. 85.) The fair argument standard is a "low threshold" test for requiring the preparation of an EIR. (*No Oil*, supra, 13 Cal.3d at 84.)

The requirement for an EIR cannot be waived merely because additional studies are required; in fact an agency's lack of investigation "may actually enlarge the scope of fair argument by lending a logical plausibility to a wider range of inferences." (*Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 311.) An ND is proper only if project revisions would avoid or mitigate the potentially significant effects "to a point where clearly no significant effect on the environment would occur, and . . . there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment." (Pub. Resources Code §§ 21064.5, 21080(c)(2); see also *Mejia v. City of Los Angeles* (2005) 130 Cal.App.4th 322, 331.)

Input from non-experts, lay testimony, can be substantial evidence when such testimony is credible and does not purport to embody analysis that would require special training. Thus, "statements of area residents who are not environmental experts may qualify as substantial evidence if they are based on relevant person observations or involve 'nontechnical issues." (*Bowman v. City of Berkeley* (2004) 122 Cal.App.4th 572, 583 (aesthetics); *Ocean View Estates Homeowners Association, Inc. v. Montecito Water District* (2004) 116 Cal.App.4th 396, 402 (aesthetics); *Mejia v. City of Los Angeles* (2005) 130 Cal.App.4th 322 (traffic and biology); *The Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 932 (land use); *Oro Fino Gold Mining Corp v. County of El Dorado* (1990) 225 Cal.App.3d 872, 882 (noise); *Citizens Association for Sensible Development of Bishop Area v. County of Inyo* (1985) 172 Cal.App.3d 151, 172 (traffic).)

In the present matter, nearby residents, including the Claunchs' have provided testimony and comments that constitute substantial evidence supporting a fair argument that the Project may result in potentially significant environmental impacts to land use, biological resources, noise and public safety.

A. Project Description

The Project Description states that the Project includes the construction of an indoor-outdoor kennel to house up to a maximum of 55 squirrel monkeys. (See IS-1.) The Project Description states that the Project will require a Wild Animal Permit from the

Sacramento County Department of Animal Care and Regulation. (*Id.*) The Initial Study, however, fails to mention that the operation of a kennel also requires a Kennel Permit in additional to the Wild Animal Permit from the County of Sacramento.

County Code section 8.26.010 provides for two types of permits: a Kennel/Cattery Permit and a Wild Animal Permit. There is nothing in the code that a Wild Animal Permit will satisfy the requirement for a Kennel/Cattery Permit. (*Id.*)

B. Land Use

The proposed Project is inconsistent with the allowable use for A-5 or AR-5. Section 3.2.5 and Table 3.1 of the Sacramento County Zoning Code, the Initial Study indicates that a "kennel" for wild animals such as monkeys is an allowable use subject to the issuance of a conditional use permit. Table 3.1(G)(A)(1)(b) identifies Commercial Service Uses to include Kennel, Cattery, Small Animal and Boarding. Footnote 30 states "All commercial uses are subject to the general commercial use standards in Section 3.7.1 . . . ." (Sacramento County Zoning Code at p. 3-12.)

The proposed Project does not fall within the Animal and Pet Services identified in Section 3.7.2.A. Section 3.7.2.A.1 states that a "kennel, cattery, ***or*** animal boarding and training use shall comply with the following minimum standards . . . ." The Zoning Code defines "kennel" to be "[a]ny lot, building, structure, enclosure, or premise where five or more dogs of four more dogs of four months of age or older are kept for more than five (5) days per year." (Zoning Code, Chapter 7.3.) The County Code regulating kennels specifically states that "kennel" means any enclosure, premises, building, structure, lot or area in or on which five (5***) or more dogs*** of at least (4) months of age are kept, harbored or maintained. (Sacramento County Code, § 8.04.210.)[1]) It should also be noted that if the County intended that the term "kennel" be broadly interpreted to mean a shelter for any animal, then there would have been no need for the Code to also use the term "cattery". Chapter 8.26 of the County Code also provides guidance on what constitutes a "kennel" for purposes of regulation. Section 8.26.015(b) states that "[a] a person shall be deemed to maintain or operate a kennel if the person, without an applicable Genial Business License in effect, keeps, harbors or maintains more than four (4) dogs over four (4) months of age." Thus, there is no provision in Chapter 8.26 that a permit for a "kennel" can be issued for wild animals such as squirrel monkeys. Thus, by definition the proposed Project does qualify as a kennel.

---

[1] This is consistent with the common definition of kennel, which is a shelter for a dog or cat or an establishment for the breeding or boarding of dogs or cats. (See Meriam-Webster; see also dictionary.com (a house of shelter for a dog or a cat); Oxforddictionaries.com (a small shelter for a dog).)

The Code also refers to "animal boarding and training" as an allowable use. The proposed Project also does not qualify for this use as it is not a training facility. Nothing in the Project description indicates that the purpose of the facility is to train monkeys.

Finally, nothing in the Zoning Code indicates that housing wild animals in the A-5 (AR-5) is an allowable use. Allowable uses refer to kennels that applies to dogs, catteries that applies to cats, and small animal boarding *and* training that applies to a facility that trains animals, which by implication would not be wild animals.

