Mitigated Negative Declaration

Sonoma County Permit and Resource Management Department
2550 Ventura Avenue, Santa Rosa, CA 95403
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Adoption Date:
State Clearinghouse: N/A

This statement and attachments constitute the **Mitigated Negative Declaration** as proposed for or adopted by the Sonoma County decision-making body for the project described below.

File No.: PLP11-0042

Planner: Melinda Grosch

Project Name: Meadows Dog Kennel

Project Description: Dog Boarding and Day Care, grooming, and training for up to 35 dogs.

Project Location: 6445 Highway 12, Santa Rosa
See Location Map - Attached

Environmental Finding:

Based upon the information contained in the Initial Study included in the project file, it has been determined that there will be no significant environmental effect resulting from this project, provided that mitigation measures are incorporated into the project. The Mitigated Negative Declaration has been completed in compliance with CEQA State and County guidelines and the information contained therein has been reviewed and considered.

There will not be a potential impact on biotic habitat of concern to Fish & Game.

Initial Study:	Attached
Other Attachments:	Noise Studies prepared on Sept. 27, 2012 and Nov. 12, 2012, and Nov. 30, 2012. Traffic Study prepared on Sept 28, 2012 Site Plan Proposal Statement revised September 2012
Decision-making Body:	Sonoma County Board of Zoning Adjustments
Lead Agency:	Sonoma County Permit and Resource Management Department

COUNTY OF SONOMA
PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

2550 Ventura Avenue, Santa Rosa, CA 95403
(707) 565-1900 FAX (707) 565-1103

ENVIRONMENTAL CHECKLIST FORM

FILE #: PLP11-0042
PROJECT: Meadows Kennel

PLANNER: Melinda Grosch
DATE: REVISED January 3, 2013

LEAD AGENCY: Sonoma County Permit and Resource Management Department

PROJECT LOCATION: 6445 Highway 12, Santa Rosa

APPLICANT NAME: Heidi Niemann

APPLICANT ADDRESS: 6445 Highway 12, Santa Rosa CA 95409

GENERAL PLAN DESIGNATION: Diverse Agriculture 10 acres per dwelling

SPECIFIC/AREA PLAN: None

ZONING: DA (Diverse Agriculture), B6-10 acre density, SR (Scenic Resources), VOH (Valley Oak Habitat)

DESCRIPTION OF PROJECT: Request for a Use Permit for a Boarding Kennel and Doggie Day Care with grooming and training for up to 35 dogs. Up to five full-time and two part-time employees are anticipated when the facility is in full operation. The kennel will be open from 7:00 a.m. to 7:00 p.m. Monday through Friday, 8:00 a.m. to 4:00 p.m. Saturday, and Noon to 7:00 p.m. on Sunday for pick-up and drop-off.

SURROUNDING LAND USES AND SETTING: Briefly describe the project's surroundings: To the North is a hilly area going up into the Mayacamas. The use is rural residential and open space. To the East is the Sonoma Valley, immediately adjoining the property is a vineyard. To the South is the Oakmont Retirement Community of single family dwellings, to the West is rural residential lands leading into the City of Santa Rosa.

Other Public Agencies whose approval is required (e.g. permits, financing approval, or participation agreement):

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Less than Significant with Mitigation" as indicated by the checklist on the following pages.

X Aesthetics	___ Agricultural & Forest Resources	X Air Quality
___ Biological Resources	X Cultural Resources	X Geology/Soils
___ Greenhouse Gas Emission	___ Hazards & Hazardous Materials	___ Hydrology/Water Quality
___ Land Use and Planning	___ Mineral Resources	X Noise
___ Population/Housing	___ Public Services	___ Recreation
X Transportation/Traffic	___ Utilities/Service Systems	
___ Mandatory Findings of Significance		

DETERMINATION

On the basis of this initial evaluation:

___ The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

_X_ Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

___ The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

___ The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed by in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

___ Although the proposed project could have a significant effect on the environment, all potentially significant effects were previously analyzed in an earlier EIR or Negative Declaration pursuant to applicable standards and potential impacts have been avoided or mitigated pursuant to that earlier EIR or Negative Declaration, including revisions or mitigation measures that are imposed upon the proposed project. There are no changes in the project, no new information related to potential impacts, and no changes in circumstances that would require further analysis pursuant to Section 15162 of CEQA Guidelines, therefore no further environmental review is required.

Incorporated Source Documents

In preparation of the Initial Study checklist, the following documents were referenced/developed, and are hereby incorporated as part of the Initial Study. All documents are available in the project file or for reference at the Permit and Resource Management Department.

_X_ Project Application and Description
_X_ Initial Data Sheet
_X_ County Planning Department's Sources and Criteria Manual
_X_ Sonoma County General Plan and Associated EIR
_X_ Specific or Area Plan: North Sonoma Valley Specific Plan
_X_ Sonoma County Zoning Ordinance
___ Sonoma County Rare Plant Site Identification Study
_X_ Project Referrals from Responsible Agencies
_X_ State and Local Environmental Quality Acts (CEQA)
___ Full record of previous hearings on project in File
___ Correspondence received on project.
_X_ Other technical reports:

The Meadows Kennel Traffic Analysis, 6445 Sonoma Hwy by Chris Kinzel, P.E., President, TJKM Transportation Consultants, August 11, 2011

Supplemental Traffic Analysis for Proposed Expansion of Services at the Meadows Kennel at 6445 Sonoma Highway in Sonoma County by Chris Kinzel, P.E., President, TJKM Transportation Consultants, September 28, 2012

Noise Impacts and Mitigation in Connection with the Proposed Meadows Kennel, 6445

Highway 12, Sonoma County, California by T. A. Barnebey, Ph.D., Principle Consultant, Sound Solutions, August 29, 2011

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 17 at the end of the checklist, "Earlier Analysis" may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063 (c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated", describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:
a) the significance criteria or threshold, if any, used to evaluate each question; and
b) the mitigation measure identified, if any, to reduce the impact to less than significance.

1. **AESTHETICS** Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	____	____	____	X

Comment: The site is not in an area with a scenic vista.

Mitigation: No mitigation measures are required.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	____	____	X	____

Comment: Highway 12 is designated as a Scenic Corridor by the County of Sonoma and a State Scenic Highway by the State. No damage to trees, rocks or buildings will result from the project.

Mitigation: No mitigation measures are required.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?	____	X	____	____

Comment: The General Plan Open Space Element includes extensive Goals, Objectives, and Policies to preserve the visual character of Sonoma County. The rural nature and natural scenic beauty of the county are considered valuable assets for both local residents and for the tourist industry. Three Scenic Resources designations have been developed to help preserve the County's visual resources. These are: Scenic Corridors, Scenic Landscape Units, and Community Separators.

Highway 12 is both a State designated Scenic Highway and a County designated Scenic Corridor. The General Plan has the following Goal for Scenic Corridors:

GOAL OSRC-3:
Identify and preserve roadside landscapes that have a high visual quality as they contribute to the living environment of local residents and to the County's tourism economy.

The goal is implemented by the following policy:

Policy OSRC-3c: Establish a rural Scenic Corridor setback of 30 percent of the depth of the lot to a maximum of 200 feet from the centerline of the road unless a different setback is provided in the Land Use Policies for the Planning Areas. Prohibit development within the setback with the following exceptions:

None of the exceptions apply to this project.

One new building is proposed as a part of this project as well as a new sign oriented towards Highway 12. The applicant has also requested an exception to the height and location criteria for the sign.

The Sonoma County Zoning Code includes sign regulation under Section 26-84. The sign that would be allowed for this location is an Appurtenant Sign. An Appurtenant Sign is defined as a "sign which directs attention to an occupancy, business, commodity, service or entertainment conducted, sold or offered only from the premises where the sign is maintained." There can only be one Appurtenant Sign per use and they are limited in height (six feet maximum) and surface area (32 square feet). There are also requirements for landscaping, lighting, and a requirement for general compatibility.

The design review committee may approve signs which exceed the above standards where it is deemed appropriate in light of topography, vegetation or unique physical characteristics or design features.

State's designation of Highway 12 is a State designated scenic highway in this area. The State's regulations on this type of sign are fairly lenient as well as they do not consider them advertising structures. State regulations are found in the Outdoor Advertising Act which can be found at:
http://www.dot.ca.gov/oda/download/ODA_Act_&_Regulations.pdf

Highway 12 is also designated as a Scenic Corridor by Sonoma County.

In addition to Highway 12's scenic designation the parcel is located in a Community Separator, specifically the Northeast Santa Rosa Community Separator. The General Plan describes the Northeast Santa Rosa Community Separator as follows:

This 3,300 acre separator extends along Highway 12 near the Oakmont community and follows the ridgeline above Rincon Valley northwest of Calistoga Road. Included in this area are scattered rural residential development and open oak woodlands. Urban encroachment in the hillside areas and valley floor would detract from the visual quality.

Only one new building is planned and it will be designed to match the house. It will be used for the indoor portion of the indoor/outdoor kennel runs. Dogs will be confined to the indoor kennels at night. The proposed kennel does not directly conflict with Community Separator policies. Kennels are also generally associated with rural areas since having space between the kennel and other uses provides a buffer for noise. However, design review of the building will be required and it will need to be placed so as to meet the Scenic Corridor setback criteria.

The General Plan includes policies to implement the Goals and Objectives of the Scenic Resources designated lands. These two polices are relevant to the site and its scenic designations.

Objective OSRC-1.2: Retain a rural character and promote low intensities of development in Community Separators. Avoid their annexation or inclusion in spheres of influence for sewer and water service providers.

Policy OSRC-1b: Avoid commercial or industrial uses in Community Separators other than those that are permitted by the agricultural or resource land use categories.

The Design Review Committee reviewed the sign and the proposed kennel building on December 7, 2011 and made some recommendations on the landscaping, fencing, signage, and lighting. Additional oak trees will be planted along the south side of the building, all lights are to be mounted so that they are downward facing, fully shielded and meet the Dark Sky International standards. The sign was a particular concern, especially for the neighborhood. The Design Review Committee recommended that the sign be relocated further onto the property to allow for a better line of sight from the highway to help reduce perceived safety issues with people not seeing the sign until they are where they need to turn in on the private road. The Committee further recommended that the applicant should consider using

distinctive fencing and other features to identify the site rather than a sign. The fence would also be more visible to people traveling towards Sonoma on Highway 12 and allow them to prepare for a turn into the kennel in advance. At a minimum the Committee recommended that the sign incorporate natural materials and landscaping so that it has a more rural feel and blends in with the area more.

Mitigation: The applicant shall plant additional landscaping (oak trees) along the south side of the proposed kennel building. The building plans shall show all lighting and clearly show the fixture types that will be located at each place where outdoor lighting is indicated.

Mitigation Monitoring: The project planner shall perform a final inspection before the building permit receives final occupancy to ensure that the lights are fully shielded and downward facing and meet the International Dark-Sky Association's criteria as outlined in their website: http://www.darksky.org/

Mitigation: The applicant shall provide a site plan showing the location of the sign if it is retained rather than being replaced with distinctive fencing or sculpture. Additionally, the sign shall be landscaped and the use of natural materials around the base to make the sign more compatible with the rural nature of the site.

Mitigation Monitoring: The project planner shall perform a final inspection before the building permit receives final occupancy to ensure that the sign is appropriately landscaped. If the sign is replaced with distinctive fencing or sculpture the planner shall review them after they are installed.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	___	X	___	___

Comment: No significant changes in lighting will result from the project. The garage to be used for the kennel building already has some exterior lights. Additional lighting for the new building has been proposed and reviewed by the Design Review Committee. Existing outdoor lights provide security and pathway lighting. Only lighting specified as security lighting will be motion activated to come on for short periods when triggered. All other lights shall be turned off when not in use so that they are not on all night.

Mitigation: Prior to commencing the use or issuance of building permits, an exterior lighting plan shall be submitted for design review (by PRMD or Design Review Committee). Lighting shall be downward facing, fully shielded, and located at the lowest possible point to the ground to prevent spill over onto adjacent properties, glare, nighttime light pollution and unnecessary glow in the rural night sky. Security lighting shall be put on motion sensors Flood lights and uplights are not permitted. Luminaires shall have a maximum output of 1000 lumens per fixture. Total illuminance beyond the property line created by simultaneous operation of all exterior lighting shall not exceed 1.0 lux.

Light fixtures shall be full cut-off fixtures, take ground fog into consideration, shall not be located at the periphery of the property and shall shut off automatically when the use is not operating. No lighting shall be directed towards off-site areas.

Mitigation Monitoring: The Project Review planner shall not approve the construction of the kennel building or operation of the boarding kennel until a lighting plan has been approved.

2. **AGRICULTURE AND FOREST RESOURCES**	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact

In determining whether impacts to agricultural

resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? ___ ___ X ___

Comment: The site is designated as Farmland of Local Importance on the western side and "Other" on the eastern side. At three acres in size the commercial agricultural uses that could be made of the property are limited. Adjoining properties to the west are also small parcels with the same Farmland designation they are currently used to pasture horses. To the east the land is designated as Prime Farmland and these areas are planted in vineyards.

Mitigation: No mitigation measures are required.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? ___ ___ X ___

Comment: The DA (Diverse Agriculture) zoning allows dog kennels with a Use Permit. The property is not under a Williamson Act contract.

Mitigation: No mitigation measures are required.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? ___ ___ ___ X

Comment: The property is not defined as forestland, timberland or Timberland Production as defined by the California Code. The land is on the valley floor and would be open rolling grasslands and oak savanna in its natural state. The area is currently developed with rural residential uses and some agriculture.

Mitigation: No mitigation measures are required.

d) Result in the loss of forest land or conversion of forest land to non-forest use? ___ ___ ___ X

Comment: See 2.c. above.

Mitigation: No mitigation measures are required.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? ____ ____ ____ X

Comment: The project will not result in the conversion of Farmland to non-agricultural land or Forestland to non-forestland.

Mitigation: No mitigation measures are required.

3. **AIR QUALITY** Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan? ____ ____ ____ X

Comment: The project is within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The District does not meet federal or state standards for ozone precursors, and has adopted an ozone Attainment Plan and a Clean Air Plan describing steps that will be taken to bring air quality in the district into compliance with federal and state Clean Air Acts' ozone standards. The plans deal primarily with emissions of ozone precursors (nitrogen oxides and volatile organic compounds (hydrocarbons)). The project will not conflict with the District's air quality plans to reduce emissions from new uses.

Mitigation: No mitigation measures are required.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? ____ ____ ____ X

Comment: State and federal standards have been established for "criteria pollutants": ozone precursors, carbon monoxide, sulfur dioxide and particulates (PM_{10} and $PM_{2.5}$). The pollutants NOx (nitrogen oxides) and hydrocarbons form ozone in the atmosphere in the presence of sunlight. Significance thresholds for ozone precursors, carbon monoxide and particulates have been established by BAAQMD. The principal source of ozone precursors is vehicle emissions, although stationary internal combustion engines must also be considered. BAAQMD generally does not recommend detailed NOx and hydrocarbon air quality analysis for projects generating less than 2,000 vehicle trips per day. Given the low traffic generation of the project relative to the screening criteria, ozone precursor emissions would be less than significant.

Detailed air quality analysis for carbon monoxide is generally not recommended unless a project would generate 10,000 or more vehicle trips a day, or contribute more than 100 vehicles per hour to intersections operating at LOS D, E, or F with project traffic. Given the

low traffic generation of the project relative to the screening criteria, carbon monoxide emissions would be less than significant.

Mitigation: No mitigation measures are required.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? ___ X ___ ___

Comment: The BAAQMD is a non-attainment area for ozone precursors and PM_{10} (fine particulate matter). See 3.b. for a discussion of ozone emissions. The project will not have a significant long-term effect on PM_{10}, because all disturbed surfaces will be paved or landscaped, and dust generation will be insignificant.

However, there could be a significant short-term emission of dust (which would include PM_{10}) during construction. These emissions could be significant at the project level, and would also contribute to a cumulative impact.

The impact could be reduced to less than significant by including dust control as described in the following mitigation measure:

Mitigation: The following dust control measures will be included in the project:

i. Water or other dust palliative will be applied to unpaved portions of the construction site, unpaved roads, parking areas, staging areas and stockpiles of soil daily as needed to control dust.

ii. Trucks hauling soil, sand and other loose materials over public roads will cover the loads, or will keep the loads at least two feet below the level of the sides of the container, or will wet the load sufficiently to prevent dust emissions.

iii. Paved roads will be swept as needed to remove any visible soil that has been carried onto them from the project site.

Mitigation Monitoring: Building/grading permits for ground disturbing activities shall not be approved for issuance by Project Review staff until the above notes are printed on the building, grading and improvement plans. The applicant shall be responsible for notifying construction contractors about the requirement for dust control measures to be implemented during construction. If dust complaints are received, PRMD staff shall conduct an on-site investigation. If it is determined by PRMD staff that complaints are warranted, the permit holder shall implement additional dust control measures as determined by PRMD or PRMD may issue a stop work order.

d) Expose sensitive receptors to substantial pollutant concentrations? ___ ___ ___ X

Comment: Sensitive receptors are facilities or locations where people may be particularly sensitive to air pollutants such as children, the elderly or people with illnesses. These uses include schools, playgrounds, hospitals, convalescent facilities, and residential areas. There will be no significant, long term increase in emissions.

Mitigation: No mitigation measures are required.

e) Create objectionable odors affecting a

substantial number of people?	____	X	____	____

Comment: While dog feces has the potential to create objectionable odors, the applicant has proposed a program of constant clean-up and deposit into airtight containers for at least weekly removal to the landfill. With this method of manure management odors and flies will be controlled so that no adjoining properties will be affected.

Mitigation: Dog waste shall be removed as it is deposited and at a minimum two times per day (morning and evening) from all areas that the dogs have access to. Waste shall be placed in air tight containers and removed from the site at least once a week. Runs shall not be hosed down. Solid waste shall be removed and residue and liquid waste shall be mopped up and the area cleaned with a disinfectant solution. The gravel areas shall be disinfected routinely with a dilute mixture of chlorine bleach and water.

Mitigation Monitoring: Kennels are routinely inspected by Sonoma County Animal Care and Control who are checking for overall cleanliness, as well as security, and proper control of dogs at the kennel. If complaints are received they will be investigated by both PRMD staff and Animal Control. Failure to comply with the manure management plan will result in more frequent inspections and may result in the revocation of the kennel license.

4. **BIOLOGICAL RESOURCES** Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	____	____	____	X

Comment: The project site is not located within the potential range of the Sonoma County California tiger salamander (CTS) as shown on the map prepared by the United States Fish and Wildlife Service (2007).

