DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
1010 10TH Street, Suite 3400, Modesto, CA 95354
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August 20, 2026

MEMO TO: Stanislaus County Planning Commission

FROM: Department of Planning and Community Development

SUBJECT: USE PERMIT APPLICATION NO. PLN2019-0075 – MASROC FARMS

DISCUSSION

Due to lack of a quorum for the August 6, 2026 Planning Commission meeting, the subject application was rescheduled. The Planning Commission Memo prepared for the August 6, 2026 meeting is included as Attachment 1 of this memo.

Since August 6, 2026, staff received a new piece of correspondence from Lois and Michelle Montgomery, residents at 9101 Georgia Lane, opposing the project unless analysis is conducted assessing the truck volumes and routes, operating hours, PM10 and PM2.5 emissions, dust-control, noise levels, chemicals and fumigants proposed, water source and project use, and protections for private wells and groundwater (see Attachment 2 - *E-mail dated August 7, 2026 from Lois and Michelle Montgomery*). As discussed in the March 20, 2025 Planning Commission Staff Report, which is contained in Attachment A of Attachment 1 of this Memo, hours of operation, truck trips, and noise levels, along with mitigation, have been addressed. While wastewater is not generated by the existing or proposed hulling or related activities, conditions of approval addressing stormwater management practices have been added to ensure proper handling of any runoff or well overflow resulting from rain, and fumigation is regulated by standards and permits enforced by the Agricultural Commissioner's Office, as reflected in conditions of approval. Additionally, a Health Risk Assessment (HRA) quantifying the carcinogenic and non-carcinogenic health risk from operations on nearby sensitive receptors was conducted in response to community concerns, and found that the

project proposes a less-than-significant health risk to nearby sensitive receptors. The HRA, included as an attachment to the Initial Study which can be found in Exhibit D of Attachment A of Attachment 1 of this memo, was reviewed by the San Joaquin Air Pollution Control District who concurred with the study.

PROPERTY OWNER AND REPRESENTATIVE INFORMATION

Applicant:	Dave Zwald, Masroc Farms
Agent:	George Petrulakis, Petrulakis Law and Advocacy, APC
Property Owner:	Scott J. Masellis, Douglas E. Rocha, and Nicole L. Rocha

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Contact Person: Kristen Anaya, Senior Planner, (209) 525-6330

Attachments:

Attachment 1 – August 6, 2026 Planning Commission Memo, with Attachments

Attachment 2 – E-mail dated August 7, 2026 from Lois and Michelle Montgomery

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August 6, 2026

MEMO TO: Stanislaus County Planning Commission

FROM: Department of Planning and Community Development

SUBJECT: USE PERMIT APPLICATION NO. PLN2019-0075 – MASROC FARMS

This project is a request to legalize the expansion of a legal non-conforming (LNC) almond hulling facility by permitting shelling activities, construction of a 2,500 square-foot office and breakroom, conversion of a 5,400 square-foot agricultural storage building, and expansion of outdoor storage, on two parcels totaling 36.84± acres in the General Agriculture (A-2-40) zoning district, located at 616 and 610 North Hopper Road, on the southeast corner of North Hopper Road and Creekside Lane, in the Modesto area.

This item was originally scheduled to be considered by the Planning Commission at a public hearing held on March 20, 2025, but was continued to the April 17, 2025 meeting, at the request of the applicant, to allow additional time to address neighborhood concerns. The project was then continued a second time to the May 15, 2025 Planning Commission meeting. At the request of the applicant, the May 15, 2025 staff recommendation was for an indefinite continuance, however, the meeting was cancelled due to lack of quorum, and the indefinite continuance was not considered, and approved, until June 5, 2025.

A detailed project description, project issues, and environmental analysis is provided in the March 20, 2025 Planning Commission Staff Report (see Attachment A – *March 20, 2025 Planning Commission Staff Report*).

Five pieces of correspondence regarding the project, that were too late for the agenda, were provided to the Planning Commission at the start of the March 20, 2025 meeting (see Attachment B – *Correspondence Received Too Late for the March 20, 2025 Stanislaus County Planning Commission Agenda*). The correspondence included three Campaign Contribution Disclosure Forms from the applicant, their agent, and the property owner; a letter from Tom and Karen Weimer dated March 20, 2025, identifying additional project considerations; and a letter dated March 17, 2025, signed by six neighbors from four different properties along Hopper Road or Georgia Lane, expressing project concerns related to traffic and road damage, speed concerns, dust and noise, and groundwater issues. A map of property owners and/or residents who have submitted correspondence regarding the project can be found in Attachment D.

Subsequent correspondence received on the project includes an e-mail from Michelle and Lois Montgomery, residents of 9101 Georgia Lane who are two of the six individuals that signed the March 17, 2025 letter, expressing concerns about fumigation, the increase in noise levels, dust, aesthetics, and the strain that the property owner's well drilling business, which is not operated at the project site, poses on water resources (see Attachment C – *E-mail from Michelle and Lois Montgomery, dated April 17, 2026*).

The project has been on hold subject to negotiations for a possible settlement between the project applicant and Ms. Whitmore, a neighboring resident who lives at 548 North Hopper

Road, located two parcels south of the project site who is speaking on behalf of an unspecified number of residents in the vicinity of the project site. As part of these negotiations, staff has been asked to add additional conditions of approval to the project to address neighborhood concerns that existing draft conditions of approval (see Exhibit C – *Conditions of Approval and Mitigation Measures* of Attachment A – *March 20, 2025 Planning Commission Staff Report*) have not addressed. Conditions that have been suggested as part of the negotiations between the two parties include:

1. Requiring any future unpermitted activities to adhere to County noise limits;
2. Prohibiting further expansion or alteration of the project facility—even minor alterations that would not typically be subject to Planning Commission consideration—without a public hearing;
3. Reducing the North Hopper Road speed limit to 25 miles-per-hour with new posted signage;
4. Requiring the applicant to employ driver education via written handouts to be distributed to truck drivers accessing the project site, directing operators to queue and execute turns (from State Route 132 onto North Hopper Road and vice versa) in a courteous and professional manner;
5. Requiring use permit revocation procedures to be initiated following noise violations in exceedance of three occurrences per month; and
6. Clarifying that off-site biproducts shall not be imported to the project site for processing.

The suggested conditions No. 1 and 3 above have been rejected by staff for being infeasible or inappropriate for inclusion into the project's Conditions of Approval. The County cannot apply conditions on unforeseen uses or activities that are not proposed or permitted, and the speed limit for North Hopper Road is set by the California Vehicle Code and cannot be arbitrarily adjusted. The project was reviewed by both Caltrans and the County Department of Public Works and no significant concerns relating to speed or driver operations were identified during project review. To address the request for the applicant to employ driver education (No. 4), and to clarify that no biproduct generated from other hullers or shellers is proposed to be imported from off-site for further processing at the project site (No. 6) staff is recommending that the following two new Conditions of Approval be added to the project (new text is in bold):

32. Applicant shall establish procedures for and provide driver education to all tractor-trailer operators visiting the project site, related to courteous and neighborly travel along North Hopper Road. The procedures shall be provided within 24 hours of any request made by the County.

33. Almond hulls, shells, hash or other biproduct handled on the project site shall be limited to those generated from almonds that are hulled and shelled on-site. No hulls, shells, hash, or other biproducts shall be separately imported from off-site for pre-cleaning, hulling, shelling, or other handling.

With respect to the request (No. 2) that all future alterations to the project, including those permitted by staff approval, be subject to a public hearing, the Planning Commission has the discretion to condition the project to prohibit any further expansion without a use permit. Section 21.100.050(A) of the County's Zoning Ordinance allows for minor changes to a

permitted use which, in the opinion of the Director of Planning and Community Development, do not change the nature of, add new uses, and do not expand the area of the building or use by more than 25 percent to be considered at a staff level under a Staff Approval Permit application process. If the Planning Commission wishes to remove the applicant's ability to make minor alterations to the project without going through the use permit process, the following is language that could be included as a condition of approval:

- Any further modification or expansion of the request shall be subject to a use permit.

Suggestion No. 5 would require the initiation of use permit revocation procedures if three noise exceedances occur in a single month; however, staff believes that the noise mitigation incorporated into the project addressing noise impacts (see Exhibit E – *Amended Mitigation Monitoring and Reporting Program* of Attachment A – *March 20, 2025 Planning Commission Staff Report*) and existing County processes already in-place for abatement of violations to adopted conditions of approval and revocation procedures for use permits (Chapter 21.104 of County Zoning Ordinance) adequately address noise-related concerns. Should the Planning Commission wish to add a condition establishing a limit on exceedances before revocation proceedings are initiated, staff is concerned with the County's ability to verify that noise complaints are tied to actual exceedances of the County noise standards.

Additionally, since the publishing of the March 20, 2025 Planning Commission Staff Report, fees associated with the Fish and Wildlife fee for the filing of a Notice of Determination for the project have increased. Accordingly, Condition of Approval No. 3 is proposed to be modified as follows (deleted text is in strikeout and new text is in bold):

3. Pursuant to Section 711.4 of the California Fish and Game Code, the applicant is required to pay a California Department of Fish and Wildlife fee at the time of filing a "Notice of Determination". Within five (5) days of approval of this project by the Planning Commission or Board of Supervisors, the applicant shall submit to the Department of Planning and Community Development a check for ~~$3,025.75~~**$3,100.75**, made payable to Stanislaus County, for the payment of California Department of Fish and Wildlife and Clerk-Recorder filing fees.

RECOMMENDATION

Staff recommends the Planning Commission approve Use Permit Application No. PLN2019-0075 – Masroc Farms, as outlined in Exhibit A of the Planning Commission Staff Report and with modification to Condition of Approval No. 3 and the addition of Conditions of Approval No. 32 and 33 as outlined in this Planning Commission Memo.

PROPERTY OWNER AND REPRESENTATIVE INFORMATION

Applicant:	Dave Zwald, Masroc Farms
Agent:	George Petrulakis, Petrulakis Law and Advocacy, APC
Property Owner:	Scott J. Masellis, Douglas E. Rocha, and Nicole L. Rocha

Note: Pursuant to California Fish and Game Code Section 711.4, all project applicants subject to the California Environmental Quality Act (CEQA) shall pay a filing fee for each project; therefore, the applicant will further be required to pay $3,100.75 for the California Department of Fish and Wildlife (formerly the Department of Fish and Game) and the Clerk-Recorder filing fees. The attached Conditions of Approval ensure that this will occur.

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Contact Person: Kristen Anaya, Senior Planner, (209) 525-6330

Attachments:

Attachment A – March 20, 2025 Planning Commission Staff Report
Attachment B – Correspondence Received Too Late for the March 20, 2025 Stanislaus County Planning Commission Agenda
Attachment C – E-mail from Michelle and Lois Montgomery, dated April 17, 2026
Attachment D – Map of Concerned Property Owners/Residents

STANISLAUS COUNTY PLANNING COMMISSION

March 20, 2025

STAFF REPORT

USE PERMIT APPLICATION NO. PLN2019-0075
MASROC FARMS

REQUEST: TO LEGALIZE THE EXPANSION OF LEGAL NON-CONFORMING (LNC) ALMOND HULLING FACILITY BY PERMITTING SHELLING ACTIVITIES, CONSTRUCTION OF A 2,500 SQUARE-FOOT OFFICE AND BREAKROOM, CONVERSION OF A 5,400 SQUARE-FOOT AGRICULTURAL STORAGE BUILDING, AND EXPANSION OF OUTDOOR STORAGE, ON TWO PARCELS TOTALING 36.84± ACRES IN THE GENERAL AGRICULTURE (A-2-40) ZONING DISTRICT.

APPLICATION INFORMATION

Applicant:	Dave Zwald, Masroc Farms
Property owner:	Scott Masellis, Douglas and Nicole Rocha
Agent:	George Petrulakis
Location:	616 and 610 North Hopper Road, on the southeast corner of North Hopper Road and Creekside Lane, in the Modesto area.
Section, Township, Range:	25-3-10
Supervisorial District:	District 1 (Supervisor B. Condit)
Assessor's Parcel:	009-016-024 and 009-016-025
Referrals:	See Exhibit I Environmental Review Referrals
Area of Parcel(s):	36.84± total acres APN: 009-016-024: 4.64± acres APN: 009-016-025: 32.20± acres
Water Supply:	Private Well
Sewage Disposal:	Private Septic System
General Plan Designation:	Agriculture
Community Plan Designation:	N/A
Existing Zoning:	General Agriculture (A-2-40)
Sphere of Influence:	N/A
Williamson Act Contract No.:	N/A
Environmental Review:	Mitigated Negative Declaration
Present Land Use:	Almond hulling and shelling facility, a single-family dwelling, accessory structures, and almond orchard.
Surrounding Land Use:	Rural ranchettes, residential and agricultural accessory structures, and irrigated orchard in all directions; a horse boarding facility and Dry Creek to the north; and State Route 132 (Yosemite Boulevard) and the MID Main Canal to the south.

RECOMMENDATION

Staff recommends the Planning Commission approve this request based on the discussion below and on the whole of the record provided to the County. If the Planning Commission decides to approve this project, Exhibit A provides an overview of all the findings required for project approval, which includes use permit findings.

PROJECT DESCRIPTION

The project is a request to legalize the expansion and permit additional modification to an existing legal nonconforming (LNC) almond hulling facility, currently operating on two parcels totaling 36.84± acres, in the General Agriculture (A-2-40) zoning district. The project parcels are identified as Assessor Parcel Numbers (APNs) 009-016-024 and 009-016-025. The facility was initially established in 1968 on APN 009-016-024, a 4.64± acre parcel, and became LNC due to the use being established prior to the requirement of a use permit, which went into effect when the parcel's zoning changed from Unclassified (A-1) to General Agriculture (A-2) in 1973.

As allowed by Stanislaus County Zoning Ordinance Section 21.80.080, Staff Approval Permits have been previously issued to modify the LNC facility, including Staff Approval (SA) No. 92-03 allowing for equipment and almond bin storage, and SA No. PLN2017-0036 allowing installation of photovoltaic solar panels to off-set the facility's energy usage; however, the facility has further expanded over the years in terms of increases in throughput, seasonal hours, months of operation, physical expansion in structures and outdoor storage areas, and accompanying vehicle trips, without the required land use permits. Due to the facility having physically and operationally expanded by more than 25% of the LNC use, a new use permit is required. While the project is LNC and the County's Zoning Ordinance contains provisions to allow a LNC use to expand via a new use permit, the proposed facility also meets the criteria of a Tier One use as allowed with a use permit in the General Agriculture (A-2) zoning district. Tier One uses, such as hulling, shelling, and storage of farm produce are uses closely related to production agriculture and considered to be necessary for a healthy agricultural economy.

This use permit application is a request for a Tier One use permit to legalize the expansion of the LNC facility by permitting the following features which have already incorporated into the facility operation without permits:

- the addition of shelling equipment and activities within the existing hulling building;
- the on-site fumigation of almonds;
- the conversion of the 5,400 square-foot personal storage structure to bobtail truck and related equipment storage;
- construction of a 2,500 square-foot office and breakroom;
- installation of an auger line; and
- expansion of the facility onto APN 009-016-025 by utilizing a 6-acre footprint of the 32.20± acre parcel for outside stockpiles of shells and hulls, bobtail trailer storage, and a stormwater retention basin.

The request also includes the expansion of the existing facility by proposing the following future improvements on APN 009-016-025:

- extension of the existing auger line; and
- removal of 2± acres of orchard to allow expansion of outside stockpile and storage areas.

The project includes outdoor almond bin storage, typically stacked along the northern, southern, and western edge of the huller facility's graveled footprint on APN 009-016-024. With the exception of a proposed extension to the existing auger, no new construction is proposed as part of this request; however, non-permitted structures and/or structures with a change in use will be subject to a condition of approval requiring the operator to obtain building permits.

Per the applicant, the historical operation included seven employees during peak season from August to December, and up to four part-time truck drivers. Historic operation included approximately 1,000 annual field run vehicle trips in 30-foot bobtail trucks, transporting up to three to 4.5 million meat pounds depending on annual crop size.