C. Biological Resources

The comments by Don Claunch indicate that the Initial Study fails disclose and discuss the pond on the project site that could support California tiger salamander or fairy shrimp. In preparing the Initial Study the County relied on the California Fish and Wildlife California Natural Diversity Database to determine that no special status species were identified within or adjacent to the project site. (Initial Study at p. 36.) The County's failure to investigate further violates CEQA.

In the leading case of *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, the court rejected a negative declaration that was supported only by a bare-bones environmental checklist. There was no indication in the record of the source or content of the data that county staff relied on in preparing the checklist, nor was there an explanation of the initial study's conclusion that potentially significant impacts would be fully mitigated. Describing the checklist as a "token observance" of CEQA requirements, the court held that a lead agency has a duty to investigate potential impacts and provide support for a negative declaration; the record of its action must demonstrate, and not simply assume, that significant impacts will not occur. This prevents a lead agency from providing a superficial analysis of a project's potential impacts in the initial study and then defending its decision to adopt a negative declaration by pointing to the absence of evidence of any significant environmental impacts.

In the present matter, the County's failed to conduct an onsite survey of biological resources constitutes a failure to investigate. Such failure violates CEQA and constitutes a prejudicial abuse of discretion. (*Sundstrom v. County of Mendocino*, *supra,* 202 Cal.App.3d 296.)

Additionally, substantial evidence also supports a fair argument that the Project may have significant impacts to biological resources. When qualified experts present conflicting evidence on the nature or extent of a project's impacts, the agency must accept the evidence tending to show that the impact might occur. Evidence to the contrary is usually irrelevant, because the agency cannot weigh competing evidence. (*Rominger v. County of Colusa, supra, 229* Cal.App.4th 690 [opinion by traffic expert conflicted with negative declaration's trip generation assumptions]; *City of Carmel-by-the-Sea v. Board of Supervisors* (1986) 183 Cal.App.3d 229, 249 [conflicting opinions by multiple experts on definition and extent of wetlands].) A disagreement between experts regarding the

significance of one or more environmental effects can require an EIR in "marginal cases where it is not clear whether there is substantial evidence that a project may have a significant effect on the environment..." (CEQA Guidelines, § 15064(g).)

In the present case, the comments by Diane Moore, a qualified biologist, constitute substantial evidence supporting a fair argument that the Project may have significant impacts to biological resources. Ms. Moore comments that the pond may be suitable habitat for the California tiger salamander and/or vernal pool fairy shrimp. As such CEQA mandates the preparation of an EIR. (Pub. Resources Code, § 21151(a); CEQA Guidelines § 15064(f)(1)-(2); *No Oil*, *supra,* 13 Cal.3d at p. 75.)

Sincerely,

Donald B. Mooney
Attorney for Don and Zina Claunch

cc: Clients

PLNP2017-00079 Squirrel Monkey Haven

Comments from County Departments and Governmental Agencies

- Regional Water Quality Control Board
- Sacramento County Sheriff's Department
- County Site Improvement & Permits Section
- County Animal Control
- County Department of Transportation
- Environmental Management Department
- Department of Water Resources
- Sacramento Area Sewer District
- SMUD
- County Surveyor
- Sacramento Air Quality Management District
- County Special Districts

Hartman. Wendy

From: Chris Buckmaster <clbuckmaster2@gmail.com>
Sent: Wednesday, August 22, 2018 8:21 AM
To: Greetan. Joshua; Hawkins. Tim
Cc: Hartman. Wendy
Subject: Fwd: Squirrel Monkey Haven Follow-up

EXTERNAL EMAIL: If unknown sender, do not click links/attachments.

Please see the e-mail below from the Regional Water Quality Control Board's Confined Animal Facility Regulatory Unit.

Thank you,
Chris

---------- Forwarded message ---------
From: **Corral, Gilberto@Waterboards** <Gilberto.Corral@waterboards.ca.gov>
Date: Tue, Aug 21, 2018 at 5:24 PM
Subject: Squirrel Monkey Haven Follow-up
To: clbuckmaster2@gmail.com <clbuckmaster2@gmail.com>, smhyear@gmail.com <smhyear@gmail.com>
Cc: Herbst, Charlene@Waterboards <Charlene.Herbst@waterboards.ca.gov>, Muhl, Richard@Waterboards <Richard.Muhl@waterboards.ca.gov>, Sellards, Kim@Waterboards <Kim.Sellards@waterboards.ca.gov>

21 August 2018

Chris,

I was asked by my supervisor, Charlene Herbst, to briefly look into the Squirrel Monkey Haven proposal. I don't have additional comments or requirements for the proposed Squirrel Monkey Haven for now. I am interested in seeing the facility once in place.

Regards,

Gilberto Corral

Water Resource Control Engineer
Confined Animal Facility Regulatory Unit

Regional Water Quality Control Board

11020 Sun Center Dr., Ste. 200

Rancho Cordova, CA 95670

Phone: 916-464-4653

SACRAMENTO COUNTY SHERIFF'S DEPARTMENT

SCOTT R. JONES
Sheriff

February 5, 2018

Wendy Hartman, Project Manager
County of Sacramento
Office of Planning and Environmental Review
827 7th Street, Room 225
Sacramento, CA 95814

Subject: **Squirrel Monkey Haven Conditional Use Permit**
Control Number: **PLNP2017-00079**
APN: **138-0090-069**
Location: **11859 N. Valensin Road, Galt, CA 95632**

The Sacramento County Sheriff's Department Subdivision and Project Review representative conducted a review and assessment of the project planning documents associated with the above referenced project.