The site is located near where the foothills of the Mayacama Mountains start and much of the intermediate foothill elevations are chaparral. The California Natural Diversity Database (CNDDB) shows that there is a potential for the following plant species within a one-mile radius of the site: Napa False Indigo (*Amorpha californica var. napensis*), Sonoma Ceanothus (*Ceanothus sonomensis*), Holly-leaved Ceanothus (*Ceanothus purpureus*), Calistoga ceanothus (*Ceanothus divergens*), and Fragrant Fritillary (*Fritillaria liliacea*). With the exception of the fritillary, these plant species are all associated with the chaparral habitat. However, given the lack of appropriate soils and elevations it is not anticipated that any of these species would occur on the valley floor where the project site is located. The fritillary prefers moist areas and was found in Annadel State park near an intermittent creek. The subject property does not contain any areas of prolonged saturation (vernal pools, ephemeral creeks, etc.) that would produce the moist conditions that this plant likes.

The CNDDB also notes that Pallid Bats (*Antrozous pallidus*) have been observed within the one mile radius from the subject property. They like open grasslands for foraging and may use this site for that purpose. There are no un-used buildings, hollow trees or rock outcroppings on the property that would be suitable roosting sites for this species. The establishment of a dog kennel with all dogs required to be inside during nighttime hours is unlikely to affect the bats' nighttime foraging.

Mitigation: No mitigation measures are required.

b) Have a substantial adverse effect on any riparian

habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? ____ ____ ____ X

Comment: There are no riparian or other sensitive natural communities on the property. The parcel is relatively small and has been used for residential purposes with incidental use of the open area as pasture. When not grazed the pasture was mowed to reduce fire hazards.

Mitigation: No mitigation measures are required.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? ____ ____ ____ X

Comment: The site currently consists of fenced and cross fenced pasture with a single family dwelling and garage. There are no streams or wetlands associated with the site. The vineyard to the east has a steep sided, above ground, man-made irrigation pond with no natural vegetation. A kennel building is planned as part of the operation, otherwise no new construction is included in the proposal.

Mitigation: No mitigation measures are required.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? ____ ____ ____ X

Comment: The small parcel size surrounded by other lots of relatively small size does not allow for use of the site as a native wildlife nursery site. The exception would be nesting birds. Since the site has been in continuous use as a residence and the occupants have always kept pet dogs it is unlikely that any of the species using this site would be affected by human activities associated with the operation of a dog kennel.

Migratory wildlife corridors generally include riparian areas and connected open space areas adjacent to urban centers. There is no indication that the site is a wildlife corridor.

Mitigation: No mitigation measures are required.

e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance? ____ ____ ____ X

Comment: The site has a VOH (Valley Oak Habitat) Zoning Designation. However, there are no Valley Oaks (Quercus lobata) present on the site and no planned tree removals as a part of this project.

Mitigation: No mitigation measures are required.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat conservation plan? ____ ____ ____ X

Comment: Habitat conservation plans and natural community conservation plans are site-specific plans to address take of listed species of plants and animals. The project site is not located in an area subject to a habitat conservation plan or natural community conservation plan. There are very few HCPs in Sonoma County-they affect certain land in timber production areas in the northwest county (for spotted owl) and in the lower Petaluma River/Sonoma Creek watershed (for saltmarsh harvest mouse/black rail/clapper rail).

Mitigation: No mitigation measures are required.

5. **CULTURAL RESOURCES** Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of an historical resource as defined in § 15064.5?	____	____	____	X

Comment: The primary dwelling and out buildings are relatively new and would not be considered historical. The proposed dog kennel includes the construction of a new kennel building which will be built to look like a barn. The construction of the kennel will not involve removal of any existing structures and will require little or no grading.

Mitigation: No mitigation measures are required.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	____	X	____	____

Comment: A referral was sent to the Northwest Information Center at Sonoma State University. They recommended an archaeological survey of the property, however, the proposed project does not include any significant earth disturbance. The following mitigation measure will ensure that any archaeological resources that might exist subsurface will be protected.

Mitigation: All building and/or grading permits shall have the following note printed on plan sheets:

"In the event that archaeological resources such as pottery, arrowheads, midden or culturally modified soil deposits are discovered at any time during grading, scraping or excavation within the property, all work shall be halted in the vicinity of the find and County PRMD - Project Review staff shall be notified and a qualified archaeologist shall be contacted immediately to make an evaluation of the find and report to PRMD. PRMD staff may consult and/or notify the appropriate tribal representative from tribes known to PRMD to have interests in the area. Artifacts associated with prehistoric sites include humanly modified stone, shell, bone or other cultural materials such as charcoal, ash and burned rock indicative of food procurement or processing activities. Prehistoric domestic resources include hearths, firepits, or house floor depressions whereas typical mortuary resources are represented by human skeletal remains. Historic artifacts potentially include all by-products of human land use greater than 50 years of age including trash pits older than fifty years of age. When contacted, a member of PRMD Project Review staff and the archaeologist shall visit the site to determine the extent of the resources and to develop and coordinate proper protection/mitigation measures required for the discovery. PRMD may refer the mitigation/protection plan to designated tribal representatives for review and comment. No work shall commence until a protection/mitigation plan is reviewed and approved by PRMD - Project Review staff. Mitigations may include avoidance, removal, preservation and/or recordation in accordance with California law. Archeological evaluation and mitigation shall be at the applicant's sole expense.

If human remains are encountered, all work must stop in the immediate vicinity of the discovered remains and PRMD staff, County Coroner and a qualified archaeologist must be notified immediately so that an evaluation can be performed. If the remains are deemed to be Native American, the Native American Heritage Commission must be contacted by the Coroner so that a "Most Likely Descendant" can be designated and the appropriate provisions of the California Government Code and California Public Resources Code will be followed."

Mitigation Monitoring: Building/grading permits shall not be approved for issuance by Project Review staff until the above notes are printed on the building, grading and improvement plans.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? ____ ____ ____ X

Comment: There are no unique geological features on the property. The geology of the site and the nature of the project make it extremely unlikely that paleontological resources would be destroyed.

Mitigation: No mitigation measures are required.

d) Disturb any human remains, including those interred outside of formal cemeteries? ____ ____ X ____

Comment: No burial sites are known in the vicinity of the project. In the event that human remains are unearthed during construction, state law requires that the County Coroner be contacted in accordance with Section 7050.5 of the State Health and Safety Code to investigate the nature and circumstances of the discovery. At the time of discovery, work in the immediate vicinity would cease until the Coroner permitted work to proceed. If the remains were determined to be native American interment, the Coroner will follow the procedure outlined in CEQA Guidelines Section 15065.5(e). The mitigation measures in 5.b. will ensure that potential impacts are less than significant.

Mitigation: See 5.b. above.

6. **GEOLOGY AND SOILS** Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) 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? Refer to Division of Mines and Geology Special Publication 42.	____	____	____	X

Comment: The site is not located within an Alquist Priolo Earthquake Fault zone, and there are no other known active or potentially active faults on the property. The Brush Creek fault is approximately 4.5 miles to the west.

All of Sonoma County is subject to seismic shaking that would result from earthquakes along

the San Andreas, Healdsburg-Rodgers Creek, and other faults. Predicting seismic events is not possible, nor is providing mitigation that can entirely reduce the potential for injury and damage that can occur during a seismic event. However, using accepted geotechnical evaluation techniques and appropriate engineering practices, potential injury and damage can be diminished, thereby exposing fewer people and less property to the effects of a major damaging earthquake.

Project conditions of approval require that building permits be obtained for all construction and that the project meet all standard seismic and soil test/compaction requirements. The project would therefore not expose people to substantial risk of injury from seismic shaking.

Mitigation: No mitigation measures are required

ii) Strong seismic ground shaking? ____ ____ X ____

Comment: The hazard maps for the Sonoma County General Plan show this area as being subject to Very Strong Shaking during seismic events. One of the buildings that is to be used as the dog kennel is an existing, one-story garage. There will not be a significant increase in risk since use of the garage as a kennel doesn't significantly increase the human occupancy of the building. The building was constructed under permits from Sonoma County meaning that it was reviewed for seismic safety and resistance to ground shaking. As a result of this application the building will be reviewed again as it will constitute a change in occupancy. If any upgrades are required they will be carried out before the use is implemented. The kennel building the applicant proposes to build on site will be subject to all permit requirements at the time of building.

Mitigation: No mitigation measures are required.

iii) Seismic-related ground failure, including liquefaction? ____ ____ ____ X

Comment: The site is not in an area subject to liquefaction or ground failure.

Mitigation: No mitigation measures are required.

iv) Landslides? ____ ____ ____ X

Comment: The site is not in an area subject to landslides.

Mitigation: No mitigation measures are required.

b) Result in substantial soil erosion or the loss of topsoil? ____ ____ X ____

Comment: The construction of the new kennel building will result in minor disturbance of the earth. All grading and earth moving will be subject to the permit process and best management practices for erosion control will be implemented. Therefore, there will be no significant erosion or loss of topsoil.

Mitigation: No mitigation measures are required.

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, liquefaction or collapse? ____ ____ ____ X

Comment: The site is not indicated as having unstable soils on the hazards maps.

Mitigation: No mitigation measures are required.

d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	___	___	___	X

Comment: Table 18-1-B of the California Building Code is an index of the relative expansive characteristics of soil as determined through laboratory testing. No substantial risks to life or property are expected if the project is located on expansive soil. Soil testing may be required for building or grading permits.

Mitigation: No mitigation measures are required.

e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	___	X	___	___

Comment: The site has a functioning septic system serving the existing dwelling. However, the proposed use will add to the wastewater flows entering the system. Therefore, the system must be evaluated to ensure that the additional wastewater can be accommodated by the system, if not an expanded system will be required. The following mitigation measure will ensure that the impact is less than significant.

Mitigation: Prior to project operation and vesting the Use Permit, the applicant shall have a capacity/wastewater flow analysis and proper functioning of the wastewater system inspection completed by a Registered Civil Engineer or Registered Environmental Health Specialist regarding the existing septic system's ability to accommodate the peak flows from all sources granted in the Use Permit and any additional sources from the parcel.

Any necessary system expansion or modifications, and demonstration of reserve areas, shall be done under permit and the current standards from the PRMD Well and Septic Section and may require both soils analysis, and groundwater and percolation testing. If a permit for a standard, innovative or experimental sewage disposal system sized to meet all peak flows cannot be issued, then the applicant shall revise the project (fees apply and a hearing may be required) to amend the Use Permit to a reduced size, not to exceed the on-site disposal capabilities of the project site and attendant easements.

Mitigation Monitoring: The Project Review Health Specialist shall receive a final clearance from the Well and Septic Section that all required septic system testing and design elements have been met.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
7.	**GREENHOUSE GAS EMISSION** Would the project:				
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	___	___	X	___

Comment: Greenhouse Gas Emissions (GHG) - Greenhouse gases trap heat in the atmosphere. Increases in greenhouse gases due to human activity are associated with Global Climate Change (aka "Global Warming"), that is, the change in the average weather on earth, as measured by wind patterns, storms, precipitation, and temperature. The primary greenhouse gases are CO_2, methane (CH_4), nitrous oxide (N_20), sulfur hexafluoride (SF_6),

perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and water vapor (H_20). Considered the most important greenhouse gas, CO_2 is the reference gas for climate change and emissions of greenhouse gases in general are often reported as CO_2 equivalents (CO_2e).

The California Air Resources Board ("CARB") is required by the Global Warming Solutions Act of 2006 to design and implement emissions limits, regulations, and other statewide measures to reduce statewide greenhouse gas emissions to 1990 levels by 2020. The Act does not indicate what role local land use planning should play in the statewide strategy or how environmental review under CEQA is implicated. In October, 2007, CARB published the Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration.

Furthermore, the Bay Area is considered to be a non-attainment area for ground-level ozone and fine particulate matter under the state and federal Clean Air Acts. As part of an effort to attain and maintain air quality standards, BAAQMD recently adopted thresholds of significance for ozone precursors and PM_{10} emissions. The thresholds are as follows:

- 54 lbs/day (10 tons/year)	Reactive Organic Gases (ROG)
- 54 lbs/day (10 tons/year)	Nitrogen Oxides (NOx)
- 54 lbs/day (10 tons/year)	Respirable Particulates (PM_{10})

By January 2010, the State Office of Planning and Research provided thresholds of significance for GHGs and transmitted them to the Resources Agency for adoption. As indicated by the Governor's letter to the Senate on signing the Act, the development of CEQA significance thresholds should be guided by the appropriate responsible agencies to achieve a standardized approach consistent with the state law. As a result, BAAQMD adopted a threshold for carbon dioxide of 1,100 metric tons per year. Regarding local efforts on GHG reductions, the Sonoma County Board of Supervisors recently adopted the Sonoma County Climate Protection Campaign which sets a target to reduce GHG emissions to 25% below 1990 levels by the year 2015. The County's Climate Protection Campaign has yet to establish emissions targets to reduce GHG in Sonoma County. However, the Climate Protection Campaign has provided a list of projects that are effective and under local control that will reduce Greenhouse Gases if they are implemented. The Plan's solutions involve four major categories: 1) Improve efficiency in energy and water use; 2) Shift transportation from fossil fuel vehicles to transit, walking, bicycling, etc.; 3) Invest in local renewable energy sources; 4) Protect forests and farmlands, sequester carbon, and convert waste into energy.

For purposes of the Mitigated Negative Declaration, the project would be considered to have a significant impact on greenhouse gases if it would conflict with the state goal of reducing greenhouse gas emissions in California to 1990 levels by 2020, as set forth by the California Global Warming Solutions Act of 2006 and if it exceeds the thresholds set by BAAQMD (currently, the County does not have established thresholds for carbon dioxide emissions, therefore, as an interim measure, the County uses the BAAQMD staff recommended threshold which is 1,100 metric tons per year).

In addition, on November 4, 2008 the Sonoma County Board of Supervisors adopted a resolution selecting the Build it Green (BIG) New Home Construction, Home Remodeling and Multifamily Green Building Guidelines for Residential Construction, and Leadership in Energy and Environmental Design (LEED®) Commercial Green Building System for Commercial Construction guidelines, along with their respective Green Points Checklists, set compliance thresholds, and directed staff to develop a green building ordinance based on these guidelines.

On November 2, 2010, the Board of Supervisors approved all state mandated model codes including the new California Green Building Standards Code (CalGreen). Sonoma County's existing green building ordinance and energy efficiency ordinance were modified to accommodate the new CalGreen code, and to replace the existing green point rated systems, Build-It-Green and LEED, for both new residential and non-residential construction

respectively. The ordinances became effective January 1, 2011. Compliance with this ordinance meets the aforementioned state regulations.

In conclusion, there is currently no indication that this project would conflict with the California Global Warming Solutions Act's timeline. As for the BAAQMD thresholds, a screening level survey of the possible emissions from 105 automobile trips per day was performed and emissions of ROG, NOx and PM_{10} were all well below the thresholds listed above. Requiring low water use fixtures and low water use landscaping will also help to reduce greenhouse gas emissions as this reduces the amount of energy used to bring water up from wells, heat water, etc. Due to the rural nature of the site there is not much that can be done to reduce CO_2 emissions related to transportation.

Mitigation: The project's landscaping shall comply with the Sonoma County Water Efficient Landscape Ordinance http://library.municode.com/HTML/16331/level1/CH7D3WAEFLA.html.

Mitigation Monitoring: The project planner shall ensure that the project has gone through Water Efficient Landscape plan check before signing-off for building permit issuance.

Mitigation: All light fixtures in the kennel buildings shall be fitted with low energy bulbs such as fluorescent or L.E.D. bulbs.

Mitigation Monitoring: The project planner shall not sign-off on project operation until all lights are shown to have the appropriate low energy use bulbs.

b) Conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? ____ ____ ____ X

Comment: The project will not conflict with the Sonoma County Community Climate Action Plan.

Mitigation: No mitigation measures are required.

8. **HAZARDS AND HAZARDOUS MATERIALS**

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	____	____	____	X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	____	____	____	X

Comment: The proposed project will not create a significant hazard from the routine use of hazardous materials.

Mitigation: No mitigation measures are required.

Comment: The proposed project would not create a significant hazard to the public or the environment from upset or accident involving hazardous materials.

Mitigation: No mitigation measures are required.

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

Comment: There will be no hazardous or acutely hazardous materials resulting from the proposal.

Mitigation: No mitigation measures are required.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? ___ ___ ___ X

Comment: The project site is not included on lists of sites containing hazardous materials that are maintained by the California Water Resources Control Board, California Department of Toxic Substances Control or California Integrated Waste Management Board.

Mitigation: No mitigation measures are required.

e) 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 result in a safety hazard for people residing or working in the project area? ___ ___ ___ X

Comment: The site is not within an airport land use plan as designated by Sonoma County or within two miles of a public airport.

Mitigation: No mitigation measures are required.

f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? ___ ___ ___ X

Comment: The nearest known private airstrip is located several miles east of the proposed project. It is a single plane strip which has very limited use. It will not result in a safety hazard for this site.

Mitigation: No mitigation measures are required.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? ___ ___ ___ X

Comment: The project would not impair implementation of or physically interfere with the County's adopted Emergency Operations Plan. There is no separate emergency evacuation plan for the County. In any case, the project would not change existing circulation patterns and would have no effect on emergency response routes.

Mitigation: No mitigation measures are required.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland

fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	____	____	X	____

Comment: The site is located in an area that is open grasslands which are indicated as having a low wildlands fire risk. The area immediately to the north, in the foothills, has been designated as a high to extremely high danger for wildlands fires. Although the site is relatively close there is an adequate amount of separation and the site is directly adjacent to Highway 12 making emergency access extremely easy.

Mitigation: No mitigation measures are required.

9. **HYDROLOGY AND WATER QUALITY**
Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	____	____	____	X

Comment: There should be no change in water quality as a result of the project as all wastewater is discharged into a permitted septic system.

Mitigation: No mitigation measures are required.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?	____	____	X	____

Comment: The project is located in a Groundwater Availability Area 1 which means that ample water is available. The basin is charged by surrounding hillsides in addition to the rainfall that occurs on the flat areas. The dog boarding and day care business does not substantially increase water usage over the current level, however, the grooming part of the business has the potential to increase water usage significantly. Even with the increase in water usage from the proposed grooming this project is unlikely to have any effect on the groundwater.

Mitigation: No mitigation measures are required.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	____	____	____	X

Comment: There should be no changes to drainage as a result of this project since the parcel is only gently sloping and little or no grading will be required to build the new kennel building.

Mitigation: No mitigation measures are required.

d) 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 rate or amount of surface runoff in a manner which would result in flooding on- or off-site? ____ ____ ____ X

Comment: There should be no changes to drainage as a result of this project since the parcel is only gently sloping and little or no grading will be required to build the new kennel building.