This request includes legalizing the facility's current peak and off-peak seasonal operation. During peak season, the facility operates with seven employees (four full-time and three part-time), 24 hours per-day, daily from mid-August to the end of November; however, equipment may be run into the off-season until February to complete that season's crop. Off-peak operation occurs from December to mid-August, Monday through Saturday, from 7:00 a.m. to 4:00 p.m., with two full-time employees. The precise start and end of peak seasonal operation is typically dictated by the almond harvest season, which varies annually depending on factors such as weather and disease. The facility currently processes between five to seven million meat pounds annually.

During the peak season, facility operations consist of trucks delivering field-run almonds (i.e. unhulled and unshelled almonds delivered directly from orchards in bob-tail trailers) to the site. Once delivered, the almonds are either stored in storage piles on APN: 009-016-025, or are unloaded directly into a pit which feeds into the pre-cleaning equipment within the 5,400 square-foot building labeled "existing huller" on the site plan (see Exhibit B – *Maps and Site Plan*). The almonds which are stored within piles are fumigated as needed, while the almonds that are diverted for pre-cleaning are removed of twigs, stones, dirt, and sticks and subsequently hulled. Hulled almonds may then be shelled in the same building, or be reserved as the outbound product. Shelled and in-shell outbound almonds are then placed in bins which are stored in the huller building for pick-up by processors. Hulls and shells are then transported via auger to outdoor storage piles on 009-016-025 which remain on-site for an approximately 15 week period during the off-season.

As with all hulling and shelling operations, there is a hull, shell, and hash biproduct which are often are sold to local dairies. Hash is the residual and fragmented pieces of almond meats that are naturally produced during the shelling process. Per the applicant, biproducts generated by the facility is rerun through the precleaning, grading, and sorting machinery to remove any twigs or stone that may remain before leaving the site. Pre-cleaning, grading, sorting, packaging, fumigation, sale and storage of hulls, shells, and hash as a biproduct are not considered new activities on-site. Moreover, the generation of these biproducts are considered incidental and accessory to hulling and shelling and warehousing activities. No processing (i.e. "value-adding"

activities such as roasting, toasting, flavoring, slicing, dicing, or otherwise combining with other ingredients), which is considered a Tier Two activity, of any kind takes place on-site.

Access to the facility is provided via a paved driveway onto County-maintained North Hopper Road. During peak season, vehicle trips are represented via the following: seven daily passenger vehicle trips occur by employees; 640 total truck trips occur for inbound almonds and outbound shelled and in-shell hulled almonds, consisting of 14 daily trips at most; and ten customer trips per week. In addition, from mid-August until February, 170 total truck trips occur for outbound shells, consisting of two truck trips daily. Over the course of a year, hulls are transported off-site as the operator is able to sell them, consisting of up to 200 annual truck trips total. In January and February, over the course of approximately one to two days, up to 85 trips occur for trash disposal. In addition to these vehicle trips, two daily employee trips occur during the off-season.

No pasteurization occurs on-site, nor is water used nor wastewater generated in on-site activities. Fumigation of tarped almond stockpiles occurs as needed, during years where navel orangeworm affects the local almond industry. Additionally, fumigation is permitted accessory and incidental to hulling operation as standard industry practice. The site is served by an existing on-site domestic well and septic tank. Stormwater runoff is handled by the existing on-site stormwater retention basin located on APN 009-016-025. Access to the facility occurs via a paved driveway onto North Hopper Road.

SITE DESCRIPTION

The 36.84± acre project site consists of two adjoining parcels (APNs 009-016-024 and 009-016-025) located at 616 North Hopper Road, in the Modesto area. APN 009-016-024 is presently improved with: a 900 square-foot single-family dwelling and 500 square-foot detached garage; a 5,400 square-foot personal storage structure; a 2,150 square-foot barn; a 2,500 square-foot office and breakroom; a 2,100 square-foot agricultural storage structure; a 5,400 square-foot huller building; and two equipment sheds (3,150 and 6,670 square feet in size) that are permitted for equipment storage in conjunction with the hulling operation. A 10,000 gallon water tank for fire suppression, two bag houses (which have been installed to meet air quality requirements) are also located on this parcel.

APN 009-016-025 is improved with a 6-acre dirt area where stockpiles of almonds, hulls, and shells occur, a stormwater retention basin, a ground-mounted photovoltaic array system, and 24 acres of almond orchard which is irrigated with water from Modesto Irrigation District (MID). An auger which transports hulls from the huller building to the outdoor storage piles crosses the project parcels.

The project site is surrounded by rural ranchettes, residential and agricultural accessory structures, and irrigated orchard in all directions; a horse boarding facility and Dry Creek to the north; and State Route 132 (Yosemite Boulevard) and the MID Main Canal to the south. The facility is in an area that is predominantly zoned General Agriculture (A-2-40, 40 Acres Minimum) with a high concentration of ranchette parcels along North Hopper Road, Georgia Lane, and Creekside Lane which share singular access to State Route 132 (Yosemite Boulevard) via Hopper Road. Maps and site plans of the project can be viewed in Exhibit B.

ISSUES

Since the application was received in 2019, eight individuals, including one realtor and seven residents/landowners of surrounding properties, have contacted County staff both by phone and letters expressing concerns about the proposed project with regards to noise, increased truck traffic and speeding issues, health risk from dust and fumigants, unpermitted expansion, incompatibility of the character of use with the surrounding neighborhood, and unpermitted discharge of water into the Modesto Irrigation District (MID) canal. Staff has worked with the applicant over the years to address these concerns, which included the preparation of noise analyses and health risk assessments, cessation of discharge of stormwater overflow into the MID canal, and through incorporating a higher degree of specificity into the operational parameters of the project description. Additionally, the applicant has increased frequency of maintenance of machinery on-site to reduce potential noise. The applicant's attempt to address these concerns have been incorporated into the mitigation measures incorporated into the project (see Exhibit E – *Amended Mitigation Monitoring and Reporting Program*).

Speaking to issues that neighbors feel have not been adequately addressed, two letters were submitted in response to the project's Initial Study referral, a checklist inventory pursuant to the California Environmental Quality Act (CEQA) identifying a project's environmental impacts (see Exhibit D – *Amended Initial Study, with Attachments*). These two letters were submitted by landowners and residents of 9161 Creekside Lane, located approximately two parcels to the northeast, and 548 North Hopper Road, located two parcels to the south and summarize complaints received over the course of the application review period (see Exhibit H – *Correspondence*).

The following discussion covers the concerns and issues that have been raised since the applicant's submittal of the use permit application and additional measures have been incorporated into the project to address aforementioned concerns:

Unpermitted Expansion

As discussed in the *Project Description* section of this report, the almond hulling facility was initially established on APN 009-016-024 in 1968 and became an LNC use in 1973 when the property's zoning designation changed. Over the years, the facility has expanded without obtaining all required land use entitlements, building, or grading permits for the various operational and physical changes made to the facility. The subject application was submitted in response to a Code Enforcement investigation opened on the property in response to a complaint relating to noise, and an increase in months of operation, number of trucks, and size of almond hull storage piles. Planning staff subsequently reached out to the applicant requesting submittal of a use permit application to legalize the changes to the LNC facility, which resulted in submittal of the subject application. To address physical changes to the facility such as the unpermitted auger, conversion of personal storage to agricultural storage used by the facility, and construction of the office and breakroom, building permits will need to be obtained within six months of project approval and finaled within a year as required by Condition of Approval No. 9. An unpermitted stormwater retention basin installed on APN 009-016-025 will be required to obtain a grading permit pursuant to Condition of Approval No. 17.

Noise

The foremost complaint received regarding the existing facility's operation is over squeaking generated from the auger line, noise generated from drop points where almonds are fed into the precleaning machinery in the huller building, operation of the hulling and shelling equipment and baghouses, vehicle back-up alarms, and manual banging on trailers to loosen materials. Over the course of project review, equipment from the huller have elicited noise complaints numerous times due to increases in facility-generated sound, which was noted by an adjacent residence as creating "whirrr-ing", squeaking, banging, and humming sounds, and generating vibrations at the window of the residence at 548 Hopper Road. The primary source of noise was noted by the applicant and noise studies prepared for the project as wood bearings on the auger in need of greasing and/or replacement, motors on top of the huller building, and bag house fan exhausts.

In response to noise concerns expressed towards the project, a noise study was required to analyze the ambient noise environment and noise generated from the facility in light of the nature of complaints received. A noise study, dated April 3, 2020, was prepared by Bollard Acoustical Consultants, Inc. (BAC) which assumed that the facility was exempted under the County's Right-to-Farm Ordinance (Stanislaus County Health and Safety Ordinance Section 9.32.030 – *Nuisance*), which declares agricultural activity operating in a manner consistent with proper and accepted customs and standards as not a nuisance for the purposes of generating noise, dust, or odor, hulling, shelling, and similar activities. However, staff required revisions to the document as this code only exempts nuisances associated with cultivation, harvesting, and transport activities for food and fiber.

Accordingly, updated noise memos by BAC were submitted on July 28, 2021 and October 14, 2021 following various measures and sound controls implemented at the facility to reduce sound; however, both documents identified that the facility exceeded the nighttime noise limit standard at the residence to the south and recommended that the site limit its operations to daytime hours (7:00 a.m. to 10:00 p.m. daily) so as not to exceed the County's General Plan Noise Element nighttime standards (10:00 p.m. to 7:00 a.m. daily).

A final Noise Study by BAC, dated October 25, 2024, identified mitigation to reduce sound levels below that of the ambient noise environment via replacement of wood bearings on the auger line with greaseable bearings, use of almond crates to create sound barriers along the facility boundaries, replacement of noisy motors on the roof of the huller building, installation of rubber surfaces at metal nut drop points, sound barriers at rooftop elevators, acoustic enclosures installed around the auger line motor, and installation of silencers on the bag house fan exhaust. These measures have been permanently integrated into the project through Mitigation Measure No. 1, which requires equal or stronger noise attenuation standards to be maintained on-site. Mitigation Measure No. 2 required replacement of a quieter motor as was indicated planned in the 2025 off-season, and Mitigation Measure No. 3 established additional measures to require further noise studies and sound control measures to be applied in the event that a verified noise complaint is received related to facility noise (see Exhibit E – *Amended Mitigation Monitoring and Reporting Program*).

Additionally, Condition of Approval No. 13 has been added to require alternative methods to striking or banging on the sides of trailers to be used to loosen materials being unloaded from trailers. Per the applicant, this action has already been significantly lessened or outright

eliminated from use on-site. While the project proposes an extension to the existing auger line, Condition of Approval No. 10 has been added requiring the submittal of a Staff Approval Permit and accompanying noise analysis to adequately address potential noise resulting from the extension of the auger line prior to issuance of an associated building permit.

Exhibit G contains correspondence from Tim Douglas and Debbie Whitmore responding, in part, to the noise analysis provided in the Initial Study and expressing concerns related to Mitigation Measure No. 3's language related to enforcement of sound controls and verification of exceedances in noise standards. Mitigation Measure No. 3 has been amended to more clearly establish parameters for cessation of the noise-generating activity noise exceedances occur, and staff believes that existing mitigation sufficiently addresses concerns and provide avenues to implement additional sound controls in the event that additional noise issues arise.

Project Description

Concerns that the project description does not clearly restrict or accurately characterize on-site activities, including concerns that hulling and shelling should be clearly restricted so as not to occur year-round and that the facility should not be permitted to process hash on-site as it has been characterized by neighbors as a processing activity. The facility presently hulls and shells field-run almonds during almond harvest season and does not propose to conduct year-round hulling and shelling activities, which mirrors industry standard practice for almond hullers and shellers. Hulling and shelling activities occur during peak season, and continue to run into the off-season only to process the remainder of the field-run almonds are run through the facility. Almond hulls, shells, and hash are biproducts generated during the standard course of operation. Shelling equipment is utilized during a portion of the off-season, up until the end of February at the latest, to clean the shell byproduct to further separate remaining almond meats from the shells, which is known as hash. Hash is a biproduct of hulling and shelling activities, it is considered accessory and incidental to the requested Tier One use permit. Although the Initial Study was circulated with information to reflect that hash is not generated on-site, clarifying information related to the has since been received regarding the almond handling process. The Initial Study has been amended, as indicated in the *Environmental Review* section of this report, to clarify that hash is not considered a product of a processing activity as regulated by the County's A-2 Zoning Ordinance.

Character of Use Being Inappropriate for Area

Additionally, several complainants have asserted that the facility should not be permitted to expand due to the facility being an industrial use operating in an agricultural area and therefore not appropriate for the area which is primarily characterized by A-2 zoned ranchette parcels along Hopper Road, Creekside Lane, and Georgia Lane. They cited the County's findings required for approval of Tier Two use permits, which require that "the establishment as proposed will not create a concentration of commercial and industrial uses in the vicinity" (Stanislaus County Zoning Ordinance Section 21.20.030[B][2]). As the proposed use is a Tier One use, which allows uses such as agricultural produce warehouses, hullers, shellers, nurseries, and feed dehydrators, and other commercial or industrial uses which are closely related to agriculture in the A-2 zoning district, this finding is not required to be made to approve the use as proposed.

Truck Traffic

Truck traffic from the facility is also cited from resident concerns, relating to the intensification of traffic on Hopper Road due to its condition and narrowness, the narrowness of the bridge crossing of the Modesto Irrigation District Lateral Canal resulting in difficulty with vehicles passing facility trucks, difficult turning movements for truck traffic coming onto and off of Yosemite Boulevard (State Route 132), and speeding concerns. Residents have requested that the applicant be required to widen Hopper Road and the bridge crossing, and expressed concerns over the degraded condition of Hopper Road due to the truck traffic generated from the Masroc Farms facility. Complainants have also requested that the facility be required to improve the State Route (SR) 132/Hopper Road intersection to Surface Transportation Assistance Act (STAA) standards as the existing intersection dimensions result in trucks swinging into oncoming lanes to turn onto and off of Hopper Road. STAA trucks which are trucks that, due to their larger size and associated turning radius exceeding that of "California legal" trucks, are limited to traveling on state highways and local roads which are designated as approved STAA access routes based on meeting standards accommodating necessary turn-arounds and turning movements to safely facilitate STAA truck traffic. Under State of California Vehicle Code, STAA vehicles are not permitted on non-STAA-approved routes.

Hopper Road is a County-maintained Local Road which is characterized by approximately 20 feet width of pavement and a Pavement Condition Index (PCI) of 81, which is characterized as Good condition. The project was referred to both Caltrans and Department of Public Works. Caltrans expressed no issues with the project as proposed, and indicated that upgrading the SR-132/Hopper Road intersection to STAA standards would only be triggered in the event the facility utilized STAA-rated trucks; however, per the applicant, vehicles accessing the Masroc Farms facility, primarily bob-tail tractor-trailers, do not meet STAA standards.

Health Hazard

In response to the project's Early Consultation referral which is a notice of the project soliciting feedback on project requirements and potential environmental impacts on the project, community members expressed concerns over the health risk posed from the facility's fumigation activities and dust generated from the site. To address these concerns, in accordance with San Joaquin Valley Air Pollution Control District (Air District) guidance, a Prioritization Screening was conducted to analyze the project's carcinogenic and non-carcinogenic health risk to nearby sensitive receptors and determined the project's health risk to be less than significant. The Air District reviewed and concurred with the findings of the Prioritization Screening. Additionally, the Agricultural Commissioner's Office, who regulates spray and fumigation permits, indicated that the project is required to maintain a fumigation permit for the activities, which has been added as Condition of Approval No. 18.

Direct Discharge into Canal

Early in the project review process, a neighbor complaint was received alleging the facility was discharging process wastewater from the facility into the MID canal which adjoins the parcel to the south. The applicant has provided clarification to staff that the facility has discharged excess stormwater overflowing from the on-site well during heavy rains, but that the on-site hulling and shelling activities are a dry process and that no water is utilized and no wastewater is generated

as part of facility operation. The issue was brought to the attention of MID who indicated that the applicant would need to obtain a license agreement prior to further discharge of stormwater into their canal. This requirement has been added as Condition of Approval No. 25.

No other issues have been identified as a part of this request. Standard conditions of approval, along with the mitigation measures discussed in the *Environmental Review* section of this report, have been added to the project.