In accordance with the Sacramento County Zoning Code and Crime Prevention through Environmental Design (CPTED) standards, the following conditions are provided:

PRIOR TO ISSUANCE OF A FINAL BUILDING PERMIT:

Approved numbers or addresses shall be placed on all new or existing buildings in such a position as to be easily read from the street or road fronting the property. The minimum size of the numbers shall not be less than six (6) inches and shall be mounted immediately adjacent to a light source and shall also contrast with their background.

PRIOR TO OCCUPANCY:

1. Applicant shall comply with the Sacramento County Emergency Alarm Ordinance prior to the installation of any alarm system as specified in Sacramento County Code 9.96.085. Additional details about the county alarm ordinance can be obtained by contacting the Sacramento County Sheriff's Department Alarm Ordinance Bureau at (916) 874-4616 or e-mail to: **alarms@sacsheriff.com**.

2. Applicant shall comply with the Sacramento County Gate Permit requirements as outlined in Sacramento County Code 17.04, Section 503.6.1 for any gate installations subject to this code.

3. Applicant shall amend their ***Emergency Prevention and Action Plan*** to include **immediate notification** of the Sacramento County Sheriff's Department in the event of a missing or escaped monkey. Additionally, this plan shall also be amended to provide notification to the Sacramento County Sheriff's Department of the return or capture of any monkey reported as missing or escaped.

ADVISORY:

1. Applicant should consider registering the proposed video monitoring system with the Sheriff's Electronic Eye (S.E.E.) program. This is a voluntary program. It is recommended that the applicant review details of the benefits associated with this program at: https://www.sacsheriff.com/Pages/SEE/SEE.aspx

Regards,

/// SIGNED ///

Phillip G. Vogel, #643
Sacramento County Project & Subdivision Review Representative
Crime Prevention through Environmental Design

PV:pgv

Hartman. Wendy

From: Santiago. Anthony
Sent: Tuesday, January 30, 2018 1:01 PM
To: Hartman. Wendy
Cc: Zaragoza. Javier; Tabbada. Ian
Subject: RE: PLNP2017-00079 Squirrel Monkey Haven

Wendy,

I have no comment.

Thanks,
Tony Santiago, Principal Engineer
Office of Development & Code Services
County Engineering - Site Improvement & Permits Section
827 7th Street, Room 102, Sacramento, CA 95814
(916) 874-7093
www.engineering.saccounty.net

From: Hartman. Wendy
Sent: Tuesday, January 30, 2018 12:53 PM
To: Hunley. Christopher; Wall. Michael; Santiago. Anthony; Nygren, Amy; Vogel. Phillip (SacSheriff)
Subject: PLNP2017-00079 Squirrel Monkey Haven

Good afternoon please let me know if you have any conditions or comments for Squirrel Monkey Haven. Thank you

https://planningdocuments.saccounty.net/ViewProjectDetails.aspx?ControlNum=PLNP2017-00079

Wendy W. Hartman, AICP, Senior Planner
Office of Planning and Environmental Review
827 7th Street, Room 225, Sacramento, CA 95814 | (916) 875-0527 (direct)
For zoning inquiries, e-mail: sacplan@saccounty.net
www.per.saccounty.net
SACRAMENTO COUNTY

From: Dickinson. Dave
To: Hartman. Wendy
Subject: RE: Buckmaster Squirrel Monkey Haven Control # PLNP2017-00079
Date: Tuesday, December 12, 2017 9:55:32 AM
Attachments: image001.png

Hi Wendy,

The application for the Wild Animal Permit cannot be granted until after the inspection of the facility. Since it is not built yet we cannot inspect it. Looks like they would have to retrofit the building and then apply for the Wild Animal permit. I do not anticipate any problems as long as they do not deviate from the proposed plans. Am I correct that the building is not yet completed? If it is completed then they need to apply for the permit and we can do the inspection. Prior to populating the facility with the Monkeys we would need documentation for each animal including medical history with vaccinations.

David Dickinson; Director
Sacramento County Municipal Services
Department of Animal Care and Regulation

From: Hartman. Wendy
Sent: Friday, December 08, 2017 3:46 PM
To: Dickinson. Dave
Subject: FW: Buckmaster Squirrel Monkey Haven Control # PLNP2017-00079

Good afternoon Dave

I am follow-up to see if you have any conditions of approval for the project or any requirements I need to include in the environmental document or to make the applicant aware of. Thank you.

Wendy Hartman
Planning and Environmental Review
(916)875-0527

SACRAMENTO COUNTY

From: Hartman. Wendy
Sent: Tuesday, November 14, 2017 1:25 PM
To: Dickinson. Dave
Subject: Buckmaster Squirrel Monkey Haven Control # PLNP2017-00079

Good afternoon Dave,

As discussed on the phone, Planning has received an application for a use permit to allow for a sanctuary for squirrel monkeys. Per our zoning code we are classifying the facility as a kennel. In reviewing Chapter 8.26 of the County Code it also appears that if the use permit is approved they will need a permit for the keeping of wild animals from Animal Control. I have attached a few documents that describe the proposed operation (information provided by the applicant). Additional project information is posted on the County's project viewer at : https://planningdocuments.saccounty.net/ViewProjectDetails.aspx?ControlNum=PLNP2017-0079

After you have had a chance to review the materials please let me know if you have any questions or concerns about the proposed facility and operation plan. Most departments provide me with either a memo or email with any proposed conditions they would like added to the use permit (i.e. Prior to issuance of a final building permit, an application for a wild animal permit from Animal Care and Regulation along with the required fee shall be submitted and an inspection of the facility conducted. Prior to the operation of the facility, the applicant shall ..... or whatever your actual requirements are).