Mitigation: No mitigation measures are required.

e) 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? ____ ____ ____ X

Comment: There should be no change in runoff from the site because there are no new sources of runoff and minimal new impervious surfaces.

Mitigation: No mitigation measures are required.

f) Otherwise substantially degrade water quality? ____ ____ ____ X

Comment: There should be no change in water quality as a result of the project as all wastewater is discharged into a permitted septic system and dog waste will be picked-up and disposed of appropriately.

Mitigation: See 3.e. above for mitigation.

g) Place housing within a 100-year hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? ____ ____ ____ X

Comment: There are no flood zones anywhere in the vicinity.

Mitigation: No mitigation measures are required.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? ____ ____ ____ X

Comment: There are no flood zones anywhere in the vicinity.

Mitigation: No mitigation measures are required.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? ____ ____ ____ X

Comment: There is a small irrigation holding pond directly to the east of the site. If the berm around the pond were to fail the water would likely inundate the immediately surrounding area. The relatively small pond would not likely cause injury or death. Some property damage to the existing single family dwelling and garage might result if the berm on the west side of the pond were the one that failed.

Mitigation: No mitigation measures are required.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
j)	Inundation by seiche, tsunami, or mudflow?	____	____	____	X

Comment: The site is not in an area at risk for seiche, tsunami, or mudflow.

Mitigation: No mitigation measures are required.

10. **LAND USE AND PLANNING** Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Physically divide an established community?	____	____	____	X

Comment: The project will not physically divide an established community.

Mitigation: No mitigation measures are required.

b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	____	____	X	____

Comment: The parcel has a General Plan designation of Diverse Agriculture 10 acre density. The purpose and definition for the Diverse Agriculture land use category is: "This category shall enhance and protect those land areas where soil, climate, and water conditions support farming but where small acreage intensive farming and part time farming activities are predominant. In these areas, farming may not be the principal occupation of the farmer. The primary purpose of this category is to protect a full range of agricultural uses and to limit further residential intrusion consistent with the policies of the Agricultural Resources Element."

The parcel has a zoning designation of DA (Diverse Agriculture) B6 10 acres/dwelling unit, SR (Scenic Resources), VOH (Valley Oak Habitat). The Diverse Agriculture designation allows commercial kennels with a Use Permit as outlined in Sec. 26-08-020.n. However, the applicant must demonstrate that the use meets a local need, avoids conflict with agricultural activities and is consistent with Objective AR-4.1 and Policy AR-4a of the Agricultural Resources Element.

Objective AR-4.1:
Apply agricultural land use categories only to areas or parcels capable of the commercial production of food, fiber and plant material, or the raising and maintaining of farm animals including horses, donkeys, mules, and similar livestock. Establish agricultural production as the highest priority use in these areas or parcels. The following policies are intended to apply primarily to lands designated within agricultural land use categories.

Policy AR-4a: The primary use of any parcel within the three agricultural land use categories shall be agricultural production and related processing, support services, and visitor serving uses. Residential uses in these areas shall recognize that the primary use of the land may create traffic and agricultural nuisance situations, such as flies, noise, odors, and spraying of chemicals.

The parcel is only 3.2 acres in size, far below the 10 acre minimum established for the Diverse Agriculture land use designation. The parcel was created in the 1970's before the current General Plan and Zoning Code had been developed and adopted and met the

minimum parcel size for the designation at the time. The applicant is grazing sheep on the parcel for weed and grass control, however, this is not a commercial agricultural use. It would be difficult to establish commercial agricultural as the primary use of the property due to the size of the property. The use of the parcel for sheep grazing in conjunction with the kennel use would appear to meet the intention of Policy AR-4a in that the parcel retains agricultural uses. The general appearance is of a fenced and cross-fenced pasture area.

A commercial dog kennel will not be affected by the vineyards and horse pastures that surround it, nor will it result in impacts on those uses. A standard condition of approval requires that a covenant acknowledging the proximity and impacts of surrounding uses be recorded for the property. This is called a "Right-to Farm" covenant. Kennel Fencing will be inspected at least annually by Sonoma County Animal Care and Control who will ensure that it is adequate to contain dogs so that the escape of boarded dogs is very unlikely. Additionally, dogs in the larger play areas will be supervised continuously to ensure that they are quiet, thus any attempts at escape or worrying of livestock along fence lines would be detected immediately and stopped.

Mitigation: No mitigation measures are required.

c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	____	____	____	X

Comment: Habitat conservation plans and natural community conservation plans are site-specific plans to address effects on sensitive species of plants and animals. The project site is not located in an area subject to a habitat conservation plan or natural community conservation plan.

Mitigation: No mitigation measures are required.

11. **MINERAL RESOURCES** Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	____	____	____	X

Comment: There are no known mineral resources on the project site.

Mitigation: No mitigation measures are required.

b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	____	____	____	X

Comment: There are no known mineral resources on the project site.

Mitigation: No mitigation measures are required.

12. **NOISE** Would the project result in:	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) 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? ___ X ___ ___

Comment: The Noise Element of the Sonoma County General Plan establishes goals, objectives and policies including performance standards to regulate noise affecting residential and other sensitive receptors. The general plan sets separate standards for transportation noise and for noise from non-transportation land uses. They are shown in the following table.

NOISE TABLE AS ADOPTED IN GP2020

Noise shall be controlled in accordance with Table NE-2 (or an adjusted Table NE-2 with respect to ambient noise as described in General Plan 2020, Policy NE-1c,) as measured at the exterior property line of any affected residential or sensitive land use:

Hourly Noise Metric[1], dBA	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
L_{50} (30 minutes in any hour)	50	45
L_{25} (15 minutes in any hour)	55	50
L_{08} (5 minutes in any hour)	60	55
L_{02} (1 minute in any hour)	65	60

[1] The sound level exceeded n% of the time in any hour. For example, the L_{50} is the value exceeded 50% of the time or 30 minutes in any hour; this is the median noise level. The L_{02} is the sound level exceeded 1 minute in any hour.

A noise study, *Noise Impacts and Mitigation in Connection with the Proposed Meadows Kennel, 6445 Highway 12, Sonoma County, California* was prepared in August 2011 based on a review of the noise environment as it exists and a projection of what the noise will be like with the kennel in operation. Because of the distance to some residences and the ambient noise levels due to the proximity of Highway 12 the kennel will be able to comply with the Sonoma County noise standards with the implementation of the following mitigation measures.

Mitigation:

Outdoor Dogs:

i. No client dogs shall be permitted outdoors between the hours of 7 p.m. and 7 a.m.

ii. Grouping of dogs in the four "Exercise Areas" combined shall not exceed 10 dogs total at any time.

iii. Grouping of dogs in the "Yard" and "Garden" areas combined shall not exceed 10 dogs total at any time.

iv. As implied by numbers 2 and 3 above, no more than 20 dogs shall be permitted outdoors at any one time. The remainder of the dogs on-site shall be housed within kennel buildings.

Indoor Dogs

i. No more than 35 dogs total shall be permitted on the site. In particular, no more than 35 dogs shall be housed in the kennel buildings.

ii. Any new kennel building added to the property shall not be closer to Highway 12 than the existing kennel building.

iii. Any new kennel building added to the property shall incorporate a building shell with interior/exterior sound insulation equal to or better than the shell for the existing building. An acceptable building shell would include: a) wood siding, b) composition roof, c) gypsum board interior walls and ceiling, and d) total window area less than 10% of the net wall area.

iv. All doors and windows of any kennel building shall be kept closed, except as needed for entry and egress.

Mitigation Monitoring: Any noise complaints will be investigated by PRMD staff and Sonoma County Animal Care and Control. If such investigation indicates that the appropriate noise standards have been or may have been exceeded, the permit holders shall be required to install, at their expense, additional professionally designed noise control measures. Failure to install the additional noise control measure(s) will be considered a violation of the use permit conditions. If noise complaints continue, PRMD shall investigate complaints. If violations are found, PRMD shall seek voluntary compliance from the permit holder and thereafter may initiate an enforcement action and/or revocation or modification proceedings, as appropriate. Animal Control may initiate their own enforcement actions for barking dogs which could lead to the revocation of their kennel license. Loss of the kennel license will result in revocation of the Use Permit.

b) Exposure of persons to or generation of excessive groundborne vibration or ground borne noise levels? ____ ____ ____ X

Comment: There are no activities or uses associated with the project that would expose persons to or generate excessive ground borne vibration or ground borne noise levels.

Mitigation: No mitigation measures are required.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? ____ X ____ ____

Comment: See 12.a.

Mitigation: See 12.a.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? ____ X ____ ____

Comment: Temporary increase in noise levels from equipment operation that could exceed County standards are expected to occur during construction. This would be a short-term, temporary impact that will cease when construction is complete.

The following mitigation measures would reduce the impact of construction activities and hauling to less than significant levels.

Mitigation:
Construction activities for this project shall be restricted as follows:

a) All internal combustion engines used during construction of this project will be operated with mufflers that meet the requirements of the State Resources Code, and, where applicable, the Vehicle Code. Equipment shall be properly maintained and turned off when not in use.

b) Except for actions taken to prevent an emergency, or to deal with an existing emergency,

all construction activities shall be restricted to the hours of 7:00 a.m. and 7:00 p.m. on weekdays and 9:00 a.m. and 7:00 p.m. on weekends and holidays. If work outside the times specified above becomes necessary, the applicant shall notify the PRMD Project Review Division as soon as practical.

c) There will be no start up of machines nor equipment prior to 7:00 a.m, Monday through Friday or 9:00 am on weekends and holidays; no delivery of materials or equipment prior to 7:00 a.m nor past 7:00 p.m, Monday through Friday or prior to 9:00 a.m. nor past 7:00 p.m. on weekends and holidays and no servicing of equipment past 7:00 p.m., Monday through Friday, or weekends and holidays. A sign(s) shall be posted on the site regarding the allowable hours of construction, and including the developer's phone number for public contact.

d) Pile driving activities shall be limited to 7:30 a.m. to 7:00 p.m. weekdays only.

e) Construction maintenance, storage and staging areas for construction equipment shall avoid proximity to residential areas to the maximum extent practicable. Stationary construction equipment, such as compressors, mixers, etc., shall be placed away from residential areas and/or provided with acoustical shielding. Quiet construction equipment shall be used when possible.

f) The developer shall designate a Project Manager with authority to implement the mitigation prior to issuance of a building/grading permit. The Project Manager's phone number shall be conspicuously posted at the construction site. The Project Manager shall determine the cause of noise complaints (e.g. starting too early, faulty muffler, etc.) and shall take prompt action to correct the problem.

Mitigation Monitoring: PRMD staff shall ensure that the measures are listed on all site alteration, grading, building or improvement plans, prior to issuance of grading or building permits. Any noise complaints will be investigated by PRMD staff. If violations are found, PRMD shall seek voluntary compliance from the permit holder and thereafter may initiate an enforcement action and/or revocation or modification proceedings, as appropriate.

e) For a project located within an airport land use plan or, where such 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? ___ ___ ___ X

Comment: The project is not located within an airport land use planning area or within two miles of a public airport.

Mitigation: No mitigation measures are required.

f) 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? ___ ___ ___ X

Comment: Then nearest known private airstrip is a couple of miles to the east. It is a single plane strip and is lightly used and will not cause excessive noise at this site.

Mitigation: No mitigation measures are required.

13. **POPULATION AND HOUSING** Would the project:

Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact

		Incorporation		

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? ____ ____ ____ X

Comment: The proposed project does not include construction of a substantial amount of homes, businesses or infrastructure and therefore would not result in the need for new fire protection facilities. The project will be subject to fire safe standards such as access, fire sprinklers, vehicle turnarounds, etc. This a standard provision in the County.

Mitigation: No mitigation measures are required.

b) Displace substantial numbers of existing housing necessitating the construction of replacement housing elsewhere? ____ ____ ____ X

Comment: No housing will be removed as a result of this project.

Mitigation: No mitigation measures are required.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? ____ ____ ____ X

Comment: No people will be displaced as a result of this project.

Mitigation: No mitigation measures are required.

14. **PUBLIC SERVICES** Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for 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 any of the public services:

Fire protection? ____ ____ ____ X

Comment: There is no increase in the need for fire protection as a result of the construction of a new kennel building and the conversion of a detached garage into a dog kennel.

Mitigation: No mitigation measures are required.

Police protection? ____ ____ ____ X

Comment: There is no increase in the need for police protection as a result of the construction of a new kennel building and the conversion of a detached garage into a dog kennel.

Mitigation: No mitigation measures are required.

Schools?	___	___	___	X

Comment: There is no increase in the use of schools as a result of the project.

Mitigation: No mitigation measures are required.

Parks?	___	___	___	X

Comment: There is no increase in the use of parks that would require additional park facilities as a result of this project.

Mitigation: No mitigation measures are required.

Other public facilities?	___	___	___	X

Comment: There are no other public facilities which would require expansion as a result of this project.

Mitigation: No mitigation measures are required.

15. **RECREATION** Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	___	___	___	X

Comment: There would be no change in the use of parks as a result of this project.

Mitigation: No mitigation measures are required.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	___	___	___	X

Comment: There would be no need for new or expanded parks as a result of this project.

Mitigation: No mitigation measures are required.

16. **TRANSPORTATION/TRAFFIC** Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) 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? ___ ___ X ___

Comment: The proposed project involves construction and operation of a 35 dog doggie daycare and boarding facility with grooming and training. Using the screening criteria established by the County of Sonoma Guidelines for traffic studies, Traffic Guidelines Revised 11-22-04, the project would not cause a significant traffic impact based on traffic contributed to the street system by the project. However, a traffic analysis was requested by Caltrans due to the project's potential impact to Highway 12. A traffic analysis was prepared by Chris Kinzel P.E. of TJKM Transportation Consultants in August 2011 and a supplemental analysis prepared in September 2012. The consultant estimated that there would be no more than 7 additional trips during the a.m. and 7 during the p.m. peak hours while overall trips would be roughly 35 per day. The dispersed trips mean that the Level of Service is not impacted by the proposed project. However, the residents along the unnamed private road that serves the kennel are very concerned about traffic impacts as it currently serves only residential uses and the entrance onto Highway 12 is considered unsafe by most of the residences due to the change in elevation. See 16.d. for a discussion of safety issues.

Mitigation: No mitigation measures are required.

b) 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? ___ ___ X ___

Comment: Sonoma no longer has a congestion management agency but Level Of Service (LOS) standards are established by the Sonoma County General Plan Circulation and Transit Element. Objective CT-4.1 establishes LOS C or better on arterial and collector roadways as the standard. See 16.a. above for a discussion of traffic resulting from project construction and operation.

Mitigation: No mitigation measures required.

c) 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

Comment: The project does not include air traffic and there is nothing about the project that would result in any impacts on air traffic.

Mitigation: No mitigation measures are required.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? ___ ___ X ___

Comment: The private lane off of Highway 12 drops off rather steeply which means that cars entering the Highway must wait until there is a big enough gap to enter without being at travel speed since the elevation change makes it impossible to enter the highway at speed. The applicant has proposed the use of a van to pick-up and drop-off dogs which can help to reduce the number of trips in and out of the site as several dogs could be transported at a time. The traffic study prepared by TJKM indicates that there will be up to 35 trips per day generated by the proposed project with approximately 14 of these trips occurring in the peak hours. Potential changes to the intersection include left turn pockets, decelaration lanes or shoulder widening. None of these changes were recommended by CalTrans or Sonoma

County Department of Transportation and Public Works as the number of trips does not significantly increase the potential for accidents.

Mitigation: No mitigation measures are required.

e) Result in inadequate emergency access? ____ ____ ____ X

Comment: Emergency access will not be affected by the proposed project.

Mitigation: No mitigation measures are required.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? ____ ____ ____ X

Comment: There are no transit or bicycle facilities located along the private roadway or Highway 12 in this area. However, Highway 12 is designated as a future Class II bicycle facility in the *2010 Sonoma County Bicycle and Pedestrian Plan.* Also the "Central Sonoma Valley Trail," a Class I facility is to follow Highway 12 through the Sonoma Valley _____. The roadway off of Highway 12 that is the access point to the kennel already exists and the addition of the kennel off of it will not result in any changes to the intersection. The bike lane will be higher than the roadway so those entering the highway from the road will be able to easily see bicyclists and bicyclists should be able to easily see any approaching cars as they will be looking down on the approaching vehicles. Adequate site distances exist for those vehicles turning off of Highway 12 onto the roadway to allow drivers to see approaching bicyclists.

Mitigation: No mitigation measures are required.

g) Result in inadequate parking capacity? ____ ____ ____ X

Comment: There is plenty of on-site parking. However, the applicant will be required to show that they have adequate accessible parking and paths of travel. This is a standard condition of approval for new businesses.

Mitigation: No mitigation measures are required.

17. **UTILITIES AND SERVICE SYSTEMS**
Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	____	____	____	X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	____	____	X	____

Comment: The site is in the North Coast Regional Water Quality Control Board's jurisdiction. The project will not generate enough wastewater to exceed the requirements of the North Coast RWQCB.

Mitigation: No mitigation measures are required.

Comment: The site is served by an on-site septic system. Additional wastewater will be generated by the grooming part of the proposed project and an increase in wastewater discharge will result from having employees and clients on site in addition to those living on-site.

Mitigation: See 6.e. above.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? ____ ____ ____ X

Comment: There will be no change in the need for storm water drainage facilities so there will be no construction of new facilities as a result of this project.

Mitigation: No mitigation measures are required.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? ____ ____ ____ X

Comment: The project is located in a Groundwater Availability Area 1 and ample water will be available to serve the project without impacting the availability of water.

Mitigation: No mitigation measures are required.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? ____ ____ ____ X

Comment: The site is not served by public sewer.

Mitigation: No mitigation measures are required.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? ____ ____ ____ X

Comment: Sonoma County has access to adequate permitted landfill capacity to serve the proposed project.

Mitigation: No mitigation measures are required.

g) Comply with federal, state, and local statutes and regulations related to solid waste? ____ ____ ____ X

Comment: There are no federal, state or local solid waste regulations that would significantly affect the project.

Mitigation: No mitigation measures are required.

18. **MANDATORY FINDINGS OF SIGNIFICANCE**

	Yes	No
a) Does the project 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?	____	X
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	____	X
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	____	X

THE MEADOWS KENNEL

TRAFFIC ANALYSIS

PLP11-0042
~~UPE11-0020~~
~~**UPE09-0069**~~

6445 Sonoma Hwy

RECEIVED
SEP 8 2011
PERMIT AND RESOURCE MANAGEMENT DEPARTMENT
COUNTY OF SONOMA

Prepared by Chris D. Kinzel, P.E.
President

TJKM

Vision That Moves Your Community

Transportation Consultants

August 11, 2011

Ms. Heidi Niemann, Owner
The Meadows Kennel
6445 Sonoma Highway (SR 12)
Santa Rosa, CA 95409

Re: Traffic Analysis of Expansion of Services at the Meadows Kennel, 6445 Sonoma Highway in Sonoma County

Dear Ms. Niemann:

TJKM is submitting this letter to facilitate review of traffic aspects to expand services at The Meadows Kennel located at 6445 Sonoma Highway (State Route 12) in the Santa Rosa area of Sonoma County to a full-service kennel for up to 50 dogs.