GENERAL PLAN CONSISTENCY

The site is currently designated "Agriculture" in the Stanislaus County General Plan. The agricultural designation recognizes the value and importance of agriculture by acting to preclude incompatible urban development within agricultural areas. This designation establishes agriculture as the primary use in land so designated, but allows dwelling units, limited agriculturally-related commercial services, agriculturally-related light industrial uses, and other uses which by their unique nature are not compatible with urban uses, provided they do not conflict with the primary use.

Goal One, Objective 1.2 of the General Plan's Agricultural Element encourages vertical integration of agriculture by organizing uses requiring use permits into three tiers based on the type of uses and their relationship to agriculture. Tier One uses include agriculture-related commercial and industrial uses, such as nut hulling, shelling, drying and warehouses for storage of grain and other farm produce. An assessment of the proposed use's compliance with the findings required for approval of a nut hulling and shelling facility is provided in the *Zoning Ordinance Consistency* section of this report.

To minimize conflicts between agricultural and non-agricultural operations, Buffer and Setback Guidelines (Appendix A of the Agricultural Element) have been adopted. The purpose of these guidelines is to protect the long-term health of local agriculture by minimizing conflicts resulting from normal agricultural practices as a consequence of new or expanding uses approved in or adjacent to the A-2 zoning district. Appendix A of these guidelines states that all projects shall incorporate a minimum 150-foot-wide buffer setback for low people intensive uses. Permitted uses within a buffer area shall include: public roadways, utilities, drainage facilities, rivers and adjacent riparian areas, landscaping, parking lots, and similar low people intensive uses. The facility footprint meets the 150-foot agricultural buffer to adjacent parcels in agricultural production, with the exception of the adjacent parcel to the north. The existing buildings are setback only 120 feet from the 1-acre parcel to the north, but provide a setback of approximately 225 feet from the 10± acre parcel to the west, 200 feet to the 4± acre parcel to the south, and over 900 feet from the 37± acre parcel to the east, all of which are planted in orchard. The project was referred to the Agricultural Commissioner's Office who did not identify concerns with the project as proposed. As a Tier One use, the project is not subject to agricultural buffers, unless the Planning Commission determines that it is a people intensive use. The facility currently operates with 15 employees on a maximum shift during harvest season. Staff believes the project can be considered a low people intensive use.

Staff believes this use can be determined by the County to be consistent with the Stanislaus County General Plan.

ZONING ORDINANCE CONSISTENCY

The site is currently zoned General Agriculture (A-2-40). In accordance with Section 21.20.030(A) of the Stanislaus County Zoning Ordinance, Tier One uses, including nut hulling, shelling, drying, and storage of agriculture products, may be allowed by use permit when the Planning Commission makes the following findings:

1. The establishment, maintenance, and operation of the proposed use or building applied for is consistent with the General Plan designation of "Agriculture" and will not, under the circumstances of the particular case, be detrimental to the health, safety, and general welfare of persons residing or working in the neighborhood of the use and that it will not be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the County.

2. The use as proposed will not be substantially detrimental to or in conflict with agricultural use of other property in the vicinity.

No new exterior lighting, signage, or buildings are proposed with this request, and the project is a request to legalize an expansion of an existing permitted facility. The project will maintain zoning consistency by adhering to the development standards established by the A-2 zoning district, and through compliance with conditions of approval and mitigation measures. Staff believes the establishment as proposed will not be substantially detrimental to or in conflict with agricultural use of other property in the vicinity. There is no indication that this project, as mitigated and conditioned, will be detrimental to the health, safety and general welfare of persons residing or working in the neighborhood of the use and that it will not be detrimental or injurious to property and improvements in the neighborhood or the general welfare of the County.

ENVIRONMENTAL REVIEW

Pursuant to the California Environmental Quality Act (CEQA), the proposed project was circulated to interested parties and responsible agencies for review and comment and no environmental issues were raised with the exception of those (traffic, noise, and health risk) discussed in the *Issues* section of this report (see Exhibit I – *Environmental Review Referrals*). An Initial Study was circulated from January 22, 2025 to February 26, 2025.

A Mitigation Monitoring and Reporting Program (MMRP) identifies measures to mitigate potentially significant noise-related impacts resulting from the project (see Exhibit E – *Amended Mitigation Monitoring and Reporting Program*). The mitigation includes Mitigation Measure No. 1 which requires the applicant to maintain sound attenuation features that have already been implemented to bring noise impacts to less than significant, such as: greaseable bearings and acoustical screens on the auger line, bag house exhaust silencers, rubber surfaces on metal drop-points, and equipment shielding. Mitigation Measure No. 2 requires installation of a quieter auger line motor prior to the 2025 almond harvest season. A response to the Initial Study referral was received from Tim Douglas and Debbie Whitmore expressing concerns over lack of clear requirements in Mitigation Measure No. 3 for the facility to cease operation during temporal periods where noise exceedances are verified to have occurred. Mitigation Measure No. 3 has been amended to add clarifying details to establish a mechanism to require additional noise

analysis in the event that complaints or noise readings meeting certain thresholds demonstrate exceedances of noise standards and incorporation of new sound controls if needed. The measure also establishes requirements for cessation of equipment that is identified as a source of exceeded noise levels, and provides an avenue for the applicant to avoid triggering additional noise analysis provided noise issues are addressed quickly and effectively. Mitigation Measure No. 3 was incorporated, not to mitigate a specific impact but to address neighborhood concerns over future unforeseeable noise issues that may arise that have not yet been identified.

Amendments to initial studies and mitigation measures may be made without recirculation provided they are providing clarifying information only and in the case of mitigation measures can be found to be equivalent or more effective in mitigating or avoiding potential significant effects and will not cause any potentially significant effect on the environment. Additionally, the *Agriculture and Forest Resources* section of the Initial Study has been amended to accurately reflect that almond hash is a biproduct of the shelling activities and not a separate value-adding processing activity. The edits made to the Amended Initial Study and Mitigation Monitoring and Reporting Program will not create new significant impacts and are considered to be clarifying in nature. Accordingly, the amended documents are not required to be re-circulated and have been included as Exhibits D and E of this report for consideration (see Exhibit D – *Amended Initial Study, with Attachments* and Exhibit E - *Amended Mitigation Monitoring and Reporting Program*).

The project is considered to have a less than significant impact with mitigation measures included. Accordingly, a Mitigated Negative Declaration has been prepared for adoption, prior to action on the project (see Exhibit F – *Mitigated Negative Declaration*). Development Standards reflecting referral responses have also been placed on the project (see Exhibit C – *Conditions of Approval and Mitigation Measures*).

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Note: Pursuant to California Fish and Game Code Section 711.4, all project applicants subject to the California Environmental Quality Act (CEQA) shall pay a filing fee for each project; therefore, the applicant will further be required to pay **$3,025.75** for the California Department of Fish and Wildlife (formerly the Department of Fish and Game) and the Clerk-Recorder filing fees. The attached Conditions of Approval ensure that this will occur.

Contact Person: Kristen Anaya, Senior Planner, (209) 525-6330

Attachments:
Exhibit A - Findings and Actions Required for Project Approval
Exhibit B - Maps and Site Plan
Exhibit C - Conditions of Approval and Mitigation Measures
Exhibit D - Amended Initial Study, with Attachments
Exhibit E - Amended Mitigation Monitoring and Reporting Program
Exhibit F - Mitigated Negative Declaration
Exhibit G - Applicant's Project Description
Exhibit H - Correspondence
Exhibit I - Environmental Review Referrals
Exhibit J - Levine Act Disclosures

Findings and Actions Required for Project Approval

1. Adopt the Mitigated Negative Declaration pursuant to CEQA Guidelines Section 15074(b), by finding that on the basis of the whole record, including the Amended Initial Study, Amended Mitigation Monitoring and Reporting Program, and any comments received, that there is no substantial evidence the project will have a significant effect on the environment and that the Mitigated Negative Declaration reflects Stanislaus County's independent judgment and analysis.

2. Find that the Amended Mitigation Monitoring and Reporting Program is equivalent or more effective in mitigating or avoiding potential significant effects and that it in itself will not cause any potentially significant effect on the environment.

3. Find that:

    a. The establishment, maintenance and operation of the proposed use or building applied for is consistent with the General Plan and will not, under the circumstances of the particular case, be detrimental to the health, safety and general welfare of persons residing or working in the neighborhood of the use and that it will not be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the county;

    b. The use as proposed will not be substantially detrimental to or in conflict with agricultural use of other property in the vicinity;

    c. That the proposed Tier One use is "low-people intensive" and not subject to the agricultural buffer.

4. Approve Use Permit Application No. PLN2019-0075 – Masroc Farms, subject to the attached Conditions of Approval and Mitigation Measures.

MASROC FARMS

UP PLN2019-0075

AREA MAP

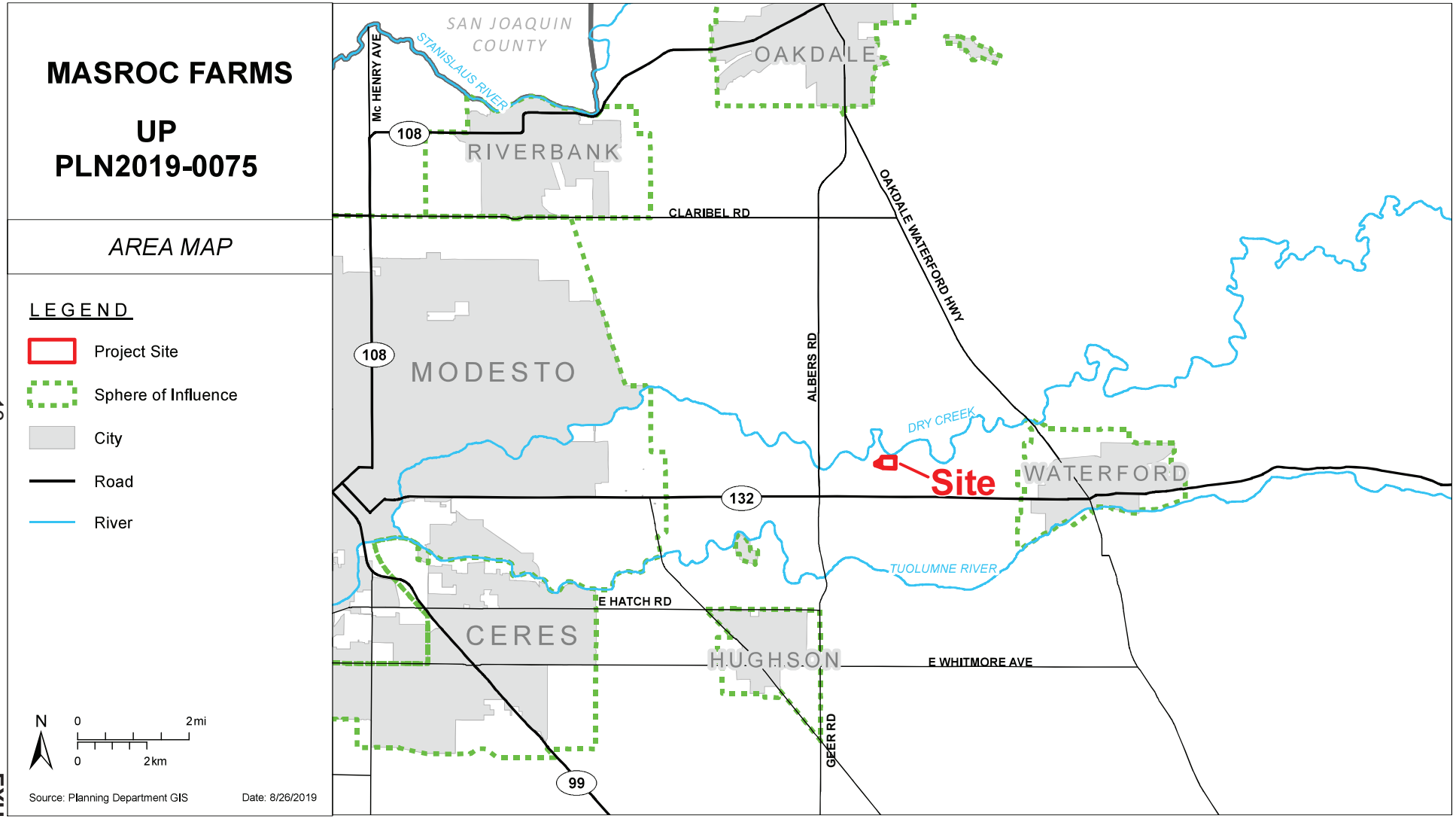
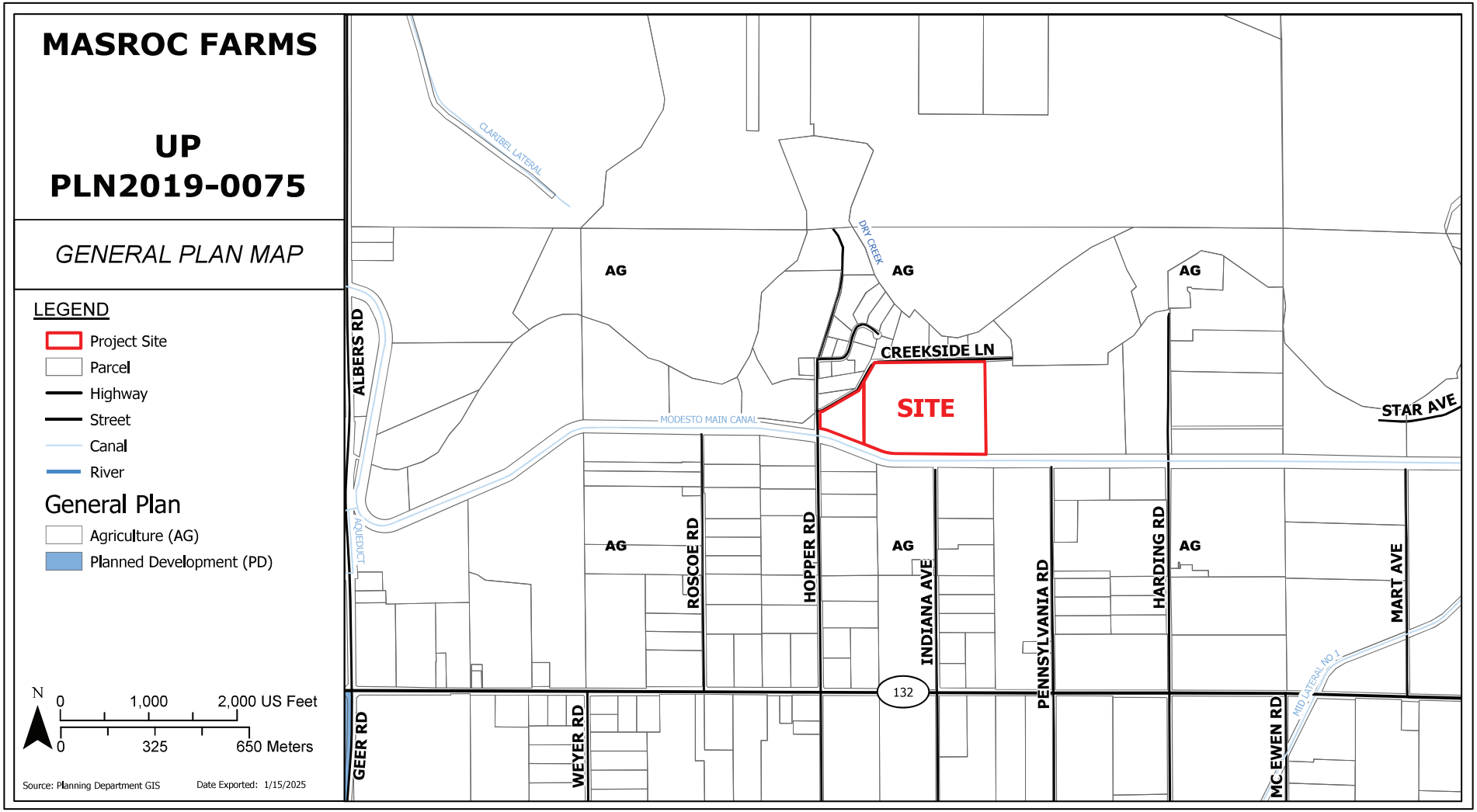