If you have any questions feel free to contact me.

Wendy W. Hartman, AICP, Senior Planner
Office of Planning and Environmental Review
827 7th Street, Room 225, Sacramento, CA 95814 | (916) 875-0527 (direct)
For zoning inquiries, e-mail: sacplan@saccounty.net
www.per.saccounty.net
SACRAMENTO COUNTY

Department of Transportation
Michael J. Penrose, Director

Divisions
Administration
Maintenance & Operations
Engineering & Planning

County of Sacramento

September 29, 2017

TO: Wendy Hartman
Office of Planning and Environmental Review

FROM: Kamal Atwal, P.E.
Department of Transportation

SUBJECT: **SQUIRREL MONKEY HAVEN UPZ**
Control No.: PLNP2017-00079
APN: 138-0090-069
Location: 11859 N. Valensin Road, Galt, CA 95632

The Department of Transportation has reviewed the application for the above referenced project. **Table 1** provides the trip generation expected for the proposed project. Please note that this trip generation analysis is preliminary and is not intended for use in a traffic study.

As shown on the trip generation table, the proposed project would generate less than 1,000 daily trips; therefore, a traffic study for the proposed project is not necessary.

If you have any questions, please call me at 875-2844.

KA:mp

Table 1: Trip Generation Estimates

Condition	Zoning or Use (Area)	Source	Daily Trip Rate	Daily Trips
Proposed Project	**Animal Shelter**			
	2 Employees[1]	Applicant	3.00 VTE/Emp	6
	2 Visitors	Applicant	2.00 VTE/Visitor	4
Total Trips				**10**

Notes: VTE = Vehicle trip ends EMP = Employee
[1] Assumed 3 daily trips per employee.

827 7th Street, Room 304 • Sacramento, California 95814 • phone (916) 874-6291 • fax (916) 874-7831 • www.saccounty.net

Department of Transportation
Michael J. Penrose, Director

Divisions
Administration
Maintenance & Operations
Engineering & Design

County of Sacramento

July 25, 2017

Wendy Hartman
Community Development Department
hartmanw@saccounty.net

Subject: **SQUIRREL MONKEY HAVEN** USE PERMIT
Control No.: **PLNP2017-00079**
Entitlement: **UPZ**
APN: **138-0090-069**
Location: **11859 N. Valensin Road, Galt, CA 95632**

The Department of Transportation has reviewed the above-referenced project and recommends the following conditions of approval relating to right-of-way, access, and improvement requirements:

Prior to approval of the Improvement Plans:

1. **Prior to issuance of a Certificate of Occupancy, obtain an encroachment permit if upgrading existing driveway, or, if constructing a secondary driveway, and for any other work performed in the right-of-way (i.e. installation of a drainage culvert under the proposed driveway) pursuant to Sacramento County Improvement Standards.**

Advisory Conditions:

2. **Any proposed project not incorporating an entry design that will accommodate access control gates pursuant to Sacramento County Code 17.04, Section 503.6.1 shall not be approved for future access control gates. Note: Gate plan submittal is a separate submittal process.**

3. **All building, parking, landscaping, monument sign, fence, and gate setbacks shall be based on the ultimate right-of-way, all of which must be shown on the project site exhibit and the building plans. Note: The ultimate right-of-way for the extension of Valensin Road designated on the General Plan is 84 feet (42 feet half along the south property line).**

Please contact SIPS for additional right-of-way, access, and improvement requirements.

If you have any questions, please call me at (916) 874-7069.

Tony Do, P.E., Department of Transportation

TD/ac

827 7th Street, Suite 304 • Sacramento, California 95814 • phone (916) 874-6291 • fax (916) 874-7831 • www.saccounty.net

Hartman. Wendy

From: Hunley. Christopher
Sent: Wednesday, October 11, 2017 11:07 AM
To: Hartman. Wendy
Subject: RE: PLNP2017-00079 Squirrel Monkey Haven

Follow Up Flag: Follow up
Flag Status: Flagged
Expires: Monday, April 9, 2018 12:00 AM

Wendy,

EMD staff provided the following information regarding your project topics:

Permits

Septic system

- Animal feces contamination is discussed in the facility operations plan. Cal-Waste Recovery of Galt will regularly pickup animal waste and bedding material.
- EMD is not currently aware of failing septic systems in the project vicinity.
- Wash down water will be collected into a new septic system. EMD requires that the proposed septic system be designed by an engineer; the design must describe the treatment process (e.g. disinfection, filtration, UV light) that will be used to treat the squirrel monkey wastewater. The engineered design will have to be reviewed and approved by EMD staff.

Water well

- Facility operations plan states 41,000 gallons of water will be used every year (= 112 gallons per day). On the average, each person in a household uses about 100 gallons of water per day.
- EMD is not currently aware of water well capacity issues in the project vicinity.
- The project site plan demonstrates that the well meets regulatory setback distances from contamination/pollution sources associated with the project.