Current Operations The Meadows Kennel currently operates as a dog day care facility for up to 10 dogs. There is only one employee, the applicant, who lives on the site. The business hours are between 7:30 a.m. and 6:00 p.m. An estimated 80-90 percent of the customers live in Oakmont retirement community immediately west of the business across State Route (SR) 12. The signalized entrance to the 3,200-home subdivision, Oakmont Drive, is located approximately 2,200 feet south of The Meadows Kennel facility on SR 12.

Nearly all of the current customers are retired persons who drop off their dogs on their way to hospital or doctor appointments, travel, or similar activities. Due to the nature of their activities, the current clientele does not drop off or pick up their dogs during commute periods, so the peak hour traffic is minimal. In addition, a kennel-owned vehicle is operated occasionally to pick up and drop off customers' dogs but during the same mid-day hours.

Access Roadways The Meadows Kennel is located on a private street extending easterly from SR 12. The roadway has a length of about 4,400 feet and serves about 11 rural residential parcels, including the Kennel parcel. The Meadows Kennel occupies the first parcel east of SR 12; there is a circular driveway to the parcel with two connections to the private lane. The first is located about 140 feet east of SR 12 and the second is about 100 feet further east. The private lane has gravel surfacing and has an approximate width of 28 feet for the first 300 to 400 feet. However, the first 50 feet of the private lane nearest SR 12 has asphalt paving with a width of 36 feet. Based on the number of homes served by the street, it is estimated that the approximate maximum traffic on the lane is100 vehicles per day.

Near the private lane, SR 12 is a two-lane roadway under the jurisdiction of Caltrans. It has center line striping and shoulder striping. It has a prevailing width of about 42 feet, indicating 12 foot lanes and nine foot shoulders. With this width, vehicles slowing or stopped to make a southbound left turn movement into the private lane may be passed on the right with care. The road is posted for a speed limit of 55 mph. Daily traffic volumes in this area are approximately 17,000 vehicles per day with about 1,500 peak hour vehicles (Caltrans, 2009).

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559.325.7530
559.221.4940 fax

Sacramento
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16th Floor
Sacramento, CA
95814-2736
916.449.9095

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707.575.5888 fax

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Proposed Operations Existing operations at the kennel would change slightly if the current application is approved. The facility would be permitted to care for up to 50 dogs with overnight lodging and grooming. The overnight lodging has been requested by 100 percent of current clientele so that dogs can be cared for while their owners are on hospital stays, trips, extended care, or other reasons. The applicant is requesting under the proposed operations for the mix of dogs staying at the kennel to be between 10-20 percent for day care and the remaining 80-90 percent for overnight care and grooming. It is noted that the overnight care creates fewer daily trips per overnight unit than does the day care usage.

In terms of day care trips, the number of daily trips per dog would be four per day, i.e., one round trip to deliver the dog and one round trip to pick up the dog. Similarly for overnight stays, if the average dog boards for four nights, those same four trips would be spread over four days and produce an average of one trip per dog per day, or 50 trips per day for 50 dogs staying overnight. It is understood that of those 50 trips per day, approximately 10-20 percent would be generated during typical weekday a.m. or p.m. peak hours, i.e. a maximum of 5-10 peak hour trips. The remaining 80-90 percent of daily trips is expected to continue accessing the facility during non-commute periods, since the retired clientele usually have no reason to travel during those periods.

Based on our analysis of the proposed operations, TJKM estimates that a conservative maximum of 10 additional trips (five round trips) could be expected during either the a.m. or p.m. peak hour. Given this very low level of expected peak hour trips, the proposed kennel expansion is not expected to constitute a significant impact with respect to traffic operations.

Caltrans and County Traffic Study Requirements Caltrans traffic studies are required if between 50 and 100 peak hour trips are generated and travel on a State facility with LOS C or D conditions. TJKM estimates that SR 12 is currently operating at no worse than LOS C or D conditions near The Meadows Kennel. Since the expansion of the kennel is estimated to generate a maximum of about ten peak hour trips, a Caltrans traffic study is therefore not required. Also, since the proposed operations would not modify the existing paved driveway, no Caltrans encroachment permit is required.

Sonoma County traffic study guidelines would require more than 10 peak hour trips to trigger the need for a traffic study, so such a study is not indicated. In addition, this development application for up to 40 additional dogs is only generating the majority of its peak hour trips onto a private road and a state highway, so this condition also does not trigger the need for a focused traffic study.

Conclusions TJKM concludes that the expansion of The Meadows Kennel will have a negligible impact on a.m. and p.m. peak hour traffic conditions in its vicinity. As such, the expansion will not trigger the need for either a Caltrans traffic study or a Sonoma County traffic study, according to the guidelines of those two agencies.

Please contact me if there are questions on this information.

Very truly yours,

Chris D. Kinzel

Chris D. Kinzel, P.E.
President

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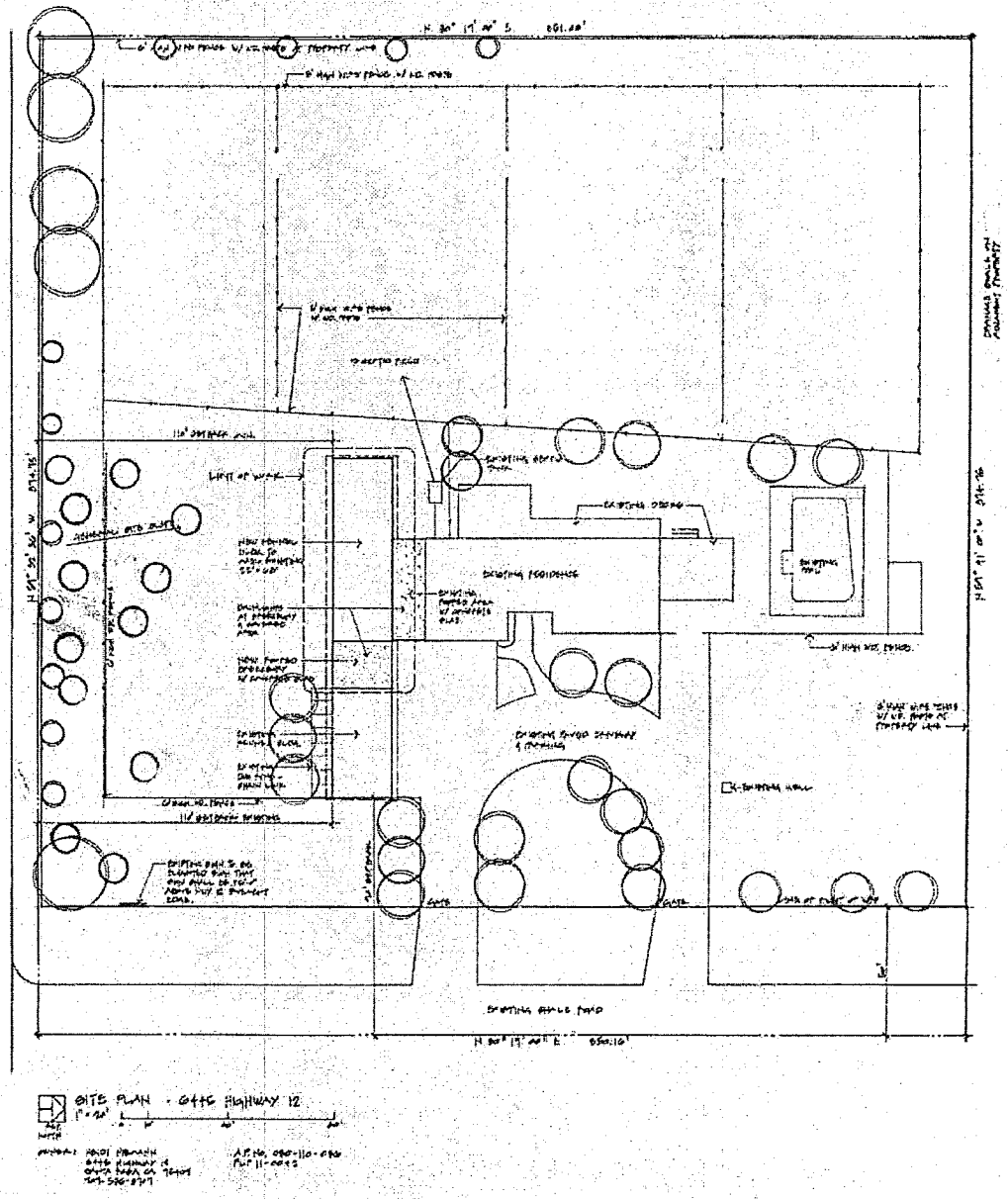

Site Plan

PLP11-0042

TJKM

Vision That Moves Your Community

Transportation Consultants

September 28, 2012

Ms. Heidi Niemann, Owner
The Meadows Kennel
6445 Sonoma Highway (SR 12)
Santa Rosa, CA 95409

Re: Supplemental Traffic Analysis for Proposed Expansion of Services at the Meadows Kennel at 6445 Sonoma Highway in Sonoma County

Dear Ms. Niemann:

TJKM is pleased to submit this letter report to supplement a previous traffic analysis report for the subject project dated August 11, 2011. The purpose of this letter is to update the project traffic analysis based on a project description that has been updated since the March 15, 2012 County Board of Zoning Appeals project hearing and to report results from a supplemental highway collision analysis and speed survey analysis. Both supplemental analyses are being prepared in response to a request by the California Department of Transportation (Caltrans) District 4 office.

Updated Project Description

TJKM understands that the applicant is proposing to expand services at The Meadows Kennel, located at 6445 Sonoma Highway (State Route (SR) 12) in the Santa Rosa area of Sonoma County, from a 10-dog daycare facility to a full-service kennel providing overnight services for up to 35 dogs. Overnight services include grooming and training. Our August 2011 study was based on the previous proposal for overnight services for up to 50 dogs, so the current proposal assumed in this supplemental study reduces that previous total by 15 dogs.

Current Operations

To supplement discussion of Existing Conditions from TJKM's August 2011 traffic study, TJKM estimates that based on current operations, the kennel is estimated to be generating an approximate maximum of 40 daily vehicle trips (10 inbound and 10 outbound during morning dropoff, and 10 inbound and 10 outbound during the afternoon pickup, accounting for 10 dogs). In addition, approximately four trips (2 inbound, 2 outbound) are estimated to be generated by the project owner. All kennel-generated vehicle trips occur within 230 feet of SR 12, since the kennel is the first parcel accessing Richards Road east of SR 12, and as a result, these existing trips do not affect traffic operations further east on Richards Road).

The vast majority of the above estimated daily trips are occurring outside typical commute peak hours on SR 12, which are 7:00-9:00 a.m. and 4:00-6:00 p.m. In the morning, virtually all dog dropoffs occur after 9:00 a.m., while in the afternoon most pickups occur before 4:00 p.m. Also, the above estimated daily trip totals include a Meadows Kennel vehicle that provides occasional dog pickups and dropoffs upon request. In terms of commute peak hours, it is estimated that a maximum of approximately four trips (2 inbound and 2 outbound) are accessing the kennel during either the a.m. or p.m. commute peak hours.

Proposed Operations

Existing operations at the kennel would change slightly if the current application is approved. The facility would be permitted to care for up to 35 dogs with overnight lodging, including grooming and training. The overnight lodging has been requested by 100 percent of current clientele so that dogs can be cared for while their owners are on hospital stays, trips, extended care, or other reasons for expected durations between four nights and one month. The applicant is requesting

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707.575.5888 fax

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www.tjkm.com

under the proposed operations for the mix of dogs staying at the kennel to be between 5-10 percent for day care and the remaining 90-95 percent for overnight care. It is noted that the overnight care creates fewer daily trips per overnight unit than does the day care usage.

In terms of day care trips, the number of daily trips per dog would be four per day, i.e., one round trip to deliver the dog and one round trip to pick up the dog. Assuming a worst case of all overnight stays consisting of only four night duration, those same four trips per dog would be spread over four days and thus produce an average of one trip per dog per day, or 35 trips per day for 35 dogs staying overnight. It is understood that of those 35 trips per day, approximately 10-20 percent would be generated during typical weekday a.m. or p.m. peak hours, i.e. a maximum of 4-7 peak hour trips. The remaining 80-90 percent of daily trips is expected to continue accessing the facility during non-commute periods, since current clientele usually have no reason to travel during those periods. It should be noted that if the average dog stays longer than four nights, the kennel overall would generate fewer than the 35 maximum daily trips.

Based on our analysis of the proposed operations, TJKM estimates that a conservative maximum of seven (7) vehicle trips could be generated by the expanded kennel during either the a.m. or p.m. commute peak hour. Given this very low level of expected peak hour trips, the proposed kennel expansion is not expected to constitute a significant impact with respect to traffic operations. This same conclusion extends to the average dog staying longer than four nights, since the kennel as a result would generate fewer than seven peak hour trips.

Caltrans and Sonoma County Traffic Study Requirements

While the previous TJKM study in August 2011 assumed a maximum of 50 boarding dogs staying an average of four nights, the current study assumes fewer dogs (35) staying at least four nights. As a result, the maximum 10 peak hour trips originally assumed to be generated by the project during either a.m. or p.m. commute peak hours has dropped to a maximum of seven. Therefore, the proposed kennel expansion still does not trigger the need for a full traffic study based on Caltrans and Sonoma County requirements that were documented in the August 2011 TJKM study. Also, since the proposed operations would not modify the existing paved apron of Richards Road at SR 12, no Caltrans encroachment permit is required.

Collision History at SR 12/Richards Road

At Caltrans' request, TJKM conducted a vehicle collision analysis covering the most recent five-year history of collisions within 500 feet of the SR 12 / Richards Road intersection. The five-year history covers January 2007 to December 2011 at this location from the California Statewide Integrated Traffic Records System (SWITRS) database. Based on review of these five-year SWITRS records, there were four (4) reported collisions within 500 feet of the SR 12 / Richards Road intersection. None of these collisions involved bicycles or pedestrians. With a reported collision rate of less than one collision per year, in TJKM's experience this does not indicate an immediate safety concern for motorists, bicyclists, or pedestrians at this intersection.

It should further be noted that the reported SWITRS collisions are related to general traffic operations at the SR 12 / Richards Road intersection, and therefore are not attributable to the Meadows Kennel's driveway operations off Richards Road. The Meadows Kennel's two driveways are located approximately 130 feet and 230 feet from the northbound edge of SR 12. Since it has recently been observed that there are no existing vehicle queues into the applicant's driveway due to the staggered drop off and pick up times of current kennel clients, it can reasonably be concluded that existing kennel operations are not currently impacting traffic operations at the SR 12 / Richards Road intersection.

Existing Vehicle Speeds on SR 12 in Project Vicinity

Caltrans additionally requested a spot speed survey to determine current approximate vehicle speeds on SR 12 in the vicinity of Richards Road. TJKM conducted this survey along both directions of SR 12 at this location. The speed survey was conducted in a manner consistent with the recommended procedures and intent of Section 2B.13 of the California Manual on Uniform Traffic Control Devices (MUTCD). Speed data were collected on Thursday, April 5, 2012 during free-flow, weekday, midday off-peak hours using certified and calibrated radar guns operated by a certified technician. Data were collected on a day with fair weather, dry pavement, and clear visibility. An effort was made to ensure that the presence of radar survey equipment did not affect the speed of the traffic being surveyed.

In traffic engineering, the 85th-percentile speed, also known as the critical speed, is the primary indicator of the appropriate speed limit for a given section of roadway. The critical speed is the speed at or below which 85 percent of the spot sample speeds were observed traveling. Traffic engineers typically consider this observed critical speed to represent the prevailing speed of vehicles on the roadway, because 85 percent of the observed driver population travel at that speed or lower. During the survey, the critical speed observed was 57 miles per hour (mph), which is within close range of the study segment's 55 mph posted speed limit. A copy of the speed survey results are shown in Attachment A.

Available Sight Distance at Intersection

At the request of Caltrans, TJKM additionally conducted a field survey of available stopping sight distance at the Richards Road intersection with SR 12. Stopping sight distance is defined as the distance required to bring a vehicle to a complete stop given the time it takes for a driver to perceive, react, and brake in response to seeing an object in the roadway, such as a vehicle turning from Richards Road onto SR 12. From the perspective of drivers entering SR 12 from Richards Road, there is approximately 510 feet of available sight distance looking to the northwest for SR 12 vehicles coming over a vertical crest curve. Looking to the southeast, there is approximately 1,000 feet of stopping sight distance available, given that the approach is relatively flat.

Based on the latest Caltrans Highway Design Manual (HDM) Chapter 200, roadways with design speeds of 55 mph (the posted speed of SR 12 along this segment) require a minimum of 500 feet available stopping sight distance. Based the observed 510 feet to the northwest and 1,000 feet to the southeast, as well as Caltrans HDM standards, it is concluded that currently there is adequate stopping sight distance in either direction of SR 12 at Richards Road.

Conclusions

TJKM has reached the following conclusions with respect to the proposed Meadows Kennel expansion that could accommodate up to 35 dogs for overnight boarding:

- *Traffic Impacts:* It is expected that the expansion of the Meadows Kennel will have a negligible impact on a.m. and p.m. peak hour traffic conditions in its vicinity. The proposed project is expected to generate a maximum of seven vehicle trips during either a.m. or p.m. peak hours. As such, the expansion still will not trigger the need for a full traffic study based on either Caltrans or Sonoma County guidelines.

- *Collision History:* Based on review of five-year SWITRS collision records, there were four (4) reported collisions within 500 feet of the SR 12 / Richards Road intersection. None of these collisions involved bicycles or pedestrians. With a reported collision rate of less than one collision per year, in TJKM's experience this does not indicate an immediate safety

concern at this intersection for motorists, bicyclists, or pedestrians. Also, these collisions are not attributable to existing kennel-related traffic operations.

- SR 12/Richards Road Operations: Given that the two existing kennel driveways are 130-230 feet from the northbound edge of SR 12 and there are no existing kennel-related vehicle queues currently spilling over onto Richards Road, it can be reasonably concluded that there are no current adverse impacts to SR 12/Richards Road intersection operations being caused by the kennel. In the future, when the expanded kennel is expected to generate a very low maximum of seven total peak hour trips, it is reasonable to expect that SR 12/Richards Road intersection operations will continue to remain acceptable.