EXHIBIT B

MASROC FARMS

UP PLN2019-0075

GENERAL PLAN MAP



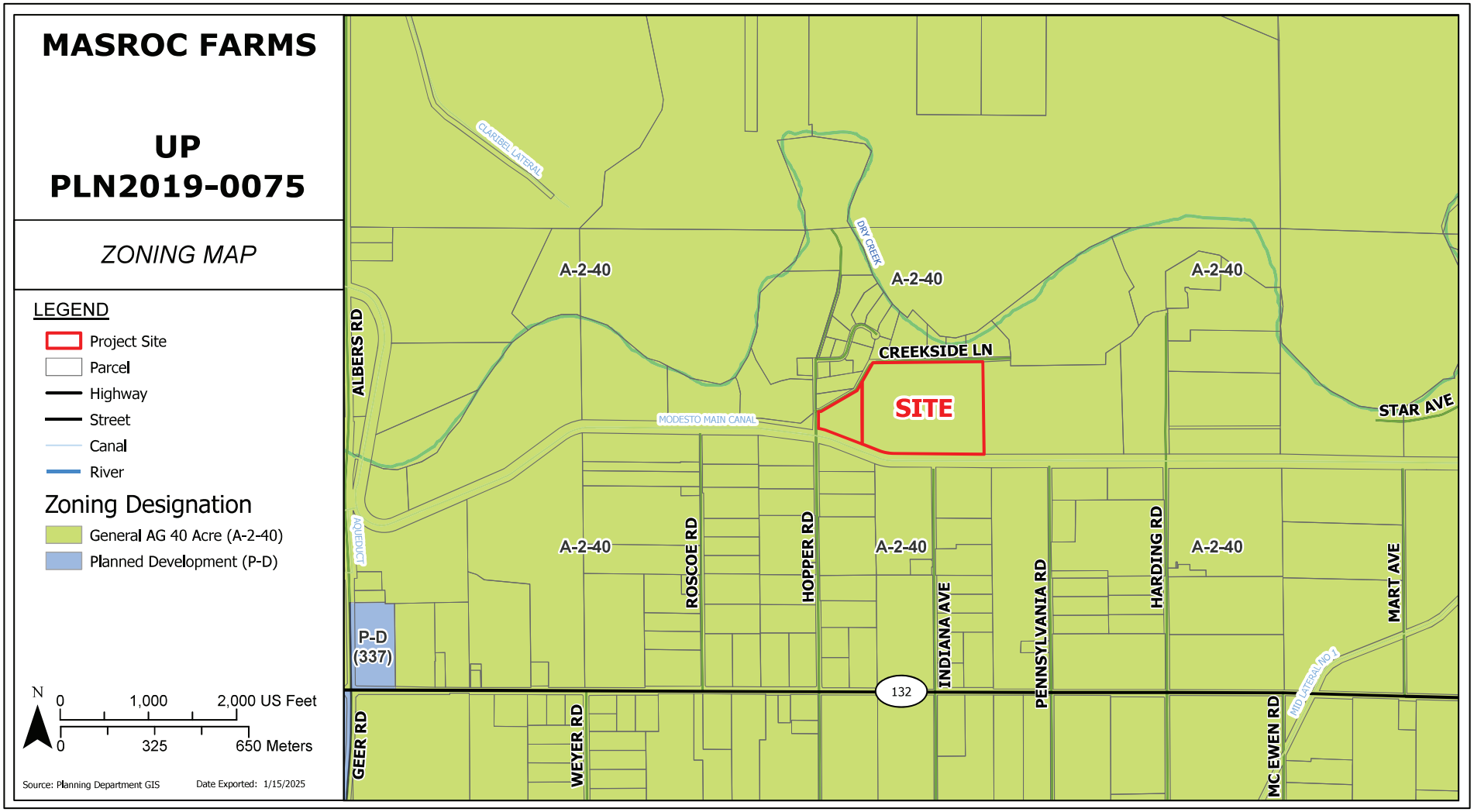

MASROC FARMS
UP
PLN2019-0075
ZONING MAP
LEGEND
Project Site
Parcel
Highway
Street
Canal
River
Zoning Designation
General AG 40 Acre (A-2-40)
Planned Development (P-D)
N
0
1,000
2,000 US Feet
0
325
650 Meters
Source: Planning Department GIS
Date Exported: 1/15/2025
CLARIBEL LATERAL
DRY CREEK
A-2-40
A-2-40
A-2-40
CREEKSIDE LN
SITE
MODESTO MAIN CANAL
STAR AVE
ALBERS RD
AQUEDUCT
A-2-40
ROSCOE RD
HOPPER RD
A-2-40
INDIANA AVE
PENNSYLVANIA RD
HARDING RD
A-2-40
MART AVE
P-D
(337)
132
GEER RD
WEYER RD
MC EWEN RD
MID LATERAL NO 1

EXHIBIT B-2

MASROC FARMS

UP PLN2019-0075

2023 AERIAL AREA MAP

EXHIBIT B-3

MASROC FARMS

UP PLN2019-0075

2023 AERIAL SITE MAP

EXHIBIT B-4

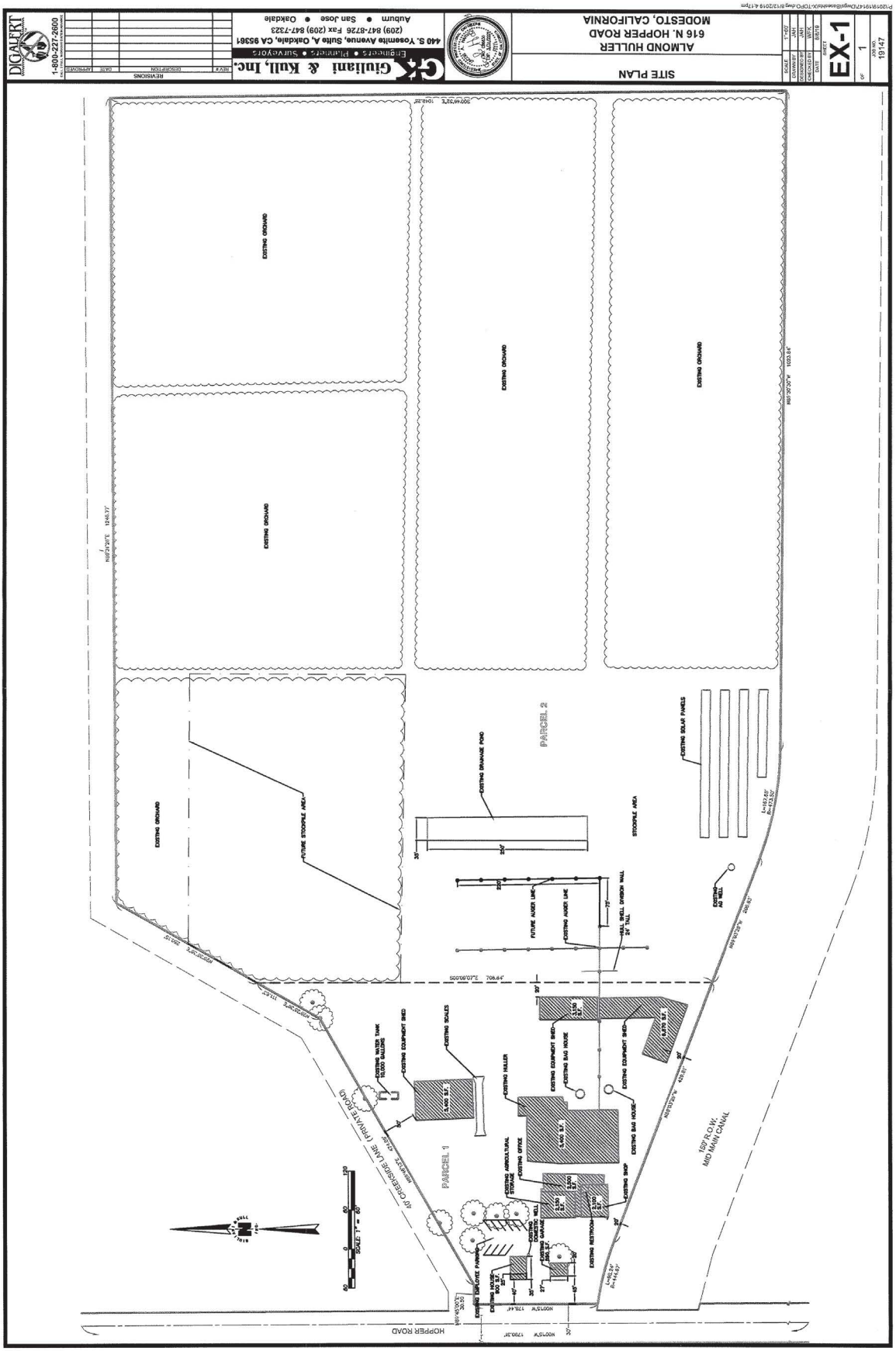

SITE PLAN
ALMOND HULLER
616 N. HOPPER ROAD
MODESTO, CALIFORNIA
EX-1
Giuliani & Kull, Inc.
Engineers • Planners • Surveyors
449 S. Yosemite Avenue, Suite A, Oakdale, CA 95361
(209) 847-8726 Fax (209) 847-7323
Auburn • San Jose • Oakdale
DIGALERT
1-800-227-2600
REVISIONS
EXISTING ORCHARD
EXISTING ORCHARD
EXISTING ORCHARD
EXISTING ORCHARD
FUTURE STOCKPILE AREA
EXISTING DRAINAGE POND
PARCEL 2
PARCEL 1
STOCKPILE AREA
EXISTING SOLAR PANELS
EXISTING AG WELL
FUTURE AUGER LINE
EXISTING AUGER LINE
15'±L SHELL DIVISION WALL 24" TALL
EXISTING SCALES
EXISTING EQUIPMENT SHED
EXISTING BAG HOUSE
EXISTING HULLER
EXISTING AGRICULTURAL STORAGE
EXISTING OFFICE
EXISTING SHOP
EXISTING RESTROOMS
EXISTING GARAGE
EXISTING RESIDENCE PARKING
EXISTING HOUSE 1,800 SF
EXISTING WATER TANK WATER HEATER
EXISTING WELL
40' CHEESEBRIE LANE (PRIVATE ROAD)
150' R.O.W. MID MAIN CANAL
HOPPER ROAD
SCALE: 1" = 60'

EXHIBIT B-5

NOTE: Approval of this application is valid only if the following conditions are met. This permit shall expire unless activated within 18 months of the date of approval. In order to activate the permit, it must be signed by the applicant and one of the following actions must occur: (a) a valid building permit must be obtained to construct the necessary structures and appurtenances; or, (b) the property must be used for the purpose for which the permit is granted. (Stanislaus County Ordinance 21.104.030)

CONDITIONS OF APPROVAL

USE PERMIT APPLICATION NO. PLN2019-0075
MASROC FARMS

Department of Planning and Community Development

1. Use(s) shall be conducted as described in the application and supporting information (including the plot plan) as approved by the Planning Commission and/or Board of Supervisors and in accordance with other laws and ordinances.

2. That all conditions of approval associated with Staff Approval Permits Nos. 92-03, 2007-83, and PLN2017-0036 shall remain in effect.

3. Pursuant to Section 711.4 of the California Fish and Game Code, the applicant is required to pay a California Department of Fish and Wildlife fee at the time of filing a "Notice of Determination." Within five (5) days of approval of this project by the Planning Commission or Board of Supervisors, the applicant shall submit to the Department of Planning and Community Development a check for **$3,025.75**, made payable to **Stanislaus County**, for the payment of California Department of Fish and Wildlife and Clerk-Recorder filing fees.

   Pursuant to Section 711.4 (e) (3) of the California Fish and Game Code, no project shall be operative, vested, or final, nor shall local government permits for the project be valid, until the filing fees required pursuant to this section are paid.

4. Developer shall pay all Public Facilities Impact Fees and Fire Facilities Fees as adopted by Resolution of the Board of Supervisors. The fees shall be payable at the time of issuance of a building permit for any construction in the development project and shall be based on the rates in effect at the time of building permit issuance.

5. The applicant/owner is required to defend, indemnify, or hold harmless the County, its officers, and employees from any claim, action, or proceedings against the County to set aside the approval of the project which is brought within the applicable statute of limitations. The County shall promptly notify the applicant of any claim, action, or proceeding to set aside the approval and shall cooperate fully in the defense.

6. Should any archeological or human remains be discovered during development, work shall be immediately halted within 150 feet of the find until it can be evaluated by a qualified archaeologist. If the find is determined to be historically or culturally significant, appropriate mitigation measures to protect and preserve the resource shall be formulated and implemented. The Central California Information Center shall be notified if the find is deemed historically or culturally significant.

7. The Department of Planning and Community Development shall record a Notice of Administrative Conditions and Restrictions with the County Recorder's Office within 30 days of project approval. The Notice includes: Conditions of Approval/Development Standards and Schedule; any adopted Mitigation Measures; and a project area map.

8. Prior to installation of any new exterior lighting, a photometric lighting plan shall be submitted for review and approval by the Planning Department for any additional exterior lighting. All exterior lighting shall be designed (aimed down and toward the site) to provide adequate illumination without a glare effect. This shall include, but not be limited to, the use of shielded light fixtures to prevent skyglow (light spilling into the night sky) and the installation of shielded fixtures to prevent light trespass (glare and spill light that shines onto neighboring properties). The height of the lighting fixtures should not exceed 17 feet above grade.

9. Within six months of project approval, building permits for the conversion of the 5,400 square-foot personal storage building, construction of the 2,500 square-foot office and breakroom, and the auger line, shall be applied for and finaled within one year of project approval. An easement between APNs 009-016-024 and 009-016-025 shall be recorded for the auger line crossing the shared property lines. An extension may be approved by the Planning Director provided evidence is submitted of the following: continued progress with permit submittals; inspections associated with issued permits in progress; or unforeseen or unavoidable condition outside of the applicant's control.

10. Prior to issuance of a building permit for any extension of the existing auger line, additional noise analysis shall occur by a qualified professional, with any required sound control measures needed to comply with noise standards to be memorialized through issuance of a Staff Approval Permit.

11. The use shall not be conducted on the premises in such a manner as to cause an unreasonable amount of noise, odor, dust, smoke, vibration, electrical interference, or other nuisance condition detectable off the site.

12. A business license shall be maintained by the facility operator at all times.

13. Alternative methods shall be used for loosening materials in trailers unloading on-site in lieu of directly striking, banging, or impacting the trailer sides so as not to create noise or vibration detectable off-site.

Building Permits Division

14. All required building permits shall conform to the California Code of Regulations, Title 24, and any other applicable standards.

Department of Public Works

15. No parking, loading or unloading of vehicles will be permitted within the County road right-of-way.

16. The developer will be required to install or pay for the installation of any street signs and/or markings, if warranted.

17. A grading, drainage, and erosion/sediment control plan for the project site shall be submitted for the on-site stormwater retention basin. The grading and drainage plan shall include the following information:

    a. The plan shall contain drainage calculations and enough information to verify that runoff from project will not flow onto adjacent properties and Stanislaus County road right-of-way. Public Works will review and approve the drainage calculations.

    b. For projects greater than one acre in size, the grading drainage and erosion/sediment control plan shall comply with the current State of California National Pollutant Discharge Elimination System (NPDES) General Construction Permit. A Waste Discharge Identification Number (WDID) and a copy of the Notice of Intent (NOI) and the project's Storm Water Pollution Prevention Plan (SWPPP) shall be provided prior to the approval of any grading, if applicable.

    c. The applicant of the grading permit shall pay the current Stanislaus County Public Works weighted labor rate for review of the grading plan.

    d. The applicant of the grading permit shall pay the current Stanislaus County Public Works weighted labor rate for all on-site inspections. The Public Works inspector shall be contacted 48 hours prior to the commencement of any grading or drainage work on-site.