Kennel Requirements

- EMD's stormwater protection program applies to dog kennel facilities only; there are no other EMD programs related to animal kennels.
- Animal control, Code Enforcement may have animal kennel requirements.
- Applicants noise study and operational plan appears to comply with Sac County's noise ordinance.

Thank you,

--Chris

(916) 876-7277 (direct)
(916) 591-2657 (mobile)

From: Hartman. Wendy
Sent: Thursday, September 28, 2017 2:51 PM
To: Hunley. Christopher
Subject: RE: PLNP2017-00079 Squirrel Monkey Haven

Hi Chris

Do you and anyone from your department that would be regulating this facility have time for a conference call sometime on Tuesday October 10th? I will be out all next week, but as soon as I return I need to finish processing the CEQA document.

Items to discuss:

Permit requirements

Any concerns with their operational plan I previously sent
Is EMD aware of any septic or well issues in the project vicinity

Thanks

Wendy Hartman
Planning and Environmental Review
(916)875-0527
SACRAMENTO COUNTY

From: Hunley. Christopher
Sent: Friday, September 15, 2017 1:30 PM
To: Hartman. Wendy
Subject: RE: PLNP2017-00079 Squirrel Monkey Haven

Thanks and enjoy your weekend!

--Chris

(916) 876-7277 (direct)
(916) 591-2657 (mobile)

From: Hartman. Wendy
Sent: Friday, September 15, 2017 10:46 AM
To: Hunley. Christopher
Subject: RE: PLNP2017-00079 Squirrel Monkey Haven

Thanks. If they need more info, we can set up a conference call later next week.

Sent from my Verizon 4G LTE Droid
On Sep 15, 2017 10:00 AM, "Hunley. Christopher" <HunleyC@Saccounty.net> wrote:
Will do, Wendy. Some of my peers that I consult with are out today, I will meet up with them early next week and put something together for you.

Environmental Management Department
Marie Woodin, Interim Director

County of Sacramento

July 20, 2017

TO: Wendy Hartman (hartmanw@saccounty.net)
FROM: Chris Hunley (hunleyc@saccounty.net)

SUBJECT: PLNP2017-00079 CONDITIONAL USE PERMIT (UPZ) FOR A PROJECT KNOWN AS SQUIRREL MONKEY HAVEN

ADDRESS: 11859 N. VALENSIN ROAD
APN: 138-0090-069

EMD RECOMMENDED PROJECT COMMENTS AND CONDITIONS:

1. **EXISTING ONSITE WASTEWATER TREATMENT SYSTEM:** EMD approved a septic system for the subject parcel on 10-24-1990 (EMD Permit Number ON0013239). The existing layout includes a 1,600 gallon septic tank and four leaching pits designed 3-feet diameter by 40-feet deep.

2. **NEW SEPTIC SYSTEM DESIGN LAYOUT:** The parcel is located in an area that requires 40-foot deep leaching pits. The proposed septic system design and construction for the animal facility must be reviewed and approved by EMD liquid waste program staff. Contact Jack Bellan at BellanJ@saccounty.net for more information.

3. **PRIOR TO ISSUANCE OF A BUILDING PERMIT:** Applicant shall obtain an approved liquid waste system permit from EMD. Contact Jack Bellan at BellanJ@saccounty.net for more information.

4. **PRIOR TO USE OF THE ANIMAL ENCLOSURE:** Applicant shall obtain final septic system construction inspection approval from EMD. Contact Jack Bellan at BellanJ@saccounty.net for more information.

5. **EXISTING WATER SUPPLY WELL**: EMD approved a new water supply well for the subject parcel on 6-27-1990 (EMD Well Permit Number WP0029336).

6. **AS PART OF ONGOING OPERATIONS:** Regarding noise from the proposed animal facility, applicant shall comply with applicable provisions of the Sacramento County Code Chapter 6.68 (Noise Ordinance). Contact Mark Barcellos at Barcellosm@saccounty.net for more information.

7. **ADVISORY:** If an abandoned well is found on the property, it must be issued an inactivation permit (subject to review and approval from EMD); repaired and brought back into service; or, it must be destroyed at the parcel owner's cost. All well related activities must be performed in compliance with EMD's well permitting and inspection program requirements. Contact EMD's abandoned well program at EMD-abndwells@saccounty.net with any questions.

8. **ADVISORY:** If an abandoned septic system tank is discovered on the property, it must be destroyed in compliance with EMD's liquid waste permitting and inspection program requirements.

W:\LAND USE\COMMENT LETTERS\2017\PLNP2017-00079 SR33398 SQUIRREL MONKEY HAVEN UPZ.DOCX

10590 Armstrong Ave. Suite A • Mather, CA 95655 • phone (916) 875-8550 • fax (916) 875-8513 • www.emd.saccounty.net

COUNTY OF SACRAMENTO
INTER-DEPARTMENT CORRESPONDENCE
DEPARTMENT OF WATER RESOURCES

MEMORANDUM

Date: July 20, 2017

TO: Wendy Hartman, Planning (916) 875-0527

Applicant:

Christine Buckmaster (650)644-7322
clbuckmaster2@gmail.com

FROM Michael Meaney, Water Resources (874-1321)

PROJECT NAME: **Squirrel Monkey Haven Use Permit**

CONTROL NUMBER: **PLNP2017-00079**

A.P.N.: **138-0090-069**

NOTE TO DWR STAFF: This memo is electronic only. No file is associated with this application.