- Project Driveway Operations: Given the lack of existing queue spillover from current kennel operations and the future expected kennel traffic generation of seven peak hour trips, it can reasonably be concluded that any future kennel vehicle queues can be successfully accommodated within the project driveway. In reality, however, such queues are expected to be unlikely, given that future project peak hour traffic generation is expected to be very similar to existing conditions and the applicant will continue to stagger arrivals of dog dropoffs and pickups to avoid vehicle stacking as is done currently.

- Vehicle Speeds on SR 12: TJKM observed a critical (85th percentile) vehicle speed of 57 mph along SR 12 in the project vicinity, which is within close range of the study segment's 55 mph speed limit (based on posted sign located just south of SR 12/Oakmont Drive signalized intersection).

- Sight Distance: Based on the latest Caltrans Highway Design Manual (HDM) Chapter 200, roadways with design speeds of 55 mph (which is the posted speed on SR 12 along this segment) require a minimum of 500 feet available stopping sight distance. Based the observed 510 feet of available sight distance to the northwest and 1,000 feet to the southeast, as well as Caltrans HDM standards, currently there is adequate stopping sight distance in either direction of SR 12 at Richards Road.

TJKM appreciates the opportunity to provide this supplemental traffic analysis for your project. Please contact me or Andrew Kluter, P.E. at (925) 463-0611 should you have questions or comments concerning this study.

Very truly yours,

Chris D. Kinzel

Chris D. Kinzel, P.E.
President

CDK/ak

Enclosure: Attachment A: Spot Speed Study Results

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Attachment A: Spot Speed Study

Prepared by: National Data Surveying Services

Sonoma County

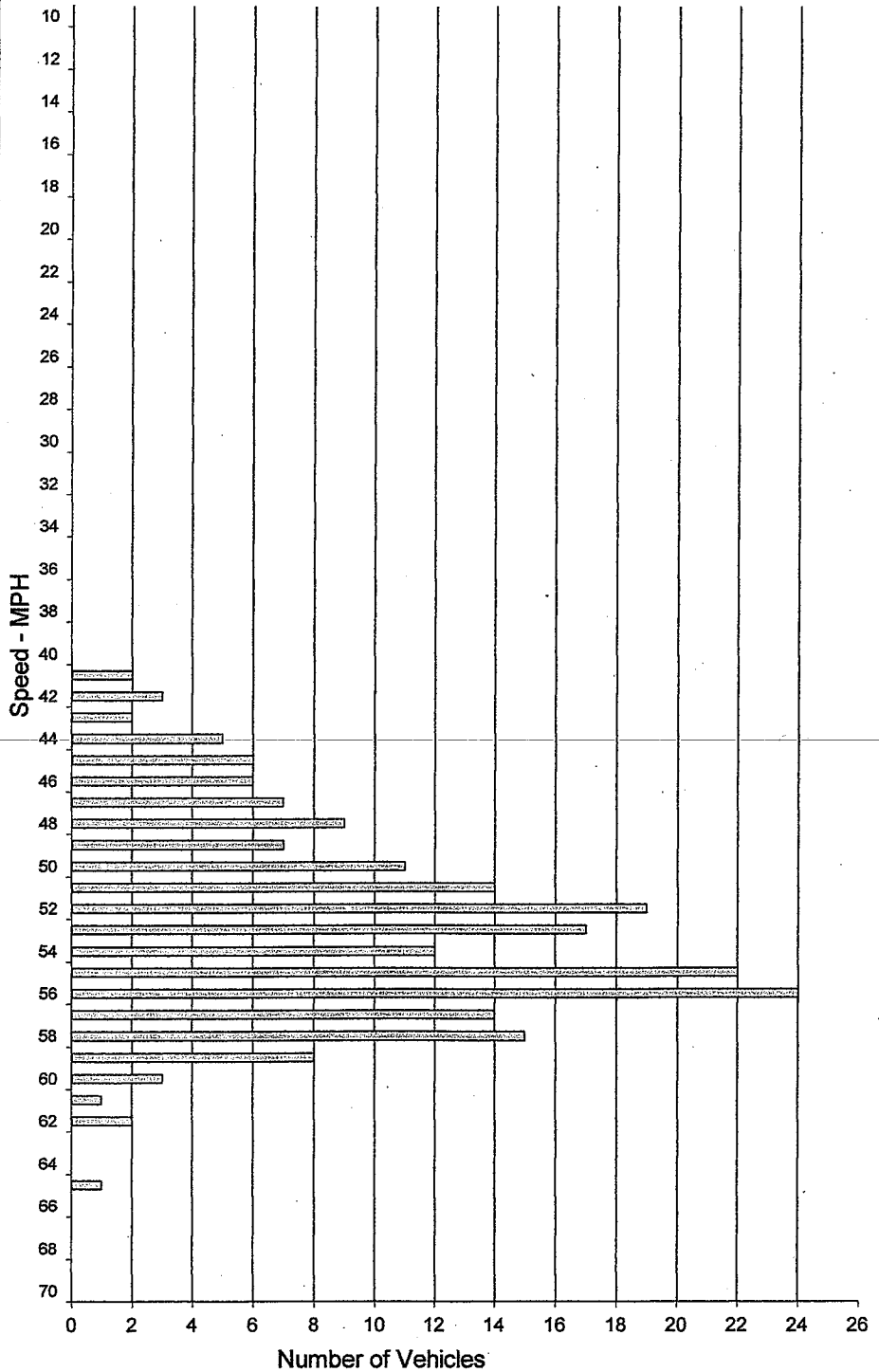
Survey Time: 9:15-10:15 **Street Width:** 40 Ft

DATE: 4/5/2012 **Location:** 6445 Sonoma Highway, Santa Rosa, CA 95409

DAY: Thursday **Posted Speed:** 55 MPH **Project #: 12-7127-001**

Eastbound & Westbound Spot Speeds

Speed mph	ALL Vehicles
<=10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	0
31	0
32	0
33	0
34	0
35	0
36	0
37	0
38	0
39	0
40	0
41	2
42	3
43	2
44	5
45	6
46	6
47	7
48	9
49	7
50	11
51	14
52	19
53	17
54	12
55	22
56	24
57	14
58	15
59	8
60	3
61	1
62	2
63	0
64	0
65	1
66	0
67	0
68	0
69	0
>=70	0



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	210	11 - 69	53 mph	57 mph	50 - 59	156	74%	22% / 47	4% / 7

REPORT 2987

NOISE IMPACTS AND MITIGATION IN CONNECTION WITH THE PROPOSED MEADOWS KENNEL, 6445 HIGHWAY 12 SONOMA COUNTY, CALIFORNIA (UPE 11-0020)

REPORT PREPARED BY:

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Sound Solutions **acoustical consulting services**

SUBMITTED TO:

Heidi Neimann
The Meadows Kennel
6445 Highway 12
Santa Rosa, CA 95409

RECEIVED
SEP 8 2011
PERMIT AND RESOURCE MANAGEMENT DEPARTMENT
COUNTY OF SONOMA

24 August 2011

I INTRODUCTION AND SUMMARY

The existing Meadows Kennel currently provides day care for up to ten dogs. The owner proposes to add boarding, grooming and training services, and to increase the kennel capacity to up as many as 50 dogs. An acoustical analysis has been performed to evaluate potential offsite noise impacts due to the proposed operations.

Measurements in the vicinity of the site have been utilized to determine existing ambient sound levels. Sound levels due to barking dogs have also been measured. The data has been used to calculate the sound levels which could occur at noise sensitive locations in the vicinity. The estimated sound levels and their implications are discussed in the remaining report sections.

Section II defines the acoustical terminology used.

In Section III, estimated sound levels are presented and discussed. The levels associated with the proposed operations are assessed through comparisons with existing ambient sound levels, and with noise exposure standards utilized by the County of Sonoma.

Mitigation of possible noise impacts is discussed in Section IV.

The conclusions are summarized in Section V.

The Appendix contains the sound level data and a description of the analysis methodology.

II GLOSSARY

The acoustical terms and abbreviations defined below shall be used to discuss sound levels in this report.

- **dBA Sound Level Units** Sound levels are conventionally measured in units of decibels, abbreviated "dB". "A" indicates that the sound signal is electronically processed to mimic the response of the human ear before the level in decibels is determined. A change in sound level by three dBA usually corresponds to a barely perceivable change in loudness. A 10 dBA increase or decrease in sound level is usually perceived as a doubling or halving of loudness.

- **Equivalent Sound Level, L_{eq}** L_{eq} is a type of average sound level. An L_{eq} value is the level, in dBA units, of a fictitious steady state sound which would deliver the same acoustic energy during a given period of time as a time-varying, measured sound actually does deliver during the same period. In more technical terms, the Leq is the result of calculating the level associated with the time averaged root mean square sound pressure variations measured at the receiver.

- **Annual Day/Night Level, L_{dn}** An L_{dn} value is the equivalent level, in dBA units, during a one year period which results when 10 dBA are added to levels measured during nighttime hours (10 PM to 7 AM). Essentially, L_{dn} is a type of weighted average sound level which emphasizes noise levels measured during the more sensitive nighttime hours. This descriptor is used as a measure of community noise exposure in many federal, state and local noise regulations and standards.

- **Percentile Sound Level, L_p** An L_p is the sound level, in dBA units, which is exceeded p percent of the measurement period. For example, L_{50} is the sound level exceeded 50% of the time, sometimes referred to as the median level. If the measurement period is one hour, L_{50} is equivalent to the level exceeded for a cumulative period of 30 minutes. This is one of the five descriptors appearing in the intermittent noise standards given in the Napa County Noise Ordinance.

- **Maximum Level, L_{max}** This is the highest sound level, in dBA, found during a specified period of time when the sound level meter is set on "slow" response. Since the maximum level is never exceeded, L_{max} is equivalent to L_0.

III SOUND LEVELS AND NOISE IMPACTS

The Meadows Kennel and vicinity are shown in Figure 1. The figure includes the locations of the existing kennel building, and the various areas around the kennel property where dogs could be active outdoors (Exercise Areas, Yard and Garden). As Figure 1 indicates, a number of dwellings exist south of Highway 12. These are considered to be the nearest noise-sensitive locations.

Figure 1 includes a Sound Receiver Location at which sound levels have been analyzed in depth. This receiving location is typical of areas meeting the following criteria: (1) outdoor residential activities could occur there, (2) unobstructed sound paths to the kennel property exist, and (3) the distance to Highway 12 is relatively large, so that ambient traffic sound levels are relatively low. Given these factors, the receiving location studied is considered to be a worst case. At points closer to the highway, the level of any sound produced at the kennel could be higher than that at the receiving location studied, but traffic sound levels would also be higher, tending to mask kennel sounds.

The data gathered and the analysis procedures leading to the results presented below are described in the Appendix. It should be noted that the assumptions regarding sound production and propagation which form the bases of the analysis are conservative in the sense that they are likely to result in somewhat overestimated sound levels. The sound levels present after the proposed activities begin could be lower than the estimates. In this sense also, worst case conditions have been considered.

A. Intermittent Sound Levels

The only potentially significant sound sources associated with the proposed operations are barking dogs. According to the proposal, some of the dogs on site could be outdoors at any given time between the hours of 7 AM and 7 PM. Between 7 PM and 7 AM, all dogs would be kept indoors. Should barking occur, the associated sound levels are expected to vary substantially with time. Such intermittent sound levels are subject to the Sonoma County General Plan Noise Exposure Standards[1]. The standards are expressed, in part, as limits on four sound descriptors, each of which is a sound level exceeded during a specified portion of a one hour period.

The county standards contain nominal limits on intermittent noise during daytime (7 AM – 10 PM) and nighttime (10 PM - 7 AM) hours. In addition, Paragraph NE-1c of the standards specifies adjustments to the limits which are to be applied as needed to take into account the nature of the sounds in question and existing ambient conditions.

Table 1 contains sound level estimates resulting from the analysis. The table includes daytime and nighttime sound level limits drawn from the Sonoma County General Plan.

The sound sources of interest are discussed separately in the following subsections, and potential impacts are assessed in Section III.B.

1. Ambient Sounds

Motor vehicle traffic on Highway 12 is the primary source of ambient sound in the vicinity of the receiving location studied. Secondary sources include occasional distant aircraft overflights and birds.

The daytime ambient levels given in Table 1 are those typical of 6 PM - 7 PM. This is the hour within the timeframe when dogs could be outdoors (7 AM - 7 PM) during which ambient sound levels are expected to be lowest. The nighttime ambient levels tabulated during the 3 AM - 4 AM hour represent the quietest time of the night. These hours were selected because potential noise impacts from added sound sources are higher when ambient levels are lower.

All entries in Table 1 include ambient sound contributions, and therefore represent the net sounds to which the receiving location could be exposed.

Whenever a sound level attributed to one of the sources tabulated is about equal to the corresponding ambient level, the implication is that the source in question is not expected to produce a significant change in existing ambient conditions.

2. Dogs

Although dogs on the kennel property could bark, in principle, virtually no barking is expected in practice. To minimize dog barking and its effects, the applicant intends to implement the following measures:

a. All dogs being considered for care will be screened through preliminary observation to determine whether they (i) are well behaved, (ii) are compatible with other dogs, and (iii) are content when away from their owners. Only dogs which are well behaved in the absence of their owners will be accepted at the kennel.

b. Only neutered dogs will be accepted at the kennel.

c. A kennel attendant will always be present in the vicinity of any dogs outdoors. With such supervision, any unwanted behavior can be quickly suppressed.

d. Disciplining collars will be used as needed. Such collars vibrate, spray or administer a small electric shock in response to barking.

e. Except for regular exercise/play periods, the dogs will be kept indoors.

f. No client dog will be outdoors between 7 PM and 7 AM.

Under the conditions listed, there would be virtually no barking dogs outdoors, ambient sound levels at the nearest dwellings would remain unchanged, no noise impact would exist, and no further acoustical analysis would be needed.

The latter outcome is highly likely. However, for the sake of completeness, an analysis of an unlikely worst case scenario is considered in the remainder of this section, a case in which measures such as those above are not implemented. The sound levels in Table 1 represent this worst case scenario.

The worst case scenario assumes that during daytime hours 10 dogs (total) would be outdoors in the four "Exercise Areas" shown in Figure 1, and 10 dogs (total) would be in the "Yard" and "Garden" areas labeled in the figure. The scenario assumes further that all 20 outdoor dogs would bark throughout a given hour.

During nighttime hours the worst case scenario assumes that 50 barking dogs are inside kennel buildings. To actually board 50 dogs, additional kennel space would be needed. It has been assumed in the analysis that any additional kennel buildings would be no closer to Highway 12 (and the dwellings to the south) than the existing kennel building, and would be similar in structure to the existing building.

B. Noise Impact Assessment of Intermittent Sound

Comparisons of the existing ambient sound levels in Table 1 with the levels associated with barking dogs show that, even in the worst case, little change in sound level is expected to result from the proposed kennel. However, it should be noted that, if barking were to occur to the degree considered, dog barks may be occasionally perceptible over the ambient traffic sounds.

Noise impacts are determined by comparing expected sound levels with the limits given in the Sonoma County Noise Exposure Standards. Noise impacts are considered possible if expected sound levels exceed the General Plan limits.

An inspection of Table 1 shows that some of the existing ambient sound levels already exceed the nominal county limits. In such an instance, the General Plan provides that the ambient levels become the limits, within a tolerance of ±1.5 dBA. In the present case, this condition is applied by limiting sound levels to no higher than one dBA above the existing ambient levels whenever the existing levels exceed the nominal limits.

The General Plan also provides that the nominal limits are to be adjusted downward if the sound source is impulsive in nature. Dog barks are considered to be in this category.

The "Adjusted County Limits" given in Table 1 result when ambient conditions and the impulsive nature of the sounds of concern are both taken into account.

All of the sound levels in Table 1 associated with dogs comply with the adjusted county limits, with a single exception. The L_{50} value due to 20 dogs barking outdoors exceeds the adjusted limit by one dBA. This is not considered significant because, (1) the estimation method is conservative, and likely to overestimate sound levels due to dogs, (2) a one decibel variation in one metric value is not perceptible. The sound levels tabulated are considered to be compliant with the intent of the General Plan standards.

However, it should be noted that all of the sound levels associated with dogs barking are close to or at the adjusted limits. This implies that if the numbers of dogs were increased, levels exceeding the limits could arise.

Measures to insure that compliance with the county limits is maintained are given in Section IV.

C. Long Term Average Sound Levels (L_{dn})

The Sonoma County General Plan contains an additional noise exposure standard

which is expressed as a limit on the long term average sound descriptor L_{dn}[2]. Specifically, the General Plan designates areas as noise impacted if they are exposed to L_{dn} values exceeding 60 dBA.

From measurements of typical ambient sound levels, it is inferred that the existing ambient L_{dn} value falls in the range 55 dBA - 60 dBA in the vicinity of the sound receiving location studied. Given the estimated sound levels associated with dogs, the intermittent nature of the sound, and the fact that the dogs will be kept indoors during nighttime hours, no significant change in the existing L_{dn} value is expected to be attributable to the proposed operations. Specifically, an L_{dn} value at or below 60 dBA is expected at the Sound Receiving Location. It follows that the proposed kennel would produce no noise impact according to the county L_{dn} criterion.