Agricultural Commissioner's Office

18. A fumigation permit shall be maintained for all on-site fumigation activities.

Department of Environmental Resources – Hazardous Materials Division

19. The applicant shall determine, to the satisfaction of the Department of Environmental Resources (DER), that a site containing (or formerly containing) residences or farm buildings, or structures, has been fully investigated (via Phase I study, and if necessary, Phase II study) prior to the issuance of a grading permit. Any discovery of underground storage tanks, former underground storage tank locations, buried chemicals, buried refuse, or contaminated soil shall be brought to the immediate attention of DER.

20. The applicant shall contact the Department of Environmental Resources – Hazardous Materials Division regarding regulatory requirements for hazardous materials and/or wastes prior to operation.

Department of Environmental Resources – Environmental Health Division

21. Prior to final inspection of any building permit for the expansion, the applicant(s) shall demonstrate and secure any necessary permits for the destruction and/or relocation of all on-site wastewater treatment systems (OWTS) and/or water wells impacted or proposed by this project, under the direction of the Stanislaus County Department of Environmental Resources (DER).

22. Prior to issuance of any grading or building permit for the expansion, the applicant(s) shall submit a site plan that includes the location, layout and design of all-existing and proposed on-site wastewater treatment systems (OWTS) and the Future 100% Expansion (Replacement) Areas.

23. All applicable County Local Agency Management Program (LAMP) standards and required setbacks are to be met.

24. Any new building requiring an on-site wastewater treatment system (OWTS), shall be designed according to type and/or maximum occupancy of the proposed structure to the estimated waste/sewage design flow rate.

Modesto Irrigation District (MID)

25. No direct discharge of stormwater into the MID Canal shall occur without a license agreement between the property owner and MID having first been obtained.

San Joaquin Valley Air Pollution Control District

26. Any construction resulting from this project shall comply with standardized dust control adopted by the San Joaquin Valley Air Pollution Control District (SJVAPCD) and may be subject to additional regulations/permits, as determined by the SJVAPCD.

27. The proposed project shall be subject to SJVAPCD Rules and Regulations in place at the time of grading or building permit issuance. Prior to issuance of a grading or building permit, the applicant shall contact the SJVAPCD's Small Business Assistance Office to determine if any SJVAPCD permits are required, including but not limited to an Authority to Construct (ATC).

Central Valley Regional Water Quality Control Board

28. Prior to issuance of a building permit, applicant/developer shall be responsible for contacting the Central Valley Regional Water Quality Control Board and obtaining any necessary permits.

MITIGATION MEASURES

29. Noise control measures, consisting of noise barriers, greaseable bearings, rubber surfaces, bag house exhaust silencers, acoustic screens, and equipment shielding, as identified in the Environmental Noise Assessment Update by Bollard Acoustical Consultants, Inc. dated October 25, 2024 shall be implemented and maintained during facility operations where noise-generating hulling, shelling, sorting equipment, and auger

lines are used, unless alternative measures providing equivalent or greater noise attenuation are approved and implemented pursuant to Mitigation Measure No. 3.

30. Prior to start of the 2025 almond harvest season, the existing auger line motor shall be replaced with a quieter model, subject to all applicable building permitting requirements.

31. Noise levels associated with on-site activities shall comply with all applicable Stanislaus County noise standards. In the event that a documented noise complaint is received by the County, for noise resulting from activities associated with Use Permit No. PLN2019-0075, such complaint shall be investigated to determine if the allowable noise standards were exceeded. A documented noise complaint shall be considered one of the following:

    A) Multiple bona fide complaints received during a 24-hour period from more than one property owner and/or resident of the surrounding area; or,

    B) Receipt of noise measurements showing exceeded noise standards from a noise consultant determined by the County Planning Director to be qualified; or,

    C) Receipt of results from noise monitoring equipment calibrated by a noise consultant determined by the County Planning Director to be qualified and showing exceeded noise standards.

    Upon receipt of a documented noise complaint, the County shall require additional noise analysis to be conducted, at the operator's/property owner's expense, in order to determine if noise standards may have been exceeded or, to identify sound control measures to reduce the noise if the documented complaint via the methods identified in B or C above identified exceeded noise standards.

    An exception to the noise analysis may be allowed by the County if the applicant has identified the source of the noise exceedance and provided verification of operational changes within 48 hours of being notified by the County, and the complaining party makes no further bona fide complaints for 48 hours.

    Any additional noise analysis required to be conducted, including review, acceptance, development of recommended sound controls, and/or inspection associated with noise mitigation, shall be conducted by a qualified noise consultant, whose contract shall be procured either by the County Planning Department or by the operator/property owner. Should the County Planning Department procure the contract, a deposit based on actual cost of the noise analysis shall be made with the Planning Department, by the operator/property owner, prior to any work being conducted. Should the operator/property owner choose to procure their own noise consultant, they shall be responsible to pay the County's costs to hire a third party to review the noise analysis if determined necessary. Upon receiving written notice from the County of the need for additional noise analysis or third-party review, the operator/property owner shall submit a deposit, in the amount determined necessary by the County, within 30-days of the deposit amount being identified by the County. The property owner/operator shall implement any new or additional sound control measures required to reduce noise to allowable levels within 30 days of the County having accepted the analysis as adequate. Additional time to implement County-approved sound control measures may be approved at the discretion

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of the Planning Director upon written request outlining the need for additional time and the interim steps to be taken to address the noise issues.

In the event the facility is determined to have exceeded noise standards, all equipment determined to be the source of exceedances shall cease operation during the daytime (7:00 a.m. to 10:00 p.m.) or nighttime (10:00 p.m. to 7:00 a.m.) period where exceedances occurred until sound reductions to comply with sound limits are achieved.

****

Please note: If Conditions of Approval/Development Standards are amended by the Planning Commission or Board of Supervisors, such amendments will be noted in the upper right-hand corner of the Conditions of Approval/Development Standards; new wording will be in bold font and deleted wording will be in strikethrough text.

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
1010 10TH Street, Suite 3400, Modesto, CA 95354
Planning Phone: (209) 525-6330 Fax: (209) 525-5911
Building Phone: (209) 525-6557 Fax: (209) 525-7759

AMENDED CEQA INITIAL STUDY

(New text is in bold font and deleted text is in strikethrough)
Adapted from CEQA Guidelines APPENDIX G Environmental Checklist Form, Final Text, January 1, 2020

1.	**Project title:**	Use Permit Application No. PLN2019-0075 Masroc Farms
2.	**Lead agency name and address:**	Stanislaus County 1010 10th Street, Suite 3400 Modesto, CA 95354
3.	**Contact person and phone number:**	Kristen Anaya, Senior Planner (209) 525-6330
4.	**Project location:**	616 North Hopper Road, on the southeast corner of Hopper Road and Creekside Lane, north of the Modesto Irrigation District Main Canal, in the Modesto area (APNs: 009-016-024 and 009-016-025).
5.	**Project sponsor's name and address:**	David Zwald, Masroc Farms
6.	**General Plan designation:**	Agriculture
7.	**Zoning:**	General Agriculture (A-2-40)

8. Description of project:

Request to expand and modify an existing legal nonconforming (LNC) almond hulling facility currently permitted to operate on a 4.64± acre parcel (Assessor Parcel Number [APN]: 009-016-024) in the General Agriculture (A-2-40) zoning district. The facility was established in the 1968 and became LNC due to the use being established prior to the requirement of a use permit, when the parcel's zoning changed from Unclassified (A-1) to General Agriculture (A-2) in 1973. The site is currently improved with the following: a 900 square-foot single-family dwelling and 500 square-foot detached garage; a 5,400 square-foot personal storage structure; a 2,150 square-foot barn; a 2,500 square-foot office and breakroom; a 2,100 square-foot agricultural storage structure that has been permitted under Staff Approval Permit No. 92-03 for equipment and almond bin storage; a 5,400 square-foot huller building; and two equipment sheds (3,150 and 6,670 square feet in size) that are permitted for equipment storage in conjunction with the hulling operation. A 10,000 gallon water tank for fire suppression, two bag houses (which have been installed to meet air quality requirements), as well as an auger which transports hulls to outdoor storage piles have also been installed on the project site.

The facility has expanded over the years in terms of vehicles trips accompanied by increases in throughput, seasonal hours, months of operation, and physical expansion in structures and outdoor storage areas without the required land use permits. This use permit application is a request to legalize the expansion of the LNC facility by entitling: the addition of shelling equipment and activities within the existing hulling building; the on-site fumigation of almonds; the conversion of the 5,400 square-foot personal storage structure to bobtail truck and related equipment storage; construction of a 2,500 square-foot office and breakroom; installation of the auger line and a future proposed extension; and use of a 7.5-acre footprint on the adjoining 32.20± acre parcel (APN: 009-016-025) for outside stockpiles of shells and hulls, and bobtail trailer storage. The project includes outdoor bin storage, typically stacked along the north and western edge of the facility's graveled footprint. APN: 009-016-025 is also improved with an unpermitted drainage pond and an existing ground-mounted photovoltaic array system off-setting the Masroc Farms facility, permitted under Staff Approval Permit No. PLN2017-0036.

The balance of the parcel, approximately 24.5± acres, is improved with an existing almond orchard. With the exception of an extension to the existing auger, no new construction is proposed as part of this request; however, non-permitted structures and/or structures with a change in use will be subject to a condition of approval requiring the operator to obtain building permits.

The permitted LNC operation included seven employees during peak season from August to December, and up to four part-time truck drivers. Historic operation included approximately 1,000 annual field run vehicle trips in 30-foot bobtail trucks, transporting up to three to 4.5 million meat pounds depending on annual crop.

The facility currently operates with peak and off-peak seasonal operation, processing between five to seven million meat pounds annually. During peak season, the facility operates with seven employees (four full-time and three part-time) 24 hours per-day daily from mid-August to the end of November. Off-peak operation occurs from December to mid-August, Monday through Saturday from 7:00 a.m. to 4:00 p.m., with two full-time employees.

Peak season begins around August annually, with facility operations consisting of trucks delivering field-run almonds (i.e. unhulled and unshelled almonds delivered directly from orchards in bob-tail trailers) to the site. Once delivered, the almonds are either stored in storage piles on APN: 009-016-025, or are unloaded directly into a pit which feeds into the pre-cleaning equipment within the 5,400-square-foot building labeled “existing huller” on the site plan. The almonds which are stored within piles are fumigated as needed, while the almonds that are diverted for pre-cleaning are removed of twigs, stones, dirt, and sticks followed and subsequently hulled. Hulled almonds may then be shelled in the same building, or be reserved as the outbound product. Shelled and in-shell outbound almonds are then placed in bins which are stored in the huller building for pick-up by processors. Hulls and shells are then transported via auger to outdoor storage piles on 009-016-025 which remain on-site for an approximately 15 week period during the off-season. These biproducts are sold to local dairies, and may be run through the pre-cleaning equipment to remove any twigs or stone that may remain before leaving the site. No processing (i.e. “value-adding” activities such as roasting, toasting, flavoring, slicing, dicing, or otherwise combining with other ingredients) of any kind takes place on-site. Pre-cleaning, fumigation, sale and storage of hulls**,** ~~and~~ shells**, and hash** as a biproduct **created during the shelling and hulling process** are all incidental and accessory to Tier One hulling and shelling and warehousing activities.

Access to the facility is provided via a paved driveway onto County-maintained North Hopper Road. During peak season, vehicle trips are represented via the following: seven daily passenger vehicle trips occur by employees; 640 total truck trips occur for inbound almonds and outbound shelled and in-shell hulled almonds, consisting of 14 daily trips at most; and ten customer trips per week. In addition, from mid-August until February, 170 total truck trips occur for outbound shells, consisting of two truck trips daily. Over the course of a year, hulls are transported off-site as the operator is able to sell them, consisting of up to 200 annual truck trips total. In January and February, over the course of approximately one to two days, up to 85 trips occur for trash disposal. During off-peak operation, two daily employee trips occur.

No pasteurization occurs on-site, nor is water used nor wastewater generated in on-site processes. Fumigation of tarped almond stockpiles occurs as needed, during years where navel orangeworm affects the local almond industry. Although fumigation is not explicitly identified on prior land use permits, it is considered a use accessory and incidental to the permitted on-site hulling activities as part of standard industry practice and therefore is considered a permitted land use activity as part of existing activities. The site is served by an existing on-site domestic well and septic tank. Stormwater runoff is handled by the existing on-site drainage basin located on APN: 009-016-025.

9. Surrounding land uses and setting: Rural ranchettes, residential and agricultural accessory structures, irrigated pasture and orchard in all directions; a horse boarding facility and Dry Creek to the north; and State Route 132 (Yosemite Boulevard) and the MID Main Canal to the south.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.):

Stanislaus County Department of Public Works
Stanislaus County Department of Planning & Community Development - Building Permits Division
San Joaquin Valley Air Pollution Control District

11. Attachments:

I. Environmental Noise Assessment, prepared by Bollard Acoustical Consultants, Inc., dated April 3, 2020
II. Environmental Noise Assessment Update, prepared by Bollard Acoustical Consultants, Inc., dated July 28, 2021
III. Environmental Noise Assessment Update, prepared by Bollard Acoustical Consultants, Inc., dated October 14, 2021
IV. Environmental Noise Assessment Update, prepared by Bollard Acoustical Consultants, Inc., dated October 25, 2024
V. Health Risk Assessment, prepared by Johnson Johnson and Miller Air Quality Consulting Services, dated August 2, 2021 and revised June 2022
VI. Mitigation Monitoring and Reporting Program, dated January 22, 2025

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" as indicated by the checklist on the following pages.

☐ **Aesthetics**	☐ **Agriculture & Forestry Resources**	☐ **Air Quality**
☐ **Biological Resources**	☐ **Cultural Resources**	☐ **Energy**
☐ **Geology / Soils**	☐ **Greenhouse Gas Emissions**	☐ **Hazards & Hazardous Materials**
☐ **Hydrology / Water Quality**	☐ **Land Use / Planning**	☐ **Mineral Resources**
☒ **Noise**	☐ **Population / Housing**	☐ **Public Services**
☐ **Recreation**	☐ **Transportation**	☐ **Tribal Cultural Resources**
☐ **Utilities / Service Systems**	☐ **Wildfire**	☐ **Mandatory Findings of Significance**

DETERMINATION: (To be completed by the Lead Agency)
On the basis of this initial evaluation:

☐ **I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.**

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

☐ **I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.**

☐ **I find that 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 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.**

☐ **I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) 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, nothing further is required.**

Signature on file. **~~January 22, 2025~~ March 12, 2025**
Prepared by Kristen Anaya, Senior Planner Date

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 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). References 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 significant 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 significant.**

ISSUES

I. AESTHETICS – Except as provided in Public Resources Code Section 21099, could the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Discussion: The site itself is not considered to be a scenic resource or unique scenic vista. The site is currently improved with residential and agricultural structures consisting of the following: a 900 square-foot single-family dwelling and 500 square-foot detached garage; a 5,400 square-foot personal storage structure; a 2,150 square-foot barn; a 2,500 square-foot office and breakroom; a 2,100 square-foot agricultural storage structure; a 5,400 square-foot huller building; and two equipment sheds (3,150 and 6,670 square feet in size); a 10,000 gallon water tank, two bag houses; as well as an auger which transports hulls to outdoor storage piles. The site is not located in the vicinity of a state scenic highway. Interstate 5 is the only designed scenic highway in Stanislaus County and is located over 23 miles from the project site to the west. The area surrounding the site consists of rural ranchettes, residential and agricultural accessory structures, irrigated pasture and orchard in all directions; a horse boarding facility and Dry Creek to the north; and State Route 132 (Yosemite Boulevard) and the MID Main Canal to the south.