COMMENTS SECTION:

1. FEMA Flood Zone: X
   Panel No. 06067C-0500J
   Date: 10/20/16

2. 100-Year water surface elevation: Local to be determined

3. Watershed: Willow Creek (South)

4. There is an existing drainage easement along the north property boundary over an existing drainage ditch.

5. Control appears to be the centerline of Valensin Rd at the low point in the road where the drainage culvert crosses north to south, approximately 1400 feet west of the parcel.

P:\Shared Folders\DRAINDEV\Planning\Planning Aps\2017 Planning Aps\PLNP2017-00079, Squirrel Monkey Haven UP\PLNP2017-00079, Squirrel Monkey Haven UP.docx

CONDITIONS OF APPROVAL:

If the project is approved, and the development proceeds, the subject application should be conditioned on the following:

PRIOR TO BUILDING PERMIT ISSUANCE

1. Minimum pad/floor elevations shall be required pursuant to the Sacramento County Floodplain Management Ordinance.

P:\Shared Folders\DRAINDEV\Planning\Planning Aps\2017 Planning Aps\PLNP2017-00079, Squirrel Monkey Haven UP\PLNP2017-00079, Squirrel Monkey Haven UP.docx

SACRAMENTO AREA
SEWER DISTRICT
SERVING YOU **24/7**

10060 Goethe Road
Sacramento, CA 95827-3553
Tel 916.876.6000
Fax 916.876.6160
www.sacsewer.com

July 10, 2017

Ms. Wendy W. Hartman,
County of Sacramento
Planning and Environmental Review Division (PER)
827 7th Street, Room 225
Sacramento, CA 95814

Subject: Squirrel Monkey Haven – CUP
APN: 138-0090-069
File No.: PLNP2017-00079

Dear Ms. Hartman,

Both the Sacramento Area Sewer District (SASD) and the Sacramento Regional County Sanitation District (Regional San) reviewed the subject documents.

This application is requesting a Conditional Use Permit (UPZ) to allow for the construction of an indoor-outdoor kennel to house up to 55 squirrel monkeys on a property with a zoning designation of General Agricultural (A-5). The property is located at 11859 N. Valensin Road on the east side of Colony Road in the Southeast Area community.

The subject property is outside the Urban Service Boundary and will not be provided sewer service by SASD or Regional San. Environmental Management Department approval will be required for the on-site waste disposal facilities. Additional comments and conditions of approval are not needed at this time.

If you have any questions regarding these comments, please call me at 916-876-6336 or call Dillon Miele at 916-876-6480.

Sincerely,

Yadira Lewis

Yadira Lewis
SASD Development Services

Powering forward. Together.

SMUD®

Sent Via E-Mail

July 18, 2017

Wendy W. Hartman
Sacramento County
Department of Community Development
827 7th Street, Room 225
Sacramento, CA 95814
hartmanw@saccounty.net

Subject: Squirrel Monkey Haven (Project No. PLNP2017-00079)

Dear Ms. Hartman:

The Sacramento Municipal Utility District (SMUD) appreciates the opportunity to provide comments on the Conditional Use Permit for the Squirrel Monkey Haven (PLNP2017-00079), located at 11859 N. Valensin Road on the east side of Colony Road in the Southeast Area Community of Sacramento County.

We have no comments to offer at this time. However, please reroute the Project for SMUD review if there are any changes to its scope.

For further questions regarding SMUD assets, please contact SMUD's Land Specialist, Yujean Kim at yujean.kim@smud.org or (916)732-5442.

Sincerely,

Angela C. McIntire
Regional & Local Government Affairs
Sacramento Municipal Utility District
6301 S Street, Mail Stop A313
Sacramento, CA 95817
angela.mcintire@smud.org

Cc: Yujean Kim, SMUD

Hartman. Wendy

From: Snow. Robert
Sent: Wednesday, July 26, 2017 11:40 AM
To: Hartman. Wendy; Scarpa. Jon
Subject: RE: PLNP2017-00079 Squirrel Monkey Haven

Wendy,

All of my comments were not addressed on this resubmittal. However, upon review, those items that I previously commented on are located outside the limits of the proposed development and have little bearing on the project. The applicant did satisfy the most important issue, being incorrect dimensions shown.

I am satisfied with the resubmittal and have no further comments.

Sincerely,

Robert W. Snow
Associate Land Surveyor
Office of Development & Code Services
County Engineering Division - Survey Section
9664 Ecology Lane, Sacramento, CA 95827 | (916) 875-5665
Mail Code: 55-606
My Office Hours: *6:00 A.M.- 3:30 P.M., (9/80)*
Go to www.SacMaps.com for filed maps and Corner Records 24/7

From: Hartman. Wendy
Sent: Wednesday, July 26, 2017 11:03 AM
To: Snow. Robert; Scarpa. Jon
Subject: PLNP2017-00079 Squirrel Monkey Haven

Good morning

The applicant has added a note to lower right corner of the site plan indicating that measurements are approximate. Will this suffice?