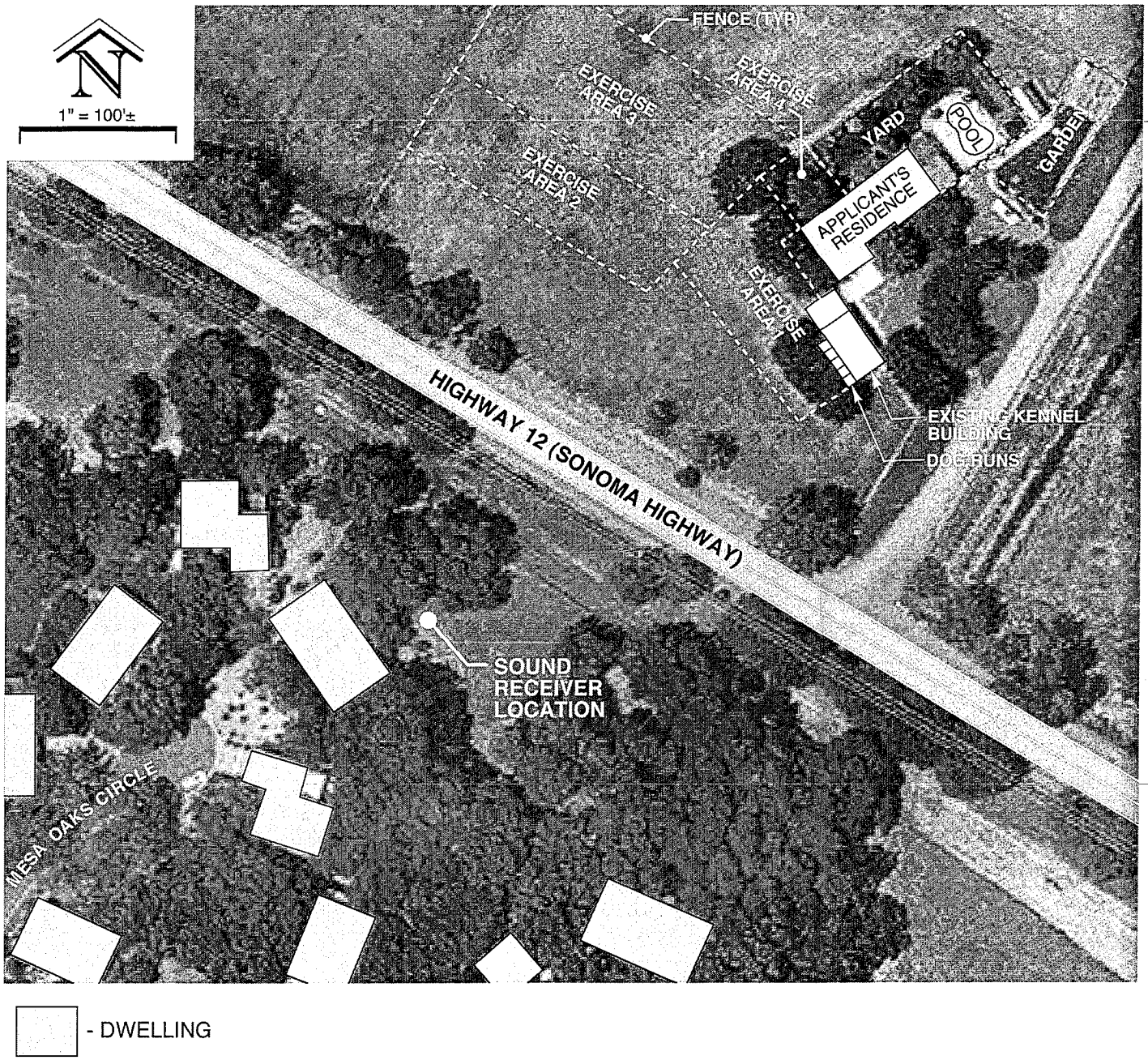

Figure 1. THE MEADOWS KENNEL AND VICINITY. The sound receiving location marked is discussed in Section III.

SOUND SOURCE OR STANDARD	HOURLY NOISE METRICS (SOUND LEVEL VALUES IN dBA)			
	L50	L25	L8	L2
Typical Evening Ambient (6 PM - 7 PM)	56	58	60	64
Typical Early Morning Ambient (3 AM - 4 AM)	34	42	53	64
20 Barking Dogs Outdoors (daytime)	58	59	61	64
50 Barking Dogs Inside Kennel Building(s) (nighttime)	38	43	53	64
Nominal Daytime County Limits (7 AM - 10 PM)	50	55	60	65
Adjusted Daytime County Limits (6 PM - 7 PM)	57	59	61	65
Nominal Nighttime County Limits (10 PM - 7 AM)	45	50	55	60
Adjusted Nighttime County Limits (3 AM - 4 AM)	40	45	54	65

Table 1. ESTIMATED SOUND LEVELS. The sound receiver location is shown in Figure 1. The sound levels tabulated are composites which include contributions from the source named and ambient sounds. The sound level limits are drawn from the standards in the Sonoma County General Plan.

The sound levels associated with barking dogs represent an unlikely worst case scenario discussed in Section III.A.2.

IV NOISE IMPACT MITIGATION

Given the measures with which the applicant proposes to control the behavior of dogs on the kennel property (see Section III.A.2), virtually no barking is expected. In that case, no significant noise impact could occur.

However, should the proposed measures not be applied, dog barking would normally be expected. This might occur, for example, if kennel ownership changed in the future, and the new owner applied a different operation model. In order to insure compliance with the Sonoma County noise exposure standards in that case, the mitigation measures below are recommended.

A. Dogs Outdoors

1. *No client dogs shall be permitted outdoors between the hours of 7 PM and 7 AM.*

2. *At any one time, no more than 10 dogs total shall be permitted in the four "Exercise Areas" combined (see Figure 1).*

3. *At any one time, no more than 10 dogs total shall be permitted in the "Yard" and "Garden" areas combined (see Figure 1).*

4. *As implied by Measures 2 and 3 above, no more than 20 dogs shall be permitted outdoors at any one time. The remainder of the dogs on site shall be housed within kennel buildings.*

As indicated in the discussion in Section III.B, Measures 1 – 4 above are expected to result in sound levels which comply with the daytime county standards, even if all outdoor dogs bark.

B. Dogs Indoors

1. *No more than 50 dogs total shall be permitted on the kennel site. In particular, no more than 50 dogs shall be housed in the kennel building(s).*

2. *Any new kennel building added to the property shall not be closer to Highway 12 than the existing kennel building shown in Figure 1.*

3. *Any new kennel building added to the property shall incorporate a building shell with interior/exterior sound insulation equal to or better than the shell of the existing building. An acceptable building shell would include: (a) wood siding, (b) composition roof, (c) gypsum board interior walls and ceiling, (d) total window area less than 10% of the net wall area.*

4. *All doors and windows of any kennel building shall be kept closed, except as needed for entry and egress.*

As suggested by the discussion in Section III.B, Measures 1 - 4 above are expected to result in sound levels which comply with the daytime and nighttime county standards, even if all dogs bark.

V SUMMARY AND CONCLUSIONS

The applicant plans to operate the proposed kennel in such a way that virtually no dog barking is expected. Therefore no noise impact would result. Nonetheless, a worst case scenario has also been considered, in which substantial dog barking could occur.

Even if dog barking were not controlled, the analysis results indicate that sound levels at the residential properties nearest the kennel are expected to comply with the Sonoma County General Plan noise exposure standards if the measures in Section IV are implemented. Section IV.A specifies verifiable administrative measures to control the sounds of dogs outdoors. Specifications for the construction of any new kennel buildings are given in Section IV.B. Any exception to these conditions should be reviewed by the acoustical consultant to insure sufficient acoustical performance of the building shells.

APPENDIX. SOUND LEVEL ANALYSIS

A. Sound Level Measurements and Data

Calibrated tape recordings were made of sound sources of interest. The recordings were calibrated before and after the measurements using a calibration signal traceable to the National Bureau of Standards. The tape recording was played back into a Model IE-30A Audio Analyzer manufactured by IVIE Electronics Inc. This device meets recommended ANSI S1.4 Type 1 and IEC 179 Standards for community noise measurements. The output of the analyzer was fed into a computer which recorded the sound levels and provided the necessary statistical analysis.

Table A-1 contains the sound level data. As suggested in the Table, the sound levels due to two dogs barking, both at a distance of 50′ from the measurement point, were calculated from the data collected with dogs at different distances. The calculated levels were used as inputs of the analysis.

B. Analysis

Ambient levels at the sound receiving location considered (see Figure 1) are due to motor vehicle traffic on Highway 12. Evening (6 PM - 7 PM) ambient sound levels there were estimated from the levels at the measurement location, taking into account the difference in distances from the traffic lanes.

Early morning (3 AM - 4 AM) ambient levels were calculated from measured daytime levels by taking into account the changes in hourly traffic volume with time of day.

Sound levels at the receiving location due to two barking dogs were calculated from the levels at 50 feet by taking account of the distances to possible locations of dogs on the kennel property. A level decrease of six dBA per doubling of distance has been assumed.

Percentile levels associated with larger numbers of dogs were calculated from the assumption that the number of sound events (barks) increases in proportion to the number of dogs present. This implies that any given sound level is exceeded more often as the number of dogs rises. If the number dogs (and barks) were doubled, any given percentile exceedance level would be exceeded twice as often. This implies, for example, that the L_{25} value due to two dogs is about equal to the L_{50} due to four dogs. This algorithm was applied to estimate the sound levels presented in the text.

Levels of diffuse sound inside a kennel building housing barking dogs were calculated from the data in Table A-1 and the assumption that little sound is absorbed by the interior surfaces (average absorption coefficient .05). Sound levels outside a closed kennel were calculated from interior levels by applying the ray model of diffuse sound, and assuming a wall transmission loss of 30 dBA.

DATE	TIME	SOUND SOURCE(S) AND MEASUREMENT LOCATIONS	SOUND LEVEL DESCRIPTORS IN dBA					
			Leq	L50	L25	L8.33	L1.67	L0
12 Jul 11	3:28 PM	Ambient	59.3	58.1	59.6	61.7	66.2	74.8
14 Jul 11	6:48 PM	Ambient	59.3	57	59.6	62.1	66.1	77.8
12 Jul 11	2:15 PM	1 Dog Barking at 55'	60.2	59.7	61.7	63.2	64.7	65.7
12 Jul 11	2:15 PM+	2 Barking Dogs, 1 at 55' and 1 at 40'	64.1	61.4	64.4	68.5	71.5	75.1
Calculated		2 Barking Dogs at 50'	63	61	64	68	71	74

Table A-1. SOUND LEVEL DATA. The ambient measurement location is shown in Figure A–1. The microphone was mounted about five feet above grade. The dog barking measurements were conducted in the "Garden" area of the existing kennel.

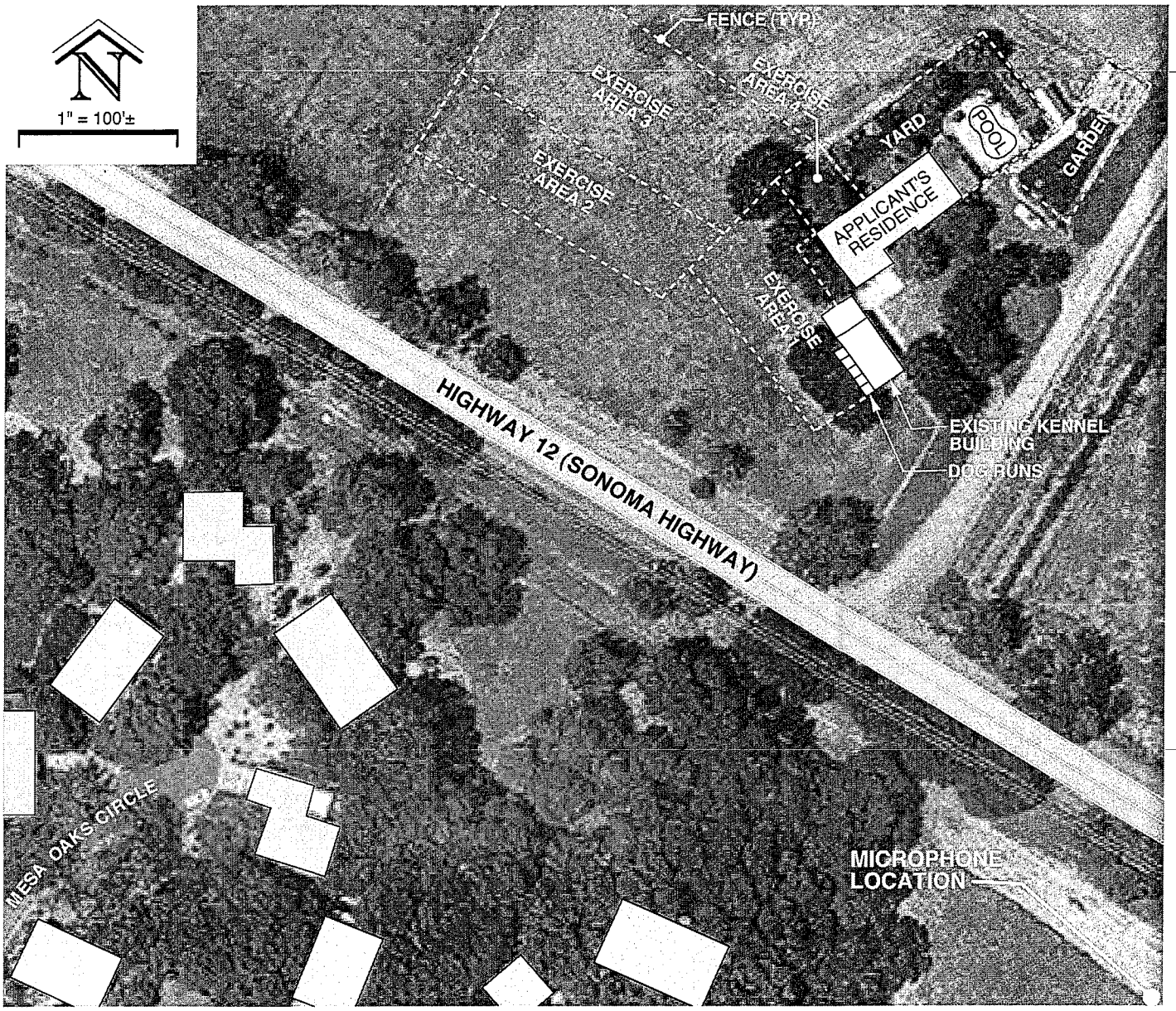

Figure 1. AMBIENT SOUND LEVEL MEASUREMENT LOCATION.

REFERENCES

1. Table NE-2 and Policy NE-1c, Noise Element, Sonoma County General Plan 2020, adopted 23 September 2008

2. Policy NE-1b, Noise Element, Sonoma County General Plan 2020, adopted 23 September 2008

UPDATED ACOUSTICAL REPORT FOR PROPOSED

THE MEADOWS KENNEL
6445 STATE ROUTE 12
SONOMA COUNTY, CALIFORNIA

~~UPE: 11-0020~~
PLP11-0042

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PERMIT AND RESOURCE MANAGEMENT DEPARTMENT
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UPDATED ACOUSTICAL REPORT FOR THE PROPOSED MEADOWS KENNEL, 6445 STATE ROUTE 12, SONOMA COUNTY, CALIFORNIA

UPE 11-0020

Prepared for:

Heidi Neiman

Meadows Kennel

Updated

12 November, 2012

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REPORT ABSTRACT

This report addresses updated acoustical findings with regard to the subject expansion of Meadows Kennel, 6445 State Route 12, Sonoma County, California in association with Sonoma County UPE 11-0020. The present report updates and augments data previously supplied in regard to the subject project in the report entitled "Noise Impacts and Mitigation in Connection with the Proposed Meadows Kennel, 6445 State Route 12, Sonoma County, California", dated 24 August, 2011.

Salient findings of this updated report by Lumina Technologies are:

- Noise impacts to neighboring residential properties are projected to be negligible and generally below thresholds of human perception.
- The noise environment of the subject neighborhood is dominated by sound emanating from vehicular traffic on California State Route 12 along with agricultural machinery noise produced by the parcel to the east of the subject Meadows Kennel site; the projected future noise environment when the Meadows Kennel expansion project is implemented will continue to be dominated by that same suite of noise sources. This assertion is valid for residential receptions on both sides of State Route 12 in the subject neighborhood.
- Each day of sound level measurements was conducted with dogs present in the outdoor environment on the Meadows site; however, the amount of energy contributed to ambient sound levels from on site dogs was much less than one percent of the sound energy for any of the hourly intervals, and accordingly contributed no measurable amount to the ambient sound levels.
- Noise impacts of the proposed project will conform to requirements of Sonoma County regulations and guidelines.
- All aspects of best available noise control technology have been incorporated into the proposed Meadows Kennel expansion as represented in the architect Patrick Slayter plans, dated September, 2012 and further augmented by any mitigation measures set forth in the present Lumina Technologies report. (All current architectural oversight and coordination for this project are being conducted under architect Patrick Slayter.)
- Projected sound levels for the completed project operation with mitigation in place have been analyzed and are virtually indistinguishable from the unmitigated project, owing to the fact that the dominant sound energy is contributed by State Route 12 and the agricultural machinery operating on the site to the east of Meadows Kennel. There is less than one half decibel difference in the mitigated and unmitigated project. Nevertheless, the sound mitigation measures are recommended as best management practices.

EXISTING AREA SOUND LEVELS

Lumina Technologies conducted 24 hour measurements of area acoustical conditions on four separate days in 2012. Prominent findings of the measurements are:

1. The Lumina Technologies data are consistent with prior data published in the Sonoma County General Plan Noise Element, even though the locational data of the County is not as close to the study area as the Lumina data.
2. The present sound levels in the project area are dominated primarily by traffic moving on State Route 12, and secondarily by intermittent agricultural machinery operating on the parcel unrelated to and east of the Meadows Kennel site.
3. The Ldn value measured by Lumina Technologies at the southernmost part of the Bernd property line (Location A) is 60 Ldn based upon the four days of Lumina measurements.
4. The Ldn value measured by Lumina Technologies at the Oakmont site (Location B) property line is 68 Ldn based upon the four days of Lumina measurements

EXISTING AND PROJECTED SOUND LEVELS

Previous sound level measurements reported in that certain report entitled "Noise Impacts and Mitigation in Connection with the Proposed Meadows Kennel, 6445 Highway 12, Sonoma County, California", dated 24 August, 2011, are hereby confirmed using independent calculations of sound propagation which consider topography, microclimate, Meadows Kennel expansion, and the existing and projected dominant noise source of State Route 12.

Additional measurements and calculations were made for that residential property immediately north of the Meadows Kennel at the location of the residential property line closest to the Meadows Kennel, denoted on Figure 1 as microphone location 2. Existing sound levels at the subject northern residential property line have been measured and the results reported in Tables 3 and 4.

It has been found that resulting sound levels from the Meadows Kennel at that northern receptor site will have negligible impact (less than one decibel) for all time periods and acoustical metrics. In fact, State Route 12 is and will continue to the audible and dominant sound source at this northerly residential receptor site, whether or not the Meadows Kennel expansion is implemented. Furthermore, future sound levels at the northern residential receptor may actually decline by a small amount (up to one decibel), due to the fact that the proposed new kennel building will partially block some fraction of the sound emanating from State Route 12.

Lumina has also conducted additional sound level measurements on the Oakmont (south) side of State Route 12 at a point at the nearest residential property line with respect to the new proposed kennel building, denoted as microphone location 1 on Figure 1. Measurements were made over four 24 hour periods at this location. The results of these new measurements are set forth in Tables 1 and 2. Projected impacts of expanded kennel operations yield identical (within a margin of one decibel) future outcome levels for the Oakmont location. This projection is due to the very high intensity of noise emanating from State Route 12 that would dominate and overshadow any marginal noise contributions from the expanded kennel.

In Tables 1 through 4, the daytime and nighttime selected was based upon the most stringent weekday or weekend time period (i.e. generally the quietest time periods within the 24 hour measurement interval). Days of 24 hour measurements include April 26, April 30, August 29, November 9 and November 11, 2012.