No new construction, with the exception of a future extension to the existing auger, is proposed. All existing structures, with the exception of solar panels and a portion of the existing auger are located on APN: 009-016-024. The height of the existing buildings range from 12 to 24 feet tall, with the two baghouses up to 30 feet tall. The footprint immediately surrounding the huller building is paved; however, the balance of the property is graveled and dirt. There are scattered trees located around the parcel at the facility boundaries. When present, the outdoor hull and shell stockpiles are located within a 7.5-acre open dirt portion of APN: 009-016-025. The balance of the parcel, approximately 24.5± acres, is improved with an existing almond orchard. Existing exterior on-site lighting consists of 13-foot-tall building-mounted lights and a 17-foot-tall free-standing light pole. A condition of approval requiring all on-site lighting be pointed down or shielded to prevent glare, sky glow, and to prevent light spillage onto neighboring parcels will be incorporated into the project. There are no federal or local plans, policies, regulations, or laws pertaining to aesthetics applicable to the proposed project. However, a condition of approval requiring that the site be well-maintained in a clean fashion, free from litter or debris, will be added to the project.

If approved, the project will permit a change in use of existing permitted buildings, permit existing structures that did not obtain land use entitlements or building permits, and permit a future proposed auger line extension. The existing structures are comprised of similar materials of other residential and agricultural accessory structures located within the surrounding area, which is currently comprised of rural ranchette properties and properties in agricultural production. The Stanislaus County General Plan treats agriculture as a source of employment and economic development, and not as a visual resource that should be protected for aesthetic reasons. With conditions of approval in place, no adverse impacts to the existing visual character of the site or its surroundings are anticipated. Development of the site will have to comply with applicable County development standards for the General Agriculture (A-2) zoning district and the County's development standards for signage and off-street parking requirements at the time of applying for a building permit.

Mitigation: None.

References: Application information; Stanislaus County Zoning Ordinance; the Stanislaus County General Plan; and Support Documentation[1].

II. AGRICULTURE AND FOREST RESOURCES: 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 Department 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:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Included**	**Less Than Significant Impact**	**No Impact**
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**	
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?			**X**	
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**
d) Result in the loss of forest land or conversion of forest land to non-forest use?				**X**
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**	

Discussion: The project site consists of two parcels totaling 36.84± acres in size; however, only a 12.14± acre footprint is improved with the Masroc Farms hulling and shelling facility. The project site consists of a 4.64± acre parcel (APN: 009-016-024) which contains a single-family residence, detached garage, and several agricultural accessory structures, and a 32.20± acre parcel (APN: 009-016-025) which has 7.5± acres of open ground for storage of equipment and almond hull stockpiles and the remaining 24.7± acres planted in almond orchard. The project site currently receives irrigation water directly from Modesto Irrigation District via the MID Main Canal which adjoins the site to the south. The 4.64-acre APN: 009-016-024 is designated as Semi-Agricultural and Rural Commercial Land, and the 32.20-acre APN: 009-016-024 is designated Prime Farmland by the California State Department of Conservation Farmland Mapping and Monitoring Program. The Natural Resources Conservation Service Soil Survey designates the site as being comprised of: Hanford fine sandy loam (HbA), 0 to 3 percent slopes; Hanford fine sandy loam, moderately deep over silt (HbpA), 0 to 1 percent slopes; Hanford fine sandy loam (HbsA), deep over silt, 0 to 1 percent slopes; Modesto loam (MoA), 0 to 1 percent slopes; Oakdale sandy loam (OaA), 0 to 3 percent slopes; and Snelling sandy loam (SnA), 0 to 3 percent slopes. All on-site soils have a California Revised Storie Index Grade 1 rating ranging from 81 to 100, which is considered to be prime soil. The project site is not enrolled in a Williamson Act Contract.

A total of 24.7± acres of the project site are actively farmed, and the remaining acreage is used in conjunction with the single-family dwelling and Masroc Farms hulling and shelling facility operations. The parcels immediately north, west, and south of APN: 009-016-024 and the parcel immediately east of APN: 009-016-025 are planted in orchard. The nearest parcels enrolled in an active Williamson Act Contract are a 10 and 17-acre parcel planted in orchard, also located immediately west and southeast, respectively, of the facility. Undersized ranchette parcels are located to the north and south of the project site, and scatter the area.

The project site and surrounding area is zoned General Agriculture (A-2-40) and has a General Plan designation of Agriculture. This project is considered to be a Tier One use. In the A-2 zoning district, the County has determined that certain uses related to agricultural production, such as Tier One uses of on-site hulling, shelling, and storage of nuts, are "necessary for a healthy agricultural economy," provided it is found that the proposed use "will not be substantially detrimental to or in conflict with the agricultural use of other property in the vicinity". This use permit application is a request to legalize the expansion of the LNC facility by permitting: the addition of shelling equipment and activities within the existing hulling building; on-site fumigation of almonds; the conversion of the existing 5,400 square-foot personal storage structure to bobtail truck and related equipment storage; permitting conversion of the existing 2,500 square-foot accessory structure for an office and breakroom; the installation of the existing auger line and a future proposed extension; and facility's expansion onto a 7.5-acre footprint on the adjoining 32.20± acre parcel (APN: 009-016-025) for outside stockpiles of shells and hulls and bobtail trailer storage. This request also includes outdoor bin storage, typically stacked along the north and western edge of the facility's graveled footprint. The existing buildings used as an office, shop, huller/sheller enclosure, and equipment storage consist of prefabricated steel frames enclosed with vinyl and metal covering and have been placed on concrete pads.

During peak season which begins around August annually, facility operations consist of trucks delivering field-run almonds (e.g., unhulled and unshelled almonds delivered directly from orchards in bob-tail trailers) to the site and either storing them within storage piles on APN: 009-016-025, or unloading them directly into a pit which feeds into the pre-cleaning equipment stored within the 5,400 square-foot building labeled "existing huller." The almonds which are stored within piles are fumigated as needed, while the almonds that are diverted for pre-cleaning are removed of twigs, stones, dirt, and sticks followed and subsequently hulled. Hulled almonds may then be shelled or be reserved as the outbound product. Shelled and in-shell outbound almonds are then placed in bins which are stored in the huller building for pick-up by processors. Hulls and shells are then transported via auger to outdoor storage piles which remain on-site for an approximately 15 week period. These biproducts are sold to local dairies, and may be run through the pre-cleaning equipment to remove any twigs or stone that may remain before leaving the site. No processing (e.g., "value-adding" activities such as roasting, flavoring, slicing, or otherwise combining with other ingredients) of any kind takes place on-site, nor does pasteurization ~~or creation of "hash"~~. Pre-cleaning, fumigation, sale and storage of hulls**,** ~~and~~ shells**, and hash** as a biproduct are all incidental and accessory to Tier One hulling and shelling and warehousing activities.

The permitted LNC operation included seven employees during peak season from August to December, and up to four part-time truck drivers. Historic operation included approximately 1,000 annual field run vehicle trips in 30-foot bobtail trucks, transporting up to three to four and a half million meat pounds depending on annual crop. The facility currently operates with peak and off-peak seasonal operation, processing between five to seven million meat pounds annually. During peak season, the facility operates with seven employees (four full-time and three part-time) daily from mid-August to the end of November. As discussed in Section XIII – *Noise*, although the facility is currently operating 24 hours per-day, a mitigation measure has been applied to the project restricting in hours of operation from 7:00 a.m. to 10:00 p.m. daily in order to bring the facility into compliance with adopted nighttime noise standards pursuant to Stanislaus County's General Plan Noise Element. During peak seasonal operation if additional sound controls are developed to bring the nighttime noise generated by the facility into compliance with County standards then 24-hour operation may be permitted. Off-peak operation occurs from December to mid-August with hours of operation of Monday through Saturday 7:00 a.m. to 4:00 p.m., with two full-time employees. No retail sales are proposed as part of this project, nor will customers be permitted on-site.

Policy 2.15 of the County Agricultural Element of the General Plan requires mitigation for the conversion of agricultural land resulting from a discretionary project requiring a General Plan or Community Plan amendment from Agriculture to a residential land use designation at a 1:1 ratio with agricultural land of equal quality located in Stanislaus County. The project does not propose residential development and therefore the requirement for agricultural mitigation does not apply.

Additionally, the County's implementation of the Right-to-Farm Ordinance (Section 9.32.52 – *Right-to-Farm Notice*), as enforced by the County Agricultural Commissioner's Office, protects agricultural operations from complaints and nuisance suits as a result of normal farming practices. Buffer and Setback Guidelines are applicable to new or expanding uses approved in or adjacent to the General Agriculture (A-2) zoning district and are required to be designed to physically avoid

conflicts between agricultural and non-agricultural uses. General Plan Amendment No. 2011-01 – *Revised Agricultural Buffers* was approved by the Board of Supervisors on December 20, 2011, to modify County requirements for buffers on agricultural projects. As this is a Tier One use, if not considered people-intensive by the Planning Commission, the project is not subject to agricultural buffers. During the harvest period, August to November, the number of employees on the project site are anticipated to be up to seven per-day. During off-season periods, December to August, the number of employees on-site are anticipated to be two per-day. The project was referred to the Stanislaus County Agricultural Commissioner, and no comments have been received to date. Therefore, staff believes the project can be considered low people-intensive, thus not subject to the County's Agricultural Buffer requirements.

The adjacent farmed parcels to the north, east, west, southwest, and southeast all have valid spray permits obtained through the County Agricultural Commissioner's Office. There are no regulatory requirements that necessitate leaving a buffer of physical distance from farming operations and agricultural processors. Most pesticides may have some buffer requirements which the user must evaluate at the time of application. Given there are ranchette parcels in the vicinity and that the Masroc Farms facility is existing, the impact from the proposed operation on adjacent farming operations would not be significantly impacted from baseline. Good management practice, off-target movement during application of sprays can be prevented by the applicator shutting off air blast before the orchard line terminates and not spraying when turning. This off-target movement should be prevented by applicators regardless of adjacent use. Further, these precautions are unlikely to be any different than precautions growers of adjacent orchards already take to prevent pesticide drift onto cars on adjacent roadways, or onto rural residences in the surrounding area.

During review of the project, a complaint was received by Planning staff that the facility was discharging excess water from the on-site domestic well into the Modesto Irrigation District (MID) Canal which had overflowed after a period of extensive rainfall. MID staff was notified and indicated that prior permission is required to be obtained prior to overflow rainwater being discharged into the canal. No other concerns were identified by MID and staff and the applicant was notified of this requirement. Accordingly, a condition of approval has been added by staff reflecting this regulatory requirement that permission from MID staff shall be obtained prior to any future direct discharge of the well into the canal.

There are no forest resources on the site or in the surrounding area. Impacts to agriculture and forest resources are considered to be less than significant.

Mitigation: None.

References: United States Department of Agriculture Natural Resources Conservation Service Soil Survey; Application information; Eastern Stanislaus Soil Survey (1957); California State Department of Conservation Farmland Mapping and Monitoring Program - Stanislaus County Farmland 2018; Stanislaus County Zoning Ordinance and General Plan and Support Documentation[1].

III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. -- Would the project:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Included**	**Less Than Significant Impact**	**No Impact**
a) Conflict with or obstruct implementation of the applicable air quality plan?			**X**	
b) 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?			**X**	
c) Expose sensitive receptors to substantial pollutant concentrations?			**X**	
d) Result in other emissions (such as those odors adversely affecting a substantial number of people?			**X**	

Discussion: The proposed project is located within the San Joaquin Valley Air Basin (SJVAB) and, therefore, falls under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). In conjunction with the Stanislaus Council of Governments (StanCOG), the SJVAPCD is responsible for formulating and implementing air pollution control strategies. The SJVAPCD's most recent air quality plans are the 2007 PM10 (respirable particulate matter) Maintenance Plan, the 2008 PM2.5 (fine particulate matter) Plan, and the 2007 Ozone Plan. These plans establish a comprehensive air pollution

control program leading to the attainment of state and federal air quality standards in the SJVAB, which has been classified as “extreme non-attainment” for ozone, “attainment” for respirable particulate matter (PM-10), and “non-attainment” for PM 2.5, as defined by the Federal Clean Air Act.

The primary source of air pollutants generated by this project would be classified as being generated from "mobile" sources. Mobile sources would generally include dust from roads, farming, and automobile exhausts. Mobile sources are generally regulated by the Air Resources Board of the California EPA which sets emissions for vehicles and acts on issues regarding cleaner burning fuels and alternative fuel technologies. During peak season, the facility operates with seven employees (four full-time and three part-time) daily from mid-August to the end of November. As discussed in Section XIII – *Noise*, although the facility is currently operating 24 hours per-day, a mitigation measure has been applied to the project restricting in hours of operation from 7:00 a.m. to 10:00 p.m. daily in order to bring the facility into compliance with adopted nighttime noise standards pursuant to Stanislaus County’s General Plan Noise Element. Twenty-four hour operation may be permitted during peak seasonal operation if additional sound controls are developed to bring the nighttime noise generated by the facility into compliance with County standards. Off-peak operation occurs from December to mid-August with hours of operation of Monday through Saturday 7:00 a.m. to 4:00 p.m., with two full-time employees.

Access to the facility is provided via a paved driveway onto County-maintained North Hopper Road. During peak season, vehicle trips are represented via the following: seven daily passenger vehicle trips occur by employees; 640 total truck trips occur for inbound almonds and outbound shelled and in-shell hulled almonds, consisting of 14 daily trips at most; and 10 customer trips per week. From the mid-August until February, 170 total truck trips occur for outbound shells, consisting of two truck trips daily. Over the course of a year, hulls are transported off-site as the operator is able to sell them, consisting of up to 200 annual truck trips total. In January and February, over the course of approximately one to two days, up to 85 trips occur for trash disposal. During off-peak operation, two daily employee trips occur. As such, the SJVAPCD has addressed most criteria air pollutants through basin wide programs and policies to prevent cumulative deterioration of air quality within the SJVAB. The project will increase traffic in the area; however, as discussed below, the project is not expected to exceed or contribute to any significant impact to air quality.

Potential impacts on local and regional air quality are anticipated to be less than significant, falling below SJVAPCD thresholds, as a result of the nature of the proposed project and project’s operation. Implementation of the proposed project would fall below the SJVAPCD significance thresholds for any short-term construction and long-term operational emissions, as discussed below. Because construction and operation of the project would not exceed the SJVAPCD significance thresholds, the proposed project would not increase the frequency or severity of existing air quality standards or the interim emission reductions specified in the air plans.

This project was referred to SJVAPCD and a response letter was received specifying that the project’s specific annual emissions of criteria pollutants are not expected to exceed any of the SJVAPCD’s significance thresholds for carbon monoxide (CO), oxides of nitrogen (NOx), reactive organic gases (ROG), oxides of sulfur (SOx), particulate matter of 10 microns or less (PM10) and would therefore have a less than significant impact on air quality. Upon further consultation with SJVAPCD staff, they requested a Health Risk Assessment (HRA) be conducted in order for the SJVAPCD to assess the project’s potential health impacts from toxic air contaminants (TACs) on nearby sensitive receptors.

Richard Miller of Johnson Johnson and Miller Air Quality Consulting Services prepared the Health Risk Assessment (HRA) for the project, evaluating risk potential on sensitive receptors (see Attachment I). The document uses the United States Environmental Protection Agency (EPA) AERMOD (versions 19191 and 21112) air dispersion model to quantify and assess project-generated emissions of toxic air contaminants (TACs) such as diesel particulate matter (DPM) and respirable particulate matter (PM10) from fugitive dust and diesel engine exhaust resulting from various mobile sources such as vehicle travel and exhaust. The document assessed the unmitigated potential carcinogenic and non-carcinogenic health risk to receptors resulting from facility operations, based on the following thresholds set by SJVACPD:

- The potential chronic carcinogenic risk falls below the significance threshold of 20 in one million
- The hazard index for the potential chronic non-cancer risk falls below the significance threshold of 1.0
- The hazard index for the potential acute non-cancer risk falls below the significance threshold of 1.0

The screening method is calculated based on the procedures set forth in the California Air Pollution Control Officer’s Association (CAPCOA) Prioritization Guidelines, which have been adopted by the SJVAPCD, and produces a “prioritization score.” The prioritization score places consideration on potency, toxicity, and quantity of TAC emissions and proximity to sensitive receptors such as hospitals, daycare centers, schools, and residences. In the case of carcinogens, the threshold for cancer risk from emissions resulting from the project is expressed as excess cancer cases per one million exposed

persons in a 70-year exposure scenario. Non-carcinogenic risk is expressed as a hazard index via a ratio of expected exposure levels to acceptable exposure levels. The nearest known sensitive receptor or "maximally exposed individual" (MEI) is an on-site residence. The nearest off-site MEI is a single residence approximately 176 feet to the north of the facility. Additional sensitive receptors include a single-family residence 511 feet to the north-northwest, a single-family residence 362 feet to the south-southwest, and another single-family residence 198 feet to the south. Based on TAC emissions from the project and the distance to the nearest sensitive receptor, the facility's cumulative prioritization score at the most-impacted sensitive receptor (per metric) from both permitted and non-permitted (non-permitted meaning mobile equipment or equipment that does not require air district permits) sources is the following: a chronic hazard index of 0.321; an acute hazard index of 0.940; and a maximum potential cancer risk (per million) of 19.51. Accordingly, the document found that the cancer risk and acute hazard index at all receptor locations were predicted to be below the SJVAPCD significance threshold, and the chronic hazard index was well below the non-cancer thresholds at all locations.