Wendy Hartman
Planning and Environmental Review
(916)875-0527
SACRAMENTO COUNTY

Hartman. Wendy

From: Snow. Robert
Sent: Tuesday, June 27, 2017 8:11 AM
To: Hartman. Wendy
Subject: RE: (PLNP2017-00079) Initial Distribution COUNTY PLANNING APPLICATION DISTRIBUTION
Attachments: Comments 1.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Wendy,

I have reviewed the site plan for the subject application and have the following comments:

1) Unless a survey is provided to document a field survey in which reestablished the lines of the subject, please ask the applicant for the following:

   - Remove the distances shown along the property lines.
   - Add the word "approximate" anywhere the phrase "property line" is located.

2) All easements noted thereon shall have the recording data (Book and Page) noted/listed.
3) Add "Prepared By:" and include the name and contact information of the individual who drafted the exhibit.

See attached "red lined" exhibit for clarification to support these comments.

The applicant is welcome to contact me directly if they need clarification or further direction.

Thank you,

Robert W. Snow
Associate Land Surveyor
Office of Development & Code Services
County Engineering Division - Survey Section
9664 Ecology Lane, Sacramento, CA 95827 | (916) 875-5665
Mail Code: 55-606
My Office Hours: *6:00 A.M.- 3:30 P.M., (9/80)*
Go to www.SacMaps.com for filed maps and Corner Records 24/7

From: hartmanw@saccounty.net [mailto:hartmanw@saccounty.net]
Sent: Thursday, June 22, 2017 2:51 PM
To: Santiago. Anthony; Snow. Robert
Cc: Plan-Distributions; AccelaAutoNotices
Subject: (PLNP2017-00079) Initial Distribution COUNTY PLANNING APPLICATION DISTRIBUTION

The Department of Community Development has received a new application.

Project Number: PLNP2017-00079

Application Name: Squirrel Monkey Haven Use Permit to ZA

Project Location: The property is located at 11859 North Valensin Road, on the east end of North Valensin Road in the Southeast community.

Parcels:
- 138-0090-069-0000

Supervisor District: Supervisor Don Nottoli (5)

Project Description: Use Permit to ZA for proposed Squirrel Monkey habitat on approximately 5 acres in the AR-5 zone. The habitat will include an approximately 5,400 square-foot agriculture structure to house 51 monkeys, and an outdoor naturalistic habitat area. The placement of a 1,200 square-foot modular caretaker facility may be included in the project proposal.

Entitlements:
- UPZ - Use Permit - ZA

Lead Planner: Wendy Hartman (916) 875-0527 hartmanw@saccounty.net

Application Submitted Date: 5/25/2017

You may download application documents and exhibits from the following Projects Viewer web page:
http://www.planningdocuments.saccounty.net/ViewProjectDetails.aspx?ControlNum=PLNP2017-00079

Comment Letter Due Date: 07/20/2017

Technical Study Request Due Date: 07/20/2017

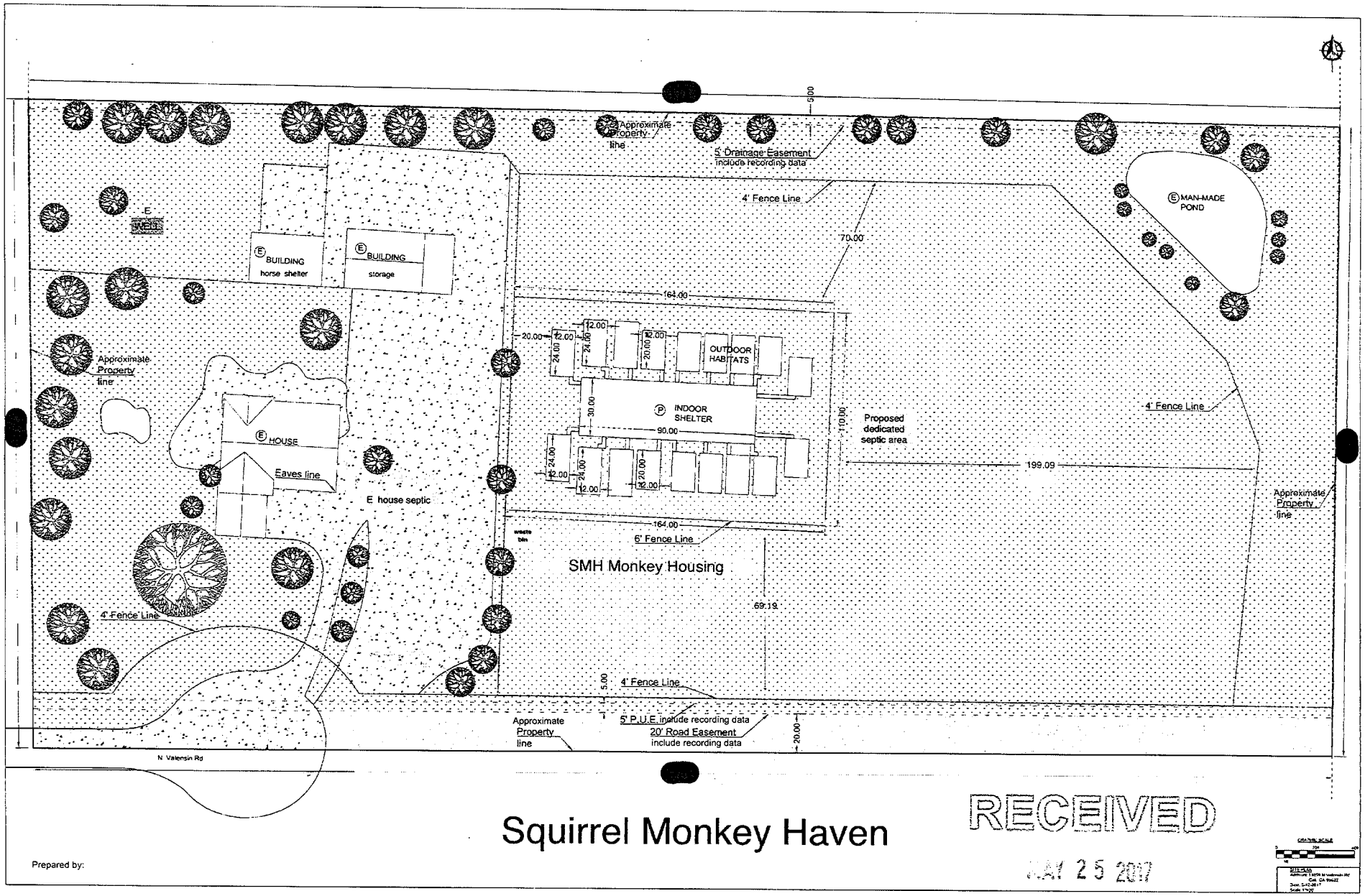
If you experience any technical difficulties contact Mark Michelini at 916-874-5648 or michelinim@saccounty.net