ADJUSTED SOUND LEVEL STANDARDS

Sonoma County explicitly provides for adjustment of its daytime and nighttime sound level standards for several circumstances. The potential adjustments germane to the present application are: (a) due to ambient conditions exceeding the County Standards and (b) due to the potential for barking dogs being present in a future scenario. First the barking dog reduction is applied, and then the adjustment to actual present ambient is to be applied, if such a second adjustment is applicable. Note that the second adjustment of ambient levels was only applicable for Location 2 under the L50 acoustic metric, since for Location 2 only for the L50 metric did the ambient level exceed the barking dog adjusted County Standard.

RECOMMENDED SOUND MITIGATION MEASURES

The following mitigation measures are set forth to assure the absolute minimum emanation of noise from the Meadows Kennel site. These measures should be considered as incorporated as integral components of the Meadows Kennel project design. Some of these measures have been previously advanced by the project applicant, and all of the measures have been discussed between Lumina Technologies and the project applicant; furthermore, the project applicant has agreed to implement all of the construction and operational measures set forth herein:

- No dogs will be permitted outdoors between 8 pm and 7 am each day of the week
- No more than 20 dogs will be permitted outdoors at any time. This number of 20 outdoor dogs includes any dogs having open access to outdoor runs
- No more than 35 dogs are proposed on site (including interior locations) at a given time
- The new kennel building proposed will not be closer to State Route 12 than the existing kennel building
- All doors and windows of existing and new kennel buildings shall be kept closed at all times except as needed for entrance and egress
- The new kennel building shall have a building shell equal or superior to the existing kennel building shell regarding sound transmission characteristics. In particular, such new shell will include (1) wood siding, (2) roofing material equal or superior in mass density to the existing kennel roof, (3) interior surfaces covered with gypsum board both for walls and ceiling, (4) total window area less than ten percent of total wall area
- Dog doors for new and existing kennel shall have double covers including hard panel sliding members and heavy flat type members. Sliding panels shall have gaskets or seals for best practicable perimeter sealing
- Dog doors for new kennel shall be positioned only such that they face an existing building on site, such that sound emanations off site will be at an absolute minimum. All Dog doors shall have an insulated internal door with a insulated noise barrier flap and an additional external door for nighttime containment. Outside dog doors are located across from a berm, trees and redwood privacy fence.
- Ductwork above ceilings of new kennel shall have exterior wrap insulation
- All windows of new kennel shall be non operable and shall be permanently sealed. Such windows shall be of superior thickness (e.g. double glazed or one quarter inch in total thickness) for sound insulation properties. Windows are Milgard Quietline series, raising each window STC to 47 from 30.
- The existing kennel building shall have upgraded insulation including the following: permanent sealing of the garage door; increasing the insulation of all windows by at least 3 decibels; replacement of exterior doors with solid core assemblies; additional layer of sound reducing drywall: Quiet Rock on all interior walls bringing the overall STC rating of the wall assemblies to 53 from the prior rating of 34 to 39. (These measures have all been carried out.)

LINE ITEM RESPONSES TO BERND LETTER OF APRIL 19, 2012

The following responses are made to those certain comments contained in that letter authored by the Bernds of April 19, 2012. Please note that Lumina Technologies has no relation to the prior acoustical consultant, upon whose work the letter is generated.

1. Request to perform analysis on the Bernd property. Lumina Technologies came to the same conclusion as the Bernds, two days before the Bernd letter was issued. The Bernd property should be analyzed, and in fact Lumina has carried out both field measurements and calculations on the Bernd property using the property line standard. Lumina wishes to point out that the property line standard offers the Bernd property the most stringent analysis of acoustical impacts. The April 19th letter is misleading as it suggests an activity area standard is desirable. In fact, analysis at any point other than the Bernd southern property line (that line common to Meadows Kennel) would give a less stringent analysis of acoustical impacts. The full analysis of the Bernd property line impacts are presented in the foregoing body of this report. In further response to commentary of the April 19th letter, one should note that the buildings located on the Meadows Kennel site do provide highly effective noise mitigation for such dogs as may be in the dog runs attached to either kennel building.
2. Dog management assumptions. The Meadows Kennel does not plan on the use of any barking control collars. The Meadows Kennel requires registration of owner contact details as well as backup contact details. Any dog who engages in systematic barking will be immediately required to be taken off the premises by the owner or secondary contact. No more than 20 dogs will be allowed out of doors at any time. Dogs in dog runs are also counted as outdoor dogs. Thus no more than 20 dogs will be outside at any time, including dogs in dog runs. All other dogs will be fully enclosed within kennel buildings.
3. Counting of outdoor dogs. As stated above, any dog who has access to an outdoor dog run is considered an outdoor dog. The maximum number of outdoor dogs will be 20. This maximum includes all dogs that are in play areas plus any dogs that have access to outdoor runs. In no case will more than 20 dogs be outside at any given time, including any dogs that have access to dog runs.
4. Applicable standards. Due to the high intensity of traffic noise from State Route 12 throughout the study area, the dominant noise source (with or without dog contributions) is State Route 12. Furthermore, the use of a standard is totally dictated by the preponderance of State Route 12 as the basis of ambient sound levels. Thus the chief question to be answered is whether kennel operations alter the ambient level by an amount inconsistent with county standards. This approach is utilized in the analysis herein and heretofore in this report.
5. Noise sensitive receptors. As indicated above Lumina Technologies agrees with the Bernd letter that Oakmont is not the site of the most proximate receptor, and accordingly the Bernd property has been analyzed by Lumina for noise impacts and reported herein.

6. Time of noise measurements. In response to the April 19th letter, additional measurements were made by Lumina over 24 hour intervals to include weekend mid-mornings and on weekday afternoons. In response to the query regarding best methodology of microphone placement, Lumina utilizes microphone placement at five feet above ground, simulating most likely location of the human ear.
7. Indoor versus outdoor dogs. As stated earlier, no more than 20 dogs will be allowed outside at any given time. A dog with access to an outdoor run is counted as an outdoor dog.
8. Basis for dog barking levels. The database used by Lumina was chosen from some of the highest intensity barking dogs known such as Australian shepherds, German shepherds and Border collies. Only medium and large dogs were used in the database. (As far as the prior study, Lumina understands that the dogs used were medium sized breeds such as Border collies. A worst case of twenty outdoor barking dogs was assumed in locations allowed for such outdoor dogs. Note that a realistic worst case is based on intermittence of barking observed at the Meadows and other kenneling sites. Note also that the expected outcome of dog barking is expected to be much less than the worst case calculations used in Tables 1 through 4, since the Meadows Kennel staff employs intensive screening of dogs accepted and intensive management oversight. This outcome of lack of collective barking has been observed and validated in the measurement data of this report.

Hourly Metric	Daytime Standard	Adjusted Daytime Standard	Existing Daytime Level (Location 1)	Projected Daytime Level (Location 1)
L50	50	59	59	59
L25	55	61	61	61
L08	60	62	62	62
L02	65	63	63	63

Table 1. County Standards, existing and projected daytime sound levels for Location 1, Oakmont

Notes:

1. L50 is the level exceeded for 30 minutes in a given hour
2. L25 is the level exceeded for 15 minutes in a given hour
3. L08 is the level exceeded for eight percent of a given hour
4. L02 is the level exceeded for two percent of a given hour
5. All sound levels are given as decibels on the A measurement scale
6. Existing levels are representative of 2012 conditions
7. Projected levels are those expected to arise with approval of the kennel expansion project
8. Projected levels are the same as reported to the integer precision level for unmitigated and mitigated project, since the overarching sources of noise are State Route 12 and machinery operations on the vineyard parcel to the east of Meadows Kennel.

Hourly Metric	Nighttime Standard	Adjusted Nighttime Standard	Existing Nighttime Level (Location 1)	Projected Nighttime Level (Location 1)
L50	45	50	50	50
L25	50	52	52	52
L08	55	53	53	53
L02	60	54	54	54

Table 2. County Standards, existing and projected nighttime sound levels for Location 1, Oakmont

Notes:

1. L50 is the level exceeded for 30 minutes in a given hour
2. L25 is the level exceeded for 15 minutes in a given hour
3. L08 is the level exceeded for eight percent of a given hour
4. L02 is the level exceeded for two percent of a given hour
5. All sound levels are given as decibels on the A measurement scale
6. Existing levels are representative of 2012 conditions
7. Projected levels are those expected to arise with approval of the kennel expansion project
8. Projected levels are the same as reported to the integer precision level for unmitigated and mitigated project, since the overarching sources of noise are State Route 12 and machinery operations on the vineyard parcel to the east of Meadows Kennel.

Hourly Metric	Daytime Standard	Adjusted Daytime Standard	Existing Daytime Level (Location 2)	Projected Daytime Level (Location 2)
L50	50	54	54	54
L25	55	55	55	55
L08	60	60	57	57
L02	65	65	59	59

Table 3. County Standards, existing and projected daytime sound levels for Location 2, northern property line of Meadows site

Notes:

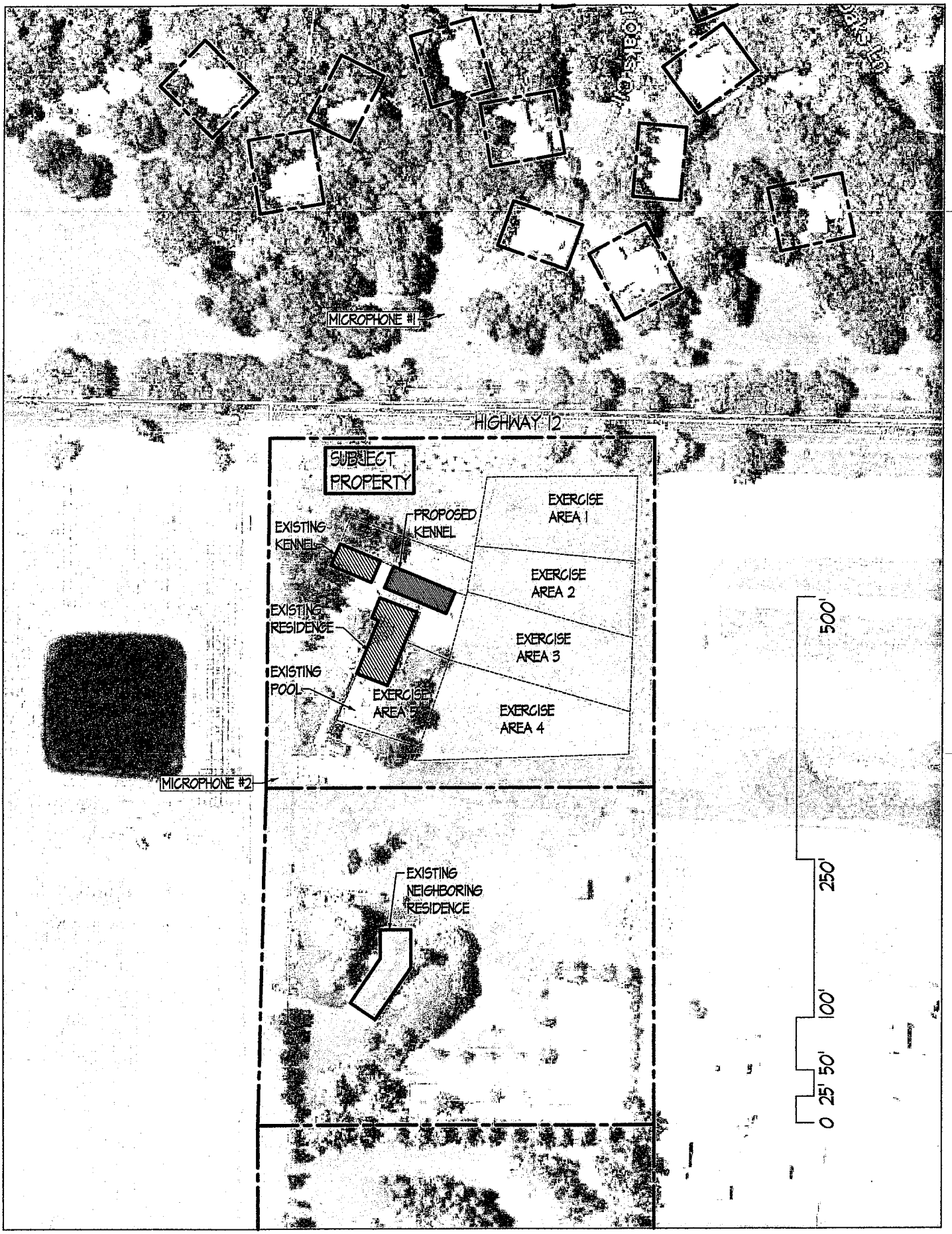
1. L50 is the level exceeded for 30 minutes in a given hour
2. L25 is the level exceeded for 15 minutes in a given hour
3. L08 is the level exceeded for eight percent of a given hour
4. L02 is the level exceeded for two percent of a given hour
5. All sound levels are given as decibels on the A measurement scale
6. Existing levels are representative of 2012 conditions
7. Projected levels are those expected to arise with approval of the kennel expansion project
8. Projected levels are the same as reported to the integer precision level for unmitigated and mitigated project, since the overarching sources of noise are State Route 12 and machinery operations on the vineyard parcel to the east of Meadows Kennel.

Hourly Metric	Nighttime Standard	Adjusted Nighttime Standard	Existing Nighttime Level (Location 2)	Projected Nighttime Level (Location 2)
L50	45	42	42	42
L25	50	45	45	45
L08	55	50	49	49
L02	60	55	54	54

Table 4. County Standards, existing and projected nighttime sound levels for Location 2, northern property line of Meadows site

Notes:

1. L50 is the level exceeded for 30 minutes in a given hour
2. L25 is the level exceeded for 15 minutes in a given hour
3. L08 is the level exceeded for eight percent of a given hour
4. L02 is the level exceeded for two percent of a given hour
5. All sound levels are given as decibels on the A measurement scale
6. Existing levels are representative of 2012 conditions
7. Projected levels are those expected to arise with approval of the kennel expansion project
8. Projected levels are the same as reported to the integer precision level for unmitigated and mitigated project, since the overarching sources of noise are State Route 12 and machinery operations on the vineyard parcel to the east of Meadows Kennel.


MICROPHONE #1
HIGHWAY 12
SUBJECT PROPERTY
EXERCISE AREA 1
PROPOSED KENNEL
EXISTING KENNEL
EXERCISE AREA 2
EXISTING RESIDENCE
EXERCISE AREA 3
EXISTING POOL
EXERCISE AREA 5
EXERCISE AREA 4
MICROPHONE #2
EXISTING NEIGHBORING RESIDENCE
500'
250'
100'
50'
25'
0

UPDATED ACOUSTICAL REPORT FOR THE PROPOSED

THE MEADOWS KENNEL, 6445 STATE ROUTE 12

SONOMA COUNTY, CALIFORNIA

UPE 11-0020

PLP11-0042

Updated

27 September, 2012

Prepared by:

C. Michael Hogan PhD

Lumina Technologies

P.O.Box 1118

Kenwood, California 95452

Lumina Technologies Technical Report 30107

REPORT ABSTRACT

This report addresses updated acoustical findings with regard to the subject expansion of Meadows Kennel, 6445 State Route 12, Sonoma County, California in association with Sonoma County UPE 11-0020. The present report updates and augments data previously supplied in regard to the subject project in the report entitled "Noise Impacts and Mitigation in Connection with the Proposed Meadows Kennel, 6445 State Route 12, Sonoma County, California", dated 24 August, 2011.

Salient findings of this updated report by Lumina Technologies are:

- Noise impacts to neighboring residential properties are projected to be negligible and generally below thresholds of human perception.
- The noise environment of the subject neighborhood is dominated by sound emanating from vehicular traffic on California State Route 12; the projected future noise environment when the Meadows Kennel expansion project is implemented will continue to be dominated by that same vehicular traffic on State Route 12. This assertion is valid for residential receptions on both sides of State Route 12 in the subject neighborhood.
- Noise impacts of the proposed project will conform to requirements of Sonoma County regulations and guidelines.
- All aspects of best available noise control technology have been incorporated into the proposed Meadows Kennel expansion as represented in the architect Ken Coker plans, dated 9 April, 2012 (Project number 21126) and further augmented by any mitigation measures set forth in the present Lumina Technologies report. (Note that current architectural oversight and coordination for this project are being conducted under architect Patrick Slayter.)

PROJECTED SOUND LEVELS

Previous sound level projections reported in that certain report entitled "Noise Impacts and Mitigation in Connection with the Proposed Meadows Kennel, 6445 Highway 12, Sonoma County, California", dated 24 August, 2011, are hereby confirmed using independent calculations of sound propagation which consider topography, microclimate, Meadows Kennel expansion, and the existing and projected dominant noise source of State Route 12.

Additional measurements and calculations were made for that residential property immediately north of the Meadows Kennel at the location of the residential property line closest to the Meadows Kennel. Existing sound levels at the subject northern residential property line have been measured to be 51 DbA L50 on a weekday mid-morning (April 25 between 10 and 11 am); at this location the weekend level was measured to be 50 dbA L50 (April 29 between 1 and 2 pm).

It has been found that resulting sound levels from the Meadows Kennel at that northern receptor site will have negligible impact (less than one decibel) for all time periods and acoustical metrics. In fact, State Route 12 is and will continue to the audible and dominant sound source at this northerly residential receptor site, whether or not the Meadows Kennel expansion is implemented. Furthermore, future sound levels at the northern residential receptor may actually decline by a small amount (up to one decibel), due to the fact that the proposed new kennel building will partially block some fraction of the sound emanating from State Route 12.

Lumina has also conducted additional sound level measurements on the Oakmont (south) side of State Route 12 at a point at the nearest residential property line with respect to the new proposed kennel building. Measurements were made at a mid-morning and at a weekend time at this location. The results of these new measurements are as follows: Midmorning results at the nearest Oakmont residential property line were 64 dbA L50 (April 26 between 10 and 11 am); weekend results of 65 dbA L50 (April 30 between 2 and 3 pm). Projected impacts of expanded kennel operations yield identical (within a margin of one decibel) future outcome levels for the Oakmont location. This projection is due to the very high intensity of noise emanating from State Route 12 that would dominate and overshadow any marginal noise contributions from the expanded kennel.