The SJVAPCD provided a response to the submitted HRA, concurring with the conclusions established in the reports that the proposed project is below the SJVAPCD's thresholds of significance for emissions. The HRA has been included as an attachment to this report.

The SJVAPCD's referral response also identified that the project is subject to SJVAPCD Rule 2201 (New and Modified Stationary Source Review Rule) and 2010 (Permits Required) which requires SJVAPCD Authority to Construct prior to installation of equipment that controls or emits air contaminants. Additionally, they identified that the proposed project may be subject to SJVAPCD Rules including, but not limited to, Regulation VIII (Fugitive PM10 Prohibitions), 4102 (Nuisance), 4601 (Architectural Coatings), and 4641 (Cutback, Slow Cure, and Emulsified Asphalt, paving and Maintenance Operations). A condition of approval requiring compliance with all applicable SJVAPCD regulatory requirements has been added to the project. With conditions in place, the proposed project would not conflict with applicable regional plans or policies adopted by agencies with jurisdiction over the project and would be considered to have a less than significant impact.

Construction activities associated with new development can temporarily increase localized PM10, PM2.5, volatile organic compound (VOC), nitrogen oxides (NOX), sulfur oxides (SOX), and carbon monoxide (CO) concentrations within a project's vicinity. The primary source of construction-related CO, SOX, VOC, and NOX emission is gasoline and diesel-powered, heavy-duty mobile construction equipment. Primary sources of PM10 and PM2.5 emissions are generally clearing and demolition activities, grading operations, construction vehicle traffic on unpaved ground, and wind blowing over exposed surfaces. Construction activities associated with the proposed project would consist primarily of construction/installation of the proposed auger extension. These activities would not require any substantial use of heavy-duty construction equipment and would require little or no grading as the project area is presently already improved and considered to be topographically flat. Consequently, emissions would be minimal. Furthermore, all construction activities would occur in compliance with all SJVAPCD regulations; therefore, construction emissions would be less than significant without mitigation.

Because of this, the project is not considered to pose a potential health risk to nearby sensitive receptors. Additionally, air impacts associated with the project are considered to be less than significant with conditions of approval requiring that all applicable SJVAPCD permits be obtained applied to the project. Based on the analysis prepared for the project impacts to air quality are considered to be less than significant.

Mitigation: None.

References: Revised Health Risk Assessment, prepared by Johnson Johnson and Miller Air Quality Consulting Services, dated August 2, 2021 and revised June 2022; Referral response from the San Joaquin Valley Air Pollution Control District, dated November 20, 2019 and January 13, 2022; E-mail correspondence from the San Joaquin Valley Air Pollution Control District, dated December 17, 2019 and June 23, 2022; San Joaquin Valley Air Pollution Control District - Regulation VIII Fugitive Dust/PM-10 Synopsis; www.valleyair.org; and the Stanislaus County General Plan and Support Documentation[1].

IV. BIOLOGICAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	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	
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	
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
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	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
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	

Discussion: It does not appear this project will result in impacts to endangered species or habitats, locally designated species, or wildlife dispersal or mitigation corridors. The project is located within the Waterford Quad of the United States Geological Survey 7.5-minute quadrangle maps. When cross-referenced with the Department of Fish and Wildlife's California Natural Diversity Database (CNDD) within the California Department of Fish and Wildlife (CDFW)'s Biogeographic Information and Observation System (BIOS), the following federal or state-listed special-status species, and unlisted species of special concern that have known or historical occurrences within the Waterford Quad include: Swainsons hawk, tricolored blackbird, burrowing owl, riffle sculpin, Sacramento hitch, hardhead, Pacific lamprey, chinook salmon, valley elderberry longhorn beetle, Colusa grass, San Joaquin Valley Orcutt grass, and Greenes tuctoria. There has been no known sensitive or protected species or natural community located on the site. The nearest recorded occurrence of a special status species is the American bumble bee located 0.55± miles west of the project site and presumed extant. San Joaquin Valley Orcutt grass, Colusa grass, and Greenes tuctoria are located 1.33± miles to the northeast and is identified as extirpated; and steelhead salmon and hardhead are located 1.6± miles to the south within the Tuolumne River and are presumed extant; and valley elderberry longhorn beetle was also identified along the Tuolumne River, approximately 1.6± miles to the southeast, and is also presumed extant.

The 4.64± acre portion of the project site located on APN: 009-016-024, and 7.5± acre portion of the project site located on (009-016-025) (for an overall 12.14± acre project site) has been historically disturbed with agricultural production with the 24.7± acre balance planted in orchard. Surrounding uses to the site include: rural ranchettes, residential and agricultural accessory structures, irrigated pasture and orchard in all directions; a horse boarding facility and Dry Creek to the north; and State Route 132 (Yosemite Boulevard) and the MID Main Canal to the south.

The project will not conflict with a Habitat Conservation Plan, a Natural Community Conservation Plan, or other locally approved conservation plans. Impacts to endangered species or habitats, locally designated species, or wildlife dispersal or mitigation corridors are considered to be less than significant.

An Early Consultation was referred to the California Department of Fish and Wildlife and no response was received to date.

Mitigation: None.

References: California Department of Fish and Wildlife Natural Diversity Database Biogeographic Information and Observation System (BIOS) California Natural Diversity Database; Stanislaus County General Plan and Support Documentation[1].

V. CULTURAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in § 15064.5?			X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?			X	
c) Disturb any human remains, including those interred outside of formal cemeteries?			X	

Discussion: As this project is not a General Plan Amendment it was not referred to the tribes listed with the Native American Heritage Commission (NAHC), in accordance with SB 18. Tribal notification of the project was not referred to any tribes in conjunction with AB 52 requirements, as Stanislaus County has not received any requests for consultation from the tribes listed with the NAHC. It does not appear that this project will result in significant impacts to any archaeological or cultural resources. The project site is already developed and the proposed construction is within the area which has already been disturbed. However, standard conditions of approval regarding the discovery of cultural resources during the construction process will be added to the project.

Mitigation: None.

References: Stanislaus County General Plan and Support Documentation[1].

VI. ENERGY -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

Discussion: The CEQA Guidelines Appendix F states that energy consuming equipment and processes, which will be used during construction or operation such as: energy requirements of the project by fuel type and end use, energy conservation equipment and design features, energy supplies that would serve the project, total estimated daily vehicle trips to be generated by the project, and the additional energy consumed per-trip by mode, shall be taken into consideration when evaluating energy impacts. Additionally, the project's compliance with applicable state or local energy legislation, policies, and standards must be considered.

All construction activities and existing structures requiring a building permit for a change in use shall be in compliance with all San Joaquin Valley Air Pollution Control District (SJVAPCD) regulations and with Title 24, Green Building Code, which includes energy efficiency requirements. The operation proposes to operate out of existing buildings and proposes to construct an extension to the existing auger for which a building permit will be required. Any future construction activities will be required to occur in compliance with all SJVAPCD regulations.

Access to the facility is provided via a paved driveway onto County-maintained North Hopper Road. During peak season, vehicle trips are represented via the following: seven daily passenger vehicle trips occur by employees; 640 total truck trips occur for inbound almonds and outbound shelled and in-shell hulled almonds, consisting of 14 daily trips at most; and ten customer trips per-week. From the mid-August until February, 170 total truck trips occur for outbound shells, consisting of two truck trips daily. Over the course of a year, hulls are transported off-site as the operator is able to sell them, consisting of up to 200 annual truck trips total. In January and February, over the course of approximately one to two days, up to 85 trips occur for trash disposal. During off-peak operation, two daily employee trips occur.

Energy consuming equipment and processes include equipment, trucks, and the employee and customer vehicles. Trucks are the main consumers of energy associated with this project but shall be required to meet all SJVAPCD regulations, including rules and regulations that increase energy efficiency for heavy trucks. Consequently, emissions would be minimal. Therefore, consumption of energy resources would be less than significant without mitigation for the proposed project.

This project was referred to SJVAPCD and a response letter was received specifying that the project's specific annual emissions of criteria pollutants are not expected to exceed any of the SJVAPCD's significance thresholds for carbon monoxide (CO), oxides of nitrogen (NOx), reactive organic gases (ROG), oxides of sulfur (SOx), particulate matter of 10 microns or less (PM10) and would therefore have a less than significant impact on air quality.

Impacts to energy are considered to be less than significant.

Mitigation: None.

References: Application information; Referral response from the San Joaquin Valley Air Pollution Control District, dated November 20, 2019 and January 13, 2022; Revised Health Risk Assessment, prepared by Johnson Johnson and Miller Air Quality Consulting Services, dated August 2, 2021 and revised June 2022; E-mail correspondence from the San Joaquin Valley Air Pollution Control District, dated December 17, 2019 and June 23, 2022; San Joaquin Valley Air Pollution Control District - Regulation VIII Fugitive Dust/PM-10 Synopsis; www.valleyair.org; and the Stanislaus County General Plan and Support Documentation[1].

VII. GEOLOGY AND SOILS -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Directly or indirectly cause 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**	
ii) Strong seismic ground shaking?			**X**	
iii) Seismic-related ground failure, including liquefaction?			**X**	
iv) Landslides?			**X**	
b) Result in substantial soil erosion or the loss of topsoil?			**X**	
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**	

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			**X**	
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**	
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			**X**	

Discussion: The USDA Natural Resources Conservation Service's Eastern Stanislaus County Soil Survey indicates that the site as being comprised of: Hanford fine sandy loam (HbA), 0 to 3 percent slopes; Hanford fine sandy loam, moderately deep over silt (HbpA), 0 to 1 percent slopes; Hanford fine sandy loam (HbsA), deep over silt, 0 to 1 percent slopes; Modesto loam (MoA), 0 to 1 percent slopes; Oakdale sandy loam (OaA), 0 to 3 percent slopes; and Snelling sandy loam (SnA), 0 to 3 percent slopes. As contained in Chapter 5 of the General Plan Support Documentation, the areas of the County subject to significant geologic hazard are located in the Diablo Range, west of Interstate 5; however, as per the California Building Code, all of Stanislaus County is located within a geologic hazard zone (Seismic Design Category D, E, or F) and a soils test may be required at building permit application. Results from the soils test will determine if unstable or expansive soils are present. If such soils are present, special engineering of the structure will be required to compensate for the soil deficiency. Any structures resulting from this project will be designed and built according to building standards appropriate to withstand shaking for the area in which they are constructed. Any on-site grading which requires a grading, drainage, and erosion/sediment control plan will be subject to Public Works review and Standards and Specifications. Likewise, any addition or expansion of a septic tank or alternative wastewater disposal system would require the approval of the Department of Environmental Resources (DER) through the building permit process, which also takes soil type into consideration within the specific design requirements.

The project site is not located near an active fault or within a high earthquake zone. Landslides are not likely due to the flat terrain of the area.

DER, Public Works, and the Building Permits Division review and approve any building or grading permit to ensure their standards are met. Conditions of approval regarding these standards will be applied to the project and will be triggered when a building permit is requested.

Mitigation: None.

References: Application information; Referral response from the Department of Environmental Resources (DER), dated November 22, 2019; Referral response from the Stanislaus County Department of Public Works dated November 4, 2019; Stanislaus County General Plan and Support Documentation[1].

VIII. GREENHOUSE GAS EMISSIONS -- Would the project:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Included**	**Less Than Significant Impact**	**No Impact**
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			**X**	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			**X**	

Discussion: The principal Greenhouse Gasses (GHGs) are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), sulfur hexafluoride (SF6), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and water vapor (H2O). CO2 is the reference gas for climate change because it is the predominant greenhouse gas emitted. To account for the varying warming potential of different GHGs, GHG emissions are often quantified and reported as CO2 equivalents (CO2e). In 2006, California passed the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] No. 32), which requires

the California Air Resources Board (ARB) design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020. Two additional bills, SB 350 and SB32, were passed in 2015 further amending the states Renewables Portfolio Standard (RPS) for electrical generation and amending the reduction targets to 40% of 1990 levels by 2030.

The permitted LNC operation included seven employees during peak season from August to December, and up to four part-time truck drivers. Historic operation included approximately 1,000 annual field run vehicle trips in 30-foot bobtail trucks, transporting up to three to 4.5 million meat pounds depending on annual crop. The facility currently operates with peak and off-peak seasonal operation, processing between five to seven million meat pounds annually. During peak season, the facility operates with seven employees (four full-time and three part-time) daily from mid-August to the end of November. As discussed in Section XIII – *Noise*, although the facility is currently operating 24 hours per-day, a mitigation measure has been applied to the project restricting in hours of operation from 7:00 a.m. to 10:00 p.m. daily in order to bring the facility into compliance with adopted nighttime noise standards pursuant to Stanislaus County's General Plan Noise Element. Twenty-four hour operation may be permitted during peak seasonal operation if additional sound controls are developed to bring the nighttime noise generated by the facility into compliance with County standards. Off-peak operation occurs from December to mid-August with hours of operation of Monday through Saturday 7:00 a.m. to 4:00 p.m., with two full-time employees.

Access to the facility is provided via a paved driveway onto County-maintained North Hopper Road. During peak season, vehicle trips are represented via the following: seven daily passenger vehicle trips occur by employees; 640 total truck trips occur for inbound almonds and outbound shelled and in-shell hulled almonds, consisting of 14 daily trips at most; and 10 customer trips per-week. From the mid-August until February, 170 total truck trips occur for outbound shells, consisting of two truck trips daily. Over the course of a year, hulls are transported off-site as the operator is able to sell them, consisting of up to 200 annual truck trips total. In January and February, over the course of approximately one to two days, up to 85 trips occur for trash disposal. During off-peak operation, two daily employee trips occur.

The project was referred to the SJVAPCD who responded that the project's annual emissions are not expected to exceed any of the SJVAPCD's significant thresholds and that the proposed construction will require an Authority to Construct (ATC) Permit and may be subject to the following SJVAPCD Rules: Regulation VIII, Rule 4102, Rule 4601, Rule 4641, Rule 4002, Rule 4102, Rule 4550, and Rule 4570. Staff will include a condition of approval on the project requiring that the applicant be in compliance with the SJVAPCD's rules and regulations.

No new construction is proposed with the exception of the future installation of an extension to the existing auger; when construction is to occur in the future all applicable SJVAPCD permits would be required to be obtained and all SJVAPCD standards will be required to be met. Additionally, any future construction or building permits to change the use of an existing structure must meet California Green Building Standards Code (CALGreen Code), which includes mandatory provisions applicable to all new residential, commercial, and school buildings. The intent of the CALGreen Code is to establish minimum statewide standards to significantly reduce the greenhouse gas emissions from new construction. The CALGreen Code includes provisions to reduce water use, wastewater generation, and solid waste generation, as well as requirements for bicycle parking and designated parking for fuel-efficient and carpool/vanpool vehicles in commercial development. It is the intent of the CALGreen Code that buildings constructed pursuant to the CALGreen Code achieve at least a 15 percent reduction in energy usage when compared to the state's mandatory energy efficiency standards contained in Title 24. The CALGreen Code also sets limits on VOCs (volatile organic compounds) and formaldehyde content of various building materials, architectural coatings, and adhesives.