---

SACCO LAND DEV - SITE IMPROV

EXHIBIT 1

PLNP 2017 - 00079



Squirrel Monkey Haven

Prepared by:

RECEIVED

MAY 25 2017

County of Sacramento
Department of Community Development
Planning and Environmental Review Division

Hartman. Wendy

From: Rachel DuBose <RDubose@airquality.org>
Sent: Friday, June 23, 2017 12:27 PM
To: Hartman. Wendy
Subject: RE: (PLNP2017-00079) Initial Distribution COUNTY PLANNING APPLICATION DISTRIBUTION

Interesting project!
No comments from SMAQMD's end.

From: hartmanw@saccounty.net [mailto:hartmanw@saccounty.net]
Sent: Thursday, June 22, 2017 2:50 PM
To: Rachel DuBose; Larry Robinson
Cc: Plan-Distributions@saccounty.net; AccelaAutoNotices@saccounty.net
Subject: (PLNP2017-00079) Initial Distribution COUNTY PLANNING APPLICATION DISTRIBUTION

The Department of Community Development has received a new application.

Project Number: PLNP2017-00079

Application Name: Squirrel Monkey Haven Use Permit to ZA

Project Location: The property is located at 11859 North Valensin Road, on the east end of North Valensin Road in the Southeast community.

Parcels:
- 138-0090-069-0000

Supervisor District: Supervisor Don Nottoli (5)

Project Description: Use Permit to ZA for proposed Squirrel Monkey habitat on approximately 5 acres in the AR-5 zone. The habitat will include an approximately 5,400 square-foot agriculture structure to house 51 monkeys, and an outdoor naturalistic habitat area. The placement of a 1,200 square-foot modular caretaker facility may be included in the project proposal.

Entitlements:
- UPZ - Use Permit - ZA

Lead Planner: Wendy Hartman (916) 875-0527 hartmanw@saccounty.net

Application Submitted Date: 5/25/2017

You may download application documents and exhibits from the following Projects Viewer web page:
http://www.planningdocuments.saccounty.net/ViewProjectDetails.aspx?ControlNum=PLNP2017-00079

Comment Letter Due Date: 07/20/2017

Technical Study Request Due Date: 07/20/2017

If you experience any technical difficulties contact Mark Michelini at 916-874-5648 or michelinim@saccounty.net

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AIR QUALITY MGMT DISTRICT

Hartman. Wendy

From: Wright. Melissa
Sent: Friday, June 23, 2017 12:15 PM
To: Hartman. Wendy; Goetz. Susan; Kodani. Dorothy
Subject: RE: (PLNP2017-00079) Initial Distribution COUNTY PLANNING APPLICATION DISTRIBUTION

Wendy,

Special Districts has no comments.

Thank you,

Melissa L. Wright, Senior Civil Engineer, Special Districts
Office of Development & Code Services - County Engineering
827 7th Street, Room 225, Sacramento, CA 95814 | (916) 874-4243
www.engineering.saccounty.net
SACRAMENTO COUNTY

From: hartmanw@saccounty.net [mailto:hartmanw@saccounty.net]
Sent: Thursday, June 22, 2017 2:51 PM
To: Goetz. Susan; Kodani. Dorothy; Almaraz. Jeff; moneyj@saccounty.net; Wright. Melissa
Cc: Plan-Distributions; AccelaAutoNotices
Subject: (PLNP2017-00079) Initial Distribution COUNTY PLANNING APPLICATION DISTRIBUTION

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SACCO SPECIAL DIST

ACKNOWLEDGEMENTS

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Joshua Greetan, Assistant Planner

Wendy Hartman, Senior Planner

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APPLICANT

Christine and Paul Buckmaster