RECOMMENDED SOUND MITIGATION MEASURES

The following mitigation measures are set forth to assure the absolute minimum emanation of noise from the Meadows Kennel site. These measures should be considered as incorporated as integral components of the Meadows Kennel project design. Some of these measures have been previously advanced by the project applicant, and all of the measures have been discussed between Lumina Technologies and the project applicant; furthermore, the project applicant has agreed to implement all of the construction and operational measures set forth herein:

- No dogs will be permitted outdoors between 8 pm and 7 am each day of the week
- No more than 20 dogs will be permitted outdoors at any time. This number of 20 outdoor dogs includes any dogs having open access to outdoor runs
- No more than 35 dogs are proposed on site at a given time
- The new kennel building proposed will not be closer to State Route 12 than the existing kennel building
- All doors and windows of existing and new kennel buildings shall be kept closed at all times except as needed for entrance and egress
- The new kennel building shall have a building shell equal or superior to the existing kennel building shell regarding sound transmission characteristics. In particular, such new shell will include (1) wood siding, (2) roofing material equal or superior in mass density to the existing kennel roof, (3) interior surfaces covered with gypsum board both for walls and ceiling, (4) total window area less than ten percent of total wall area
- Dog doors for new kennel shall have double covers including hard panel sliding members and heavy flat type members. Sliding panels shall have gaskets or seals for best practicable perimeter sealing

- Dog doors for new kennel shall be positioned only such that they face an existing building on site, such that sound emanations off site will be at an absolute minimum
- Ductwork above ceilings of new kennel shall have exterior wrap insulation
- All windows of new kennel shall be non operable and permanently sealed. Such windows shall be of superior thickness for sound insulation properties.

LINE ITEM RESPONSES TO BERND LETTER OF APRIL 19, 2012

The following responses are made to those certain comments contained in that letter authored by the Bernds of April 19, 2012. Please note that Lumina Technologies has no relation to the prior acoustical consultant, upon whose work the letter is generated.

1. Request to perform analysis on the Bernd property. Lumina Technologies came to the same conclusion at the Bernds, two days before the Bernd letter was issued. The Bernd property should be analyzed, and in fact Lumina has carried out both field measurements and calculations on the Bernd property using the property line standard. Lumina wishes to point out that the property line standard offers the Bernd property the most stringent analysis of acoustical impacts. The April 19th letter is misleading as it suggests an activity area standard is desirable. In fact, analysis at any point other than the Bernd southern property line (that line common to Meadows Kennel) would give a less stringent analysis of acoustical impacts. The full analysis of the Bernd property line impacts are presented in the foregoing body of this report. In further response to commentary of the April 19th letter, one should note that the buildings located on the Meadows Kennel site do provide highly effective noise mitigation for such dogs as may be in the dog runs attached to either kennel building.
2. Dog management assumptions. The Meadows Kennel does not plan on the use of any barking control collars. The Meadows Kennel requires registration of owner contact details as well as backup contact details. Any dog who engages in systematic barking will be immediately required to be taken off the premises by the owner or secondary contact. No more than 20 dogs will be allowed out of doors at any time. Dogs in dog runs are also counted as outdoor dogs. Thus no more than 20 dogs will be outside at any time, including dogs in dog runs. All other dogs will be fully enclosed within kennel buildings.

3. Counting of outdoor dogs. As stated above, any dog who has access to an outdoor dog run is considered an outdoor dog. The maximum number of outdoor dogs will be 20. This maximum includes all dogs that are in play areas plus any dogs that have access to outdoor runs. In no case will more than 20 dogs be outside at any given time, including any dogs that have access to dog runs.
4. Applicable standards. Due to the high intensity of traffic noise from State Route 12 throughout the study area, the dominant noise source (with or without dog contributions) is State Route 12. Furthermore, the use of a standard is totally dictated by the preponderance of State Route 12 as the basis of ambient sound levels. Thus the chief question to be answered is whether kennel operations alter the ambient level by an amount inconsistent with county standards. This approach is utilized in the analysis herein and heretofore in this report.
5. Noise sensitive receptors. As indicated above Lumina Technologies agrees with the Bernd letter that Oakmont is not the site of the most proximate receptor, and accordingly the Bernd property has been analyzed by Lumina for noise impacts.
6. Time of noise measurements. In response to the April 19th letter, additional measurements were made by Lumina at weekend mid-mornings and on weekday afternoons. In response to the query regarding best methodology of microphone placement, Lumina utilizes microphone placement at five feet above ground, simulating most likely location of the human ear.
7. Indoor versus outdoor dogs. As stated earlier, no more than 20 dogs will be allowed outside at any given time. A dog with access to an outdoor run is counted as an outdoor dog.
8. Basis for dog barking levels. The database used by Lumina was chosen from some of the highest intensity barking dogs known such as Australian shepherds, German shepherds and Border collies. Only medium and large dogs were used in the database. (As far as the prior study, Lumina understands that the dogs used were medium sized breeds such as Border collies.)

UPDATED ACOUSTICAL REPORT FOR THE PROPOSED MEADOWS KENNEL, 6445 STATE ROUTE 12, SONOMA COUNTY, CALIFORNIA

UPE 11-0020

Prepared for:

Heidi Neiman

Meadows Kennel

Updated

30 November, 2012

Prepared by:

C.Michael Hogan PhD

Lumina Technologies

P.O.Box 1118

Kenwood, California 95452

REPORT ABSTRACT

This report addresses updated acoustical findings with regard to the subject expansion of Meadows Kennel, 6445 State Route 12, Sonoma County, California in association with Sonoma County UPE 11-0020. The present report updates and augments data previously supplied in regard to the subject project in the report entitled "Noise Impacts and Mitigation in Connection with the Proposed Meadows Kennel, 6445 State Route 12, Sonoma County, California", dated 24 August, 2011.

Salient findings of this updated report by Lumina Technologies are:

- Noise impacts to neighboring residential properties are projected to be negligible and generally below thresholds of human perception.
- The noise environment of the subject neighborhood is dominated by sound emanating from vehicular traffic on California State Route 12 along with agricultural machinery noise produced by the parcel to the east of the subject Meadows Kennel site; the projected future noise environment when the Meadows Kennel expansion project is implemented will continue to be dominated by that same suite of noise sources. This assertion is valid for residential receptions on both sides of State Route 12 in the subject neighborhood.
- Each day of sound level measurements was conducted with dogs present in the outdoor environment on the Meadows site; however, the amount of energy contributed to ambient sound levels from on site dogs was much less than one percent of the sound energy for any of the hourly intervals, and accordingly contributed no measurable amount to the ambient sound levels.
- Noise impacts of the proposed project will conform to requirements of Sonoma County regulations and guidelines.
- All aspects of best available noise control technology have been incorporated into the proposed Meadows Kennel expansion as represented in the architect Patrick Slayter plans, dated September, 2012 and further augmented by any mitigation measures set forth in the present Lumina Technologies report. (All current architectural oversight and coordination for this project are being conducted under architect Patrick Slayter.)
- Projected sound levels for the completed project operation with mitigation in place have been analyzed and are virtually indistinguishable from the unmitigated project, owing to the fact that the dominant sound energy is contributed by State Route 12 and the agricultural machinery operating on the site to the east of Meadows Kennel. There is less than one half decibel difference in the mitigated and unmitigated project. Nevertheless, the sound mitigation measures are recommended as best management practices.

EXISTING AREA SOUND LEVELS

Lumina Technologies conducted 24 hour measurements of area acoustical conditions on four separate days in 2012. Prominent findings of the measurements are:

1. The Lumina Technologies data are consistent with prior data published in the Sonoma County General Plan Noise Element, even though the locational data of the County is not as close to the study area as the Lumina data.
2. The present sound levels in the project area are dominated primarily by traffic moving on State Route 12, and secondarily by intermittent agricultural machinery operating on the parcel unrelated to and east of the Meadows Kennel site.
3. The Ldn value measured by Lumina Technologies at the southernmost part of the Berndt property line (Location A) is 60 Ldn based upon the four days of Lumina measurements.
4. The Ldn value measured by Lumina Technologies at the Oakmont site (Location B) property line is 68 Ldn based upon the four days of Lumina measurements

EXISTING AND PROJECTED SOUND LEVELS

Previous sound level measurements reported in that certain report entitled "Noise Impacts and Mitigation in Connection with the Proposed Meadows Kennel, 6445 Highway 12, Sonoma County, California", dated 24 August, 2011, are hereby confirmed using independent calculations of sound propagation which consider topography, microclimate, Meadows Kennel expansion, and the existing and projected dominant noise source of State Route 12.

Sound level measurements Sound level measurements and calculations were made for that residential property line along Oakmont residences south of the Meadows Kennel at the location of a residential property line closest to the Meadows Kennel, denoted on Figure 1 as microphone location 1. Existing sound levels at the subject Oakmont residential property line have been measured and the results reported in Tables 1 and 2.

Sound level measurements and calculations were made for that residential property immediately north of the Meadows Kennel at the location of the residential property line closest to the Meadows Kennel, denoted on Figure 1 as microphone location 2. Existing sound levels at the subject northern residential property line have been measured and the results reported in Tables 3 and 4.

In all cases of noise metric and daytime/nighttime evaluation, the Future Project sound levels at this northern property line comply with County Standards. It has further been found that resulting sound levels from the Meadows Kennel at that northern receptor site (Location 2) will have negligible impact on future ambient sound levels (less than one half decibel) for all time periods and acoustical metrics. Projected mitigated impacts of expanded kennel operations yield identical (within a margin of one half decibel) future outcome levels for the northern property line location (Location 2), compared to present conditions. This outcome verifies that there is no "creep" upward of ambient levels due to the proposed project, pursuant to the County's 1.5 decibel increment standard. In fact, State Route 12 is and will continue to the audible and dominant sound source at this northerly residential receptor site, whether or not the Meadows Kennel expansion is implemented.

Lumina has also conducted additional sound level measurements on the Oakmont (south) side of State Route 12 at a point at the nearest residential property line with respect to the new proposed kennel building, denoted as microphone location 1 on Figure 1. Measurements were made over four 24 hour periods at this location. The results of these new measurements are set forth in Tables 1 and 2. Projected mitigated impacts of expanded kennel operations yield identical (within a margin of one half decibel) future outcome levels for the Oakmont location, compared to present conditions. This outcome verifies that there is no "creep" upward of ambient levels due to the proposed project, pursuant to the County's 1.5 decibel increment standard. This outcome is due to the very

high intensity of noise emanating from State Route 12 that would dominate and overshadow any marginal noise contributions from the expanded kennel.

In Tables 1 through 4, the daytime and nighttime selected was based upon the most stringent weekday or weekend time period (i.e. generally the quietest time periods within the 24 hour measurement interval). Days of 24 hour measurements include April 26, April 30, August 29, November 9 and November 11, 2012.

ADJUSTED SOUND LEVEL STANDARDS

Sonoma County explicitly provides for adjustment of its daytime and nighttime sound level standards for several circumstances. The potential adjustments germane to the present application are: (a) due to ambient conditions exceeding the County Standards and (b) due to the potential for barking dogs being present in a future scenario. First, the adjustment to actual present ambient is applied (when applicable), and then the barking dog reduction is applied. Note that the first adjustment of ambient levels was applicable only to certain of the locations and noise metrics, whereas the reduction for barking dogs was applied in every instance of noise metric, time of day and location.

RECOMMENDED SOUND MITIGATION MEASURES

The following mitigation measures are set forth to assure the absolute minimum emanation of noise from the Meadows Kennel site. These measures should be considered as incorporated as integral components of the Meadows Kennel project design. Some of these measures have been previously advanced by the project applicant, and all of the measures have been discussed between Lumina Technologies and the project applicant; furthermore, the project applicant has agreed to implement all of the construction and operational measures set forth herein:

- No dogs will be permitted outdoors between 8 pm and 7 am each day of the week
- No more than 20 dogs will be permitted outdoors at any time. This number of 20 outdoor dogs includes any dogs having open access to outdoor runs
- No more than 35 dogs are proposed on site (including interior locations) at a given time
- The new kennel building proposed will not be closer to State Route 12 than the existing kennel building
- All doors and windows of existing and new kennel buildings shall be kept closed at all times except as needed for entrance and egress
- The new kennel building shall have a building shell equal or superior to the existing kennel building shell regarding sound transmission characteristics. In particular, such new shell will include (1) wood siding, (2) roofing material equal or superior in mass density to the existing kennel roof, (3) interior surfaces covered with gypsum board both for walls and ceiling, (4) total window area less than ten percent of total wall area
- Dog doors for new and existing kennel shall have double covers including hard panel sliding members and heavy flat type members. Sliding panels shall have gaskets or seals for best practicable perimeter sealing
- Dog doors for new kennel shall be positioned only such that they face an existing building on site, such that sound emanations off site will be at an absolute minimum. All Dog doors shall have an insulated internal door with a insulated noise barrier flap and an additional external door for nighttime containment. Outside dog doors are located across from a berm, trees and redwood privacy fence.
- Ductwork above ceilings of new kennel shall have exterior wrap insulation
- All windows of new kennel shall be non operable and shall be permanently sealed. Such windows shall be of superior thickness (e.g. double glazed or one quarter inch in total thickness) for sound insulation properties. Windows are Milgard Quietline series, raising each window STC to 47 from 30.
- The existing kennel building shall have upgraded insulation including the following: permanent sealing of the garage door; increasing the insulation of all windows by at least three decibels; replacement of exterior doors with solid core assemblies; additional layer of sound reducing drywall: Quiet Rock on all interior walls bringing the overall STC rating of the wall assemblies to 53 from the prior rating of 34 to 39. (These measures have all been carried out.)

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3. Counting of outdoor dogs. As stated above, any dog who has access to an outdoor dog run is considered an outdoor dog. The maximum number of outdoor dogs will be 20. This maximum includes all dogs that are in play areas plus any dogs that have access to outdoor runs. In no case will more than 20 dogs be outside at any given time, including any dogs that have access to dog runs.
4. Applicable standards. Due to the high intensity of traffic noise from State Route 12 throughout the study area, the dominant noise source (with or without dog contributions) is State Route 12. Furthermore, the use of a standard is totally dictated by the preponderance of State Route 12 as the basis of ambient sound levels. Thus the chief question to be answered is whether kennel operations alter the ambient level by an amount inconsistent with county standards. This approach is utilized in the analysis herein and heretofore in this report.
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6. Time of noise measurements. In response to the April 19th letter, additional measurements were made by Lumina over 24 hour intervals to include weekend mid-mornings and on weekday afternoons. In response to the query regarding best methodology of microphone placement, Lumina utilizes microphone placement at five feet above ground, simulating most likely location of the human ear.
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Hourly Metric	County Daytime Standard	Adjusted Daytime Standard	Existing Ambient Daytime Level (Location 1)	Future Project Daytime Level (Location 1)	Future Mitigated Daytime Level (Location 1)
L50	50	50	59	45	42
L25	55	55	61	47	44
L08	60	57	62	48	45
L02	65	60	63	50	47

Table 1. County Standards, existing ambient, and Future Project daytime sound levels for Location 1, Oakmont

Notes:

1. L50 is the level exceeded for 30 minutes in a given hour
2. L25 is the level exceeded for 15 minutes in a given hour
3. L08 is the level exceeded for eight percent of a given hour
4. L02 is the level exceeded for two percent of a given hour
5. All sound levels are given as decibels on the A measurement scale
6. Existing levels are representative of 2012 conditions at quietest daytime hour
7. Future Project levels are those sound levels solely due to the Meadows Kennel site sound emissions, which sound levels are expected to arise with approval of the kennel expansion project
8. Future Mitigated levels are those sound levels solely due to the Meadows Kennel site sound emissions with all mitigation measures applied, which sound levels are expected to arise with approval of the kennel expansion project with mitigation.

Hourly Metric	County Nighttime Standard	Adjusted Nighttime Standard	Existing Ambient Nighttime Level (Location 1)	Future Project Nighttime Level (Location 1)	Future Mitigated Nighttime Level (Location 1)
L50	45	45	50	40	37
L25	50	47	52	42	39
L08	55	50	53	44	40
L02	60	55	54	45	42

Table 2. County Standards, existing ambient, and Future Project nighttime sound levels for Location 1, Oakmont

Notes:

1. L50 is the level exceeded for 30 minutes in a given hour
2. L25 is the level exceeded for 15 minutes in a given hour
3. L08 is the level exceeded for eight percent of a given hour
4. L02 is the level exceeded for two percent of a given hour
5. All sound levels are given as decibels on the A measurement scale
6. Existing levels are representative of 2012 conditions at quietest nighttime hour
7. Future Project levels are those sound levels solely due to the Meadows Kennel site sound emissions, which sound levels are expected to arise with approval of the kennel expansion project
8. Future Mitigated levels are those sound levels solely due to the Meadows Kennel site sound emissions with all mitigation measures applied, which sound levels are expected to arise with approval of the kennel expansion project with mitigation.

Hourly Metric	County Daytime Standard	Adjusted Daytime Standard	Existing Ambient Daytime Level (Location 2)	Future Project Daytime Level (Location 2)	Future Mitigated Daytime Level (Location 2)
L50	50	49	54	48	45
L25	55	50	55	49	46
L08	60	55	57	52	49
L02	65	60	59	55	53

Table 3. County Standards, existing ambient daytime, and Future Project daytime sound levels for Location 2, northern property line of Meadows Kennel site

Notes:

1. L50 is the level exceeded for 30 minutes in a given hour
2. L25 is the level exceeded for 15 minutes in a given hour
3. L08 is the level exceeded for eight percent of a given hour
4. L02 is the level exceeded for two percent of a given hour
5. All sound levels are given as decibels on the A measurement scale
6. Existing ambient levels are representative of 2012 conditions at quietest daytime hour
7. Future Project levels are those sound levels solely due to the Meadows Kennel site sound emissions, which sound levels are expected to arise with approval of the kennel expansion project
8. Future Mitigated levels are those sound levels solely due to the Meadows Kennel site sound emissions with all mitigation measures applied, which sound levels are expected to arise with approval of the kennel expansion project with mitigation.

Hourly Metric	County Nighttime Standard	Adjusted Nighttime Standard	Existing Ambient Nighttime Level (Location 2)	Future Project Nighttime Level (Location 2)	Future Mitigated Nighttime Level (Location 2)
L50	45	40	45	40	37
L25	50	45	47	42	39
L08	55	50	49	44	41
L02	60	55	52	45	42

Table 4. County Standards, existing nighttime ambient, and Future Project nighttime sound levels for Location 2, northern property line of Meadows site

Notes:

1. L50 is the level exceeded for 30 minutes in a given hour
2. L25 is the level exceeded for 15 minutes in a given hour
3. L08 is the level exceeded for eight percent of a given hour
4. L02 is the level exceeded for two percent of a given hour
5. All sound levels are given as decibels on the A measurement scale
6. Existing levels are representative of 2012 conditions at quietest nighttime hour
7. Future Project levels are those sound levels solely due to the Meadows Kennel site sound emissions, which sound levels are expected to arise with approval of the kennel expansion project
8. Future Mitigated levels are those sound levels solely due to the Meadows Kennel site sound emissions with all mitigation measures applied, which sound levels are expected to arise with approval of the kennel expansion project with mitigation.