Senate Bill 743 (SB743) requires that the transportation impacts under the California Environmental Quality Act (CEQA) evaluate impacts by using Vehicle Miles Traveled (VMT) as a metric. Stanislaus County has currently not adopted any significance thresholds for VMT, and projects are treated on a case-by-case basis for evaluation under CEQA. However, the project was submitted prior to SB 743 passing and therefore is not subject to VMT thresholds.

Mitigation: None.

References: Application information; Referral response from the San Joaquin Valley Air Pollution Control District, dated November 20, 2019; Stanislaus County General Plan and Support Documentation[1].

IX. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	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	
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	
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	
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 or excessive noise for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X	

Discussion: The project was referred to the DER Hazardous Materials (Haz Mat) Division who responded saying that the facility is regulated under the California Electronic Reporting System (CERS) as a handler of hazardous materials due to on-site storage of diesel and gasoline storage tanks and must submit any updates to the CERS database, including any changes in the location or storage capacities of regulated tanks. The applicant is required to use, store, and dispose of any hazardous materials in accordance with all applicable federal, state, and local regulations. These requirements will be applied to the conditions of approval for the project.

Buffer and Setback Guidelines are applicable to new or expanding uses approved in or adjacent to the General Agriculture (A-2) zoning district and are required to be designed to physically avoid conflicts between agricultural and non-agricultural uses. General Plan Amendment No. 2011-01 – *Revised Agricultural Buffers* was approved by the Board of Supervisors on December 20, 2011, to modify County requirements for buffers on agricultural projects. As this is a Tier One use, if not considered people-intensive by the Planning Commission, the project is not subject to agricultural buffers. During the harvest period, August to November, the number of employees on the project site are anticipated to be up to seven per-day. During off-season periods, December to August, the number of employees on-site are anticipated to be two per-day. The project was referred to the Stanislaus County Agricultural Commissioner, and no comments have been received to date. Therefore, staff believes the project can be considered low people-intensive, thus not subject to the County's Agricultural Buffer requirements.

Pesticide exposure is a risk in areas located in the vicinity of agriculture. Sources of exposure include contaminated groundwater, which is consumed, and drift from spray applications. Application of sprays is strictly controlled by the Agricultural Commissioner and can only be accomplished after first obtaining permits. A 24.7± acre portion of the project site is in almond orchard for which there are valid spray permits. The next nearest agricultural parcels under separate ownership include a two-acre parcel located north across Creekside Lane, a 10-acre parcel to the west across Hopper Road, and a 17-acre parcel to the southeast across the MID Main Canal, all planted in almond orchard with valid spray

permits. A three-acre parcel planted in orchard trees is also located immediately to the south, but no currently valid spray permits are on record. As mentioned, the project was referred to the Stanislaus County Agricultural Commissioner and no comments have been received to date.

The project site is not listed on the EnviroStor database managed by the CA Department of Toxic Substances Control nor within the vicinity of any airport. The project does not interfere with the Stanislaus County Local Hazard Mitigation Plan, which identifies risks posed by disasters and identifies ways to minimize damage from those disasters. The site is located in a Local Responsibility Area (LRA) for fire protection and is served by Stanislaus Consolidated Protection District. The project was referred to the District, however no response was received. Any building permits for new construction or a change in use will be reviewed by Fire Prevention Bureau staff for conformance with District standards and regulatory fire requirements.

Project impacts related to Hazards and Hazardous Materials are considered to be less-than significant impact with mitigation.

Mitigation: None.

References: Application information; California Electronic Reporting System; Referral response from the Department of Environmental Resources – Hazardous Materials Division, dated November 14, 2019; Stanislaus County General Plan and Support Documentation[1].

X. HYDROLOGY AND WATER QUALITY -- Would the project:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Included**	**Less Than Significant Impact**	**No Impact**
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			**X**	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			**X**	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site;			**X**	
ii) substantially increase the rate of amount of surface runoff in a manner which would result in flooding on- or off-site.			**X**	
iii) 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; or			**X**	
iv) impede or redirect flood flows?			**X**	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			**X**	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			**X**	

Discussion: Areas subject to flooding have been identified in accordance with the Federal Emergency Management Act (FEMA). The project site is located in FEMA Flood Zone X, which includes areas determined to be outside the 0.2% annual chance floodplains. All flood zone requirements will be addressed by the Building Permits Division during the building permit process. Current standards require that all of a project's stormwater be maintained on-site. As part of the unpermitted expansion of the legal non-conforming (LNC) portion of the facility onto the adjoining parcel (APN: 009-016-025) for the storage of hull and shell piles, a stormwater drainage basin was developed. As a condition of approval, a grading permit will be required to be submitted to ensure the basin meets all applicable standards and specifications for on-site water retention. Accordingly, runoff associated with the construction at the proposed project site will be reviewed as part of the grading review process and be required to be maintained on-site.

The site is served by an existing on-site domestic well. Existing restroom facilities for employees are located on the Assessor Parcel Number (APN) 027-010-009, which is also operated by the applicant. However, if any future new wells are to be constructed on-site, they will be subject to review under the County's Well Permitting Program, which will determine whether a new well will require environmental review. A referral response received from DER stated they have no comments on the project.

The Sustainable Groundwater Management Act (SGMA) was passed in 2014 with the goal of ensuring the long-term sustainable management of California's groundwater resources. SGMA requires agencies throughout California to meet certain requirements including forming Groundwater Sustainability Agencies (GSAs), developing Groundwater Sustainability Plans (GSP), and achieving balanced groundwater levels within 20 years. The site is located in the Stanislaus and Tuolumne Rivers Groundwater Basin Association GSA, which manages the Modesto Subbasin. The GSAs adopted the GSP on December 13, 2019, and submitted the GSP to the California Department of Water Resources (DWR) on January 31, 2022. Currently, the GSAs are preparing for GSP implementation.

Further, during review of the project, a complaint was received by Planning staff that the facility was discharging excess water from the on-site domestic well into the Modesto Irrigation District (MID) Canal which had overflowed after a period of extensive rainfall. MID staff was notified and indicated that while discharge from wells into the canal may be allowed, a license agreement is required to be obtained prior to overflow rainwater being discharged into the canal. No other concerns were identified by MID and staff and the applicant was notified of this requirement. Accordingly, a condition of approval has been added by staff reflecting this regulatory requirement that permission from MID staff shall be obtained prior to any future direct discharge of the well into the canal. As a result of the conditions of approval required for this project, impacts associated with drainage, water quality, and runoff are expected to have a less than significant impact. The project was referred to Regional Water and the GSAs; however, no responses have been received to date. The project was also referred to the Modesto Irrigation District (MID); however, no other comments regarding irrigation or domestic water were received.

As a result of the project details, impacts associated with drainage, water quality, and runoff are expected to have a less than significant impact.

Mitigation: None.

References: Application material**;** Stanislaus and Tuolumne Rivers Groundwater Basin Association (STRGBA) Groundwater Sustainability Agency and County of Tuolumne Groundwater Sustainability Agency Groundwater Sustainability Plan; E-mail correspondence from Modesto Irrigation District, dated September 20, 2021; Referral response from the Modesto Irrigation District, dated November 15, 2019 and revised November 22, 2019; Referral response from Department of Environmental Resources dated November 22, 2019; Stanislaus County General Plan and Support Documentation[1].

XI. LAND USE AND PLANNING -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) **Physically divide an established community?**			X	
b) **Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?**			X	

Discussion: This is a request to expand and modify an existing legal non-conforming (LNC) almond hulling facility currently permitted to operate on a 4.64± acre parcel (Assessor Parcel Number [APN]: 009-016-024) in the General Agriculture (A-2-40) zoning district. The facility was established in the 1968 and became LNC due to the use being established prior to the requirement of a use permit, when the parcel's zoning changed from Unclassified (A-1) to General Agriculture (A-2) in 1973. This use permit application is a request to legalize the expansion of the LNC facility by permitting: the addition of shelling equipment within the existing hulling building; memorialize the on-site fumigation of almonds; the conversion of the 5,400 square-foot personal storage structure to bobtail truck and related equipment storage; construction of a 2,500 square-foot office and breakroom; installation of an auger line and a future proposed extension; and use of a 7.5-acre footprint on the adjoining 32.20± acre parcel (APN: 009-016-025) for outside stockpiles of shells and hulls, and bobtail trailer storage. This request also includes outdoor bin storage, typically stacked along the north and western edge of the facility's graveled footprint. APN: 009-016-025 is also improved with a drainage pond and an existing ground-mounted photovoltaic array system off-setting the Masroc Farms facility, permitted under Staff Approval Permit No. PLN2017-0036. The balance of the parcel, approximately 24.5± acres, is improved with an existing almond orchard. With the exception of an extension to the existing auger, no new construction is proposed as part of this request; however, non-permitted structures and/or structures with a change in use will be subject to a condition of approval requiring the operator to obtain building permits.

The permitted LNC operation included seven employees during peak season from August to December, and up to four part-time truck drivers. Historic operation included approximately 1,000 annual field run vehicle trips in 30-foot bobtail trucks, transporting up to three to 4.5 million meat pounds depending on annual crop. The facility currently operates with peak and off-peak seasonal operation, processing between five to seven million meat pounds annually. During peak season, the facility operates with seven employees (four full-time and three part-time) daily from mid-August to the end of November 24 hours a day. As discussed in Section XIII – *Noise*, the facility must be into compliance with adopted daytime and nighttime noise standards pursuant to Stanislaus County's General Plan Noise Element.

The project site and surrounding area is zoned General Agriculture (A-2-40) and has a General Plan designation of Agriculture. In Section 21.20.030 of the Stanislaus County Zoning Code regulating permitted uses subject to a Use Permit in the General Agriculture zoning district, warehouses for storage of farm produce, as well as nut hulling, shelling, and drying are Tier One uses which are closely related to agriculture. The proposed use is considered a Tier One use, which are those uses closely related to agriculture and are necessary for a healthy agricultural economy. Tier One uses may be allowed when the Planning Commission finds that:

1. The use as proposed will not be substantially detrimental to or in conflict with agricultural use of other properties in the vicinity.

2. The establishment, maintenance, and operation of the proposed use or building applied for is consistent with the General Plan designation of "Agriculture" and will not, under the circumstances of the particular case, be detrimental to the health, safety, and general welfare of persons residing or working in the neighborhood of the use and that it will not be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the County.

General Plan Amendment No. 2011-01 - Revised Agricultural Buffers was approved by the Board of Supervisors on December 20, 2011, to modify County requirements for buffers on agricultural projects. As this is a Tier One use, if not considered people intensive by the Planning Commission, the project is not subject to agricultural buffers. As the applicant anticipates a maximum of seven employees during the peak harvest periods and takes place indoors with the exception of outdoor storage piles, staff would consider the project to be low people intensive and not subject to the agricultural buffer requirement.

The project will not physically divide an established community nor conflict with any habitat conservation plans.

Mitigation: None.

References: Application Materials; Stanislaus County Zoning Ordinance (Title 21); Stanislaus County General Plan and Support Documentation[1].

XII. MINERAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	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	
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	

Discussion: The location of all commercially viable mineral resources in Stanislaus County has been mapped by the State Division of Mines and Geology in Special Report 173. There are no known significant resources on the site, nor is the project site located in a geological area known to produce resources.

Mitigation: None.

References: Stanislaus County General Plan and Support Documentation[1].

XIII. NOISE -- Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

Discussion: The project site is surrounded by rural ranchettes, residential and agricultural accessory structures, irrigated pasture and orchard in all directions; a horse boarding facility and Dry Creek to the north; and State Route 132 (Yosemite Boulevard) and the MID Main Canal to the south. Noise-generating activities associated with the project include project-related vehicle traffic, hulling, shelling, and pre-cleaning equipment within the huller building, bag houses installed on the eastern exterior of the huller building, and the auger line which transports hulls and shells to the exterior storage area located on Assessor Parcel Number (APN) 009-016-025. The huller building's primary opening and intake area for inbound almonds is such that is faces the southern portion of the site with minimal barriers between the structure and the parcels to the south.

During peak season, the facility operates 24 hours per-day from mid-August to the end of November. Off-peak operation occurs from December to mid-August with hours of operation of Monday through Saturday 7:00 a.m. to 4:00 p.m. The baghouses and equipment within the huller building are primarily used during peak season, with infrequent, sporadic operation during off-season for maintenance or equipment checks.

The site itself is impacted by the noise generated from local farming operations during harvest season but is otherwise not impacted by intense noise-generating uses within the vicinity. The area's ambient noise level will temporarily increase during construction of the future auger extension; otherwise, no new construction is proposed in association with this project. The project will be conditioned to abide by County regulations related to hours and days of construction.

Prior to and during project review, several complaints were received by the Department of Planning and Community Development - Planning Division from surrounding residents regarding noise coming from equipment used in conjunction with the existing facility. An Early Consultation referral response from Stanislaus County Environmental Review Committee required an acoustical study be prepared to assess the facility's compliance with applicable County noise standards. A Noise Analysis prepared by Bollard Acoustical Consultants, Inc. (BAC), dated April 2, 2020 was prepared for the project, and was updated on July 28, 2021 and again on October 14, 2021. The Stanislaus County General Plan identifies noise levels up to 75 dB Ldn (or CNEL) as the normally acceptable level of noise for industrial and agricultural uses. The Stanislaus County General Plan Noise Element identifies daytime (7:00 a.m. to 10:00 p.m.) maximum allowable average noise exposure for stationary noise sources to be an hourly average of 50 decibels and maximum level of 70 decibels, and nighttime (10:00 p.m. to 7:00 a.m.) to be an hourly average of 45 decibels and maximum of 65 decibels, measured at residential or other noise-sensitive land use on neighboring properties. The nearest noise-sensitive land uses consist of single-family dwellings, located to the north and south on Assessor Parcel Numbers (APNs) 009-016-002 and 009-017-043 respectively. In response to these complaints, during project review the operator implemented several noise-attenuating measures: replacement of wood bearings with greaseable bearings, the use of almond crates to create sound barriers along substantial portions of the southern, western and northern site boundaries, replacement of four noisy motors on the roof of the huller building, installation of rubber surfaces at nut drop points (the nuts previously fell on metal hoppers), and installation bag house fan exhaust silencers. BAC took long-term noise level measurements at the two identified nearest residences during peak facility operations, which were continuous during the noise survey period with the exception of a short period on one of the monitored days. Of the days the facility was in continuous operation, the facility's measure daytime noise levels attributable to the facility were in compliance with the County's daytime noise standards of 50 dB L_{50} and 70 dB L_{max}. and several short term noise level survey locations. The measured daytime noise levels attributable to the facility were in compliance with the County's 50 dB L_{50} and 70 dB L_{max} daytime noise standards at the nearest residences. However, the measured median nighttime noise generated by the facility was found to exceed the 45 db L_{50} nighttime standard by 1-4 decibels. Accordingly, the previous recommendation from BAC was to restrict hours of operation for the facility to daytime hours only, from 7:00a.m. to 10:00p.m. in order to bring the facility into compliance with all applicable standards.

Following the September 2021 noise analysis, Masroc Farms utilized additional stacking of almond crates to serve as noise barriers, they installed plywood noise barriers at rooftop elevators, created an acoustic screen using rubber belts by the pre-cleaner, and constructed an acoustic enclosure around a loud motor on the auger line. In addition, Masroc plans to replace that louder motor during the next off-season with a quieter motor. A mitigation measure has been incorporated into the project requiring that the motor be replaced prior to onset of the 2025 operating season.

In September of 2024, BAC returned to Masroc Farms and conducted additional noise measurements at the nearest neighboring property to the south. To quantify the ambient noise environment at the nearest residence to the south of the Masroc Farms facility, BAC conducted a long-term (72-consecutive hour) noise level measurements at the location identified on Figure 1 of the October 2024 Noise Assessment. Noise measurements were taken from September 3rd through 6th, 2024; during which time the Masroc facility was in continuous operation. The measured daytime noise levels attributable to the facility were in compliance with the County's 50 dB L_{50} and 70 dB L_{max} daytime noise standards at the nearest residences. In addition, the measured maximum noise levels generated by the facility were determined to be in compliance with the County's 65 dB L_{max} nighttime standard at those residences.

Although the noise survey results indicate that measured median (L_{50}) nighttime noise levels averaged 47 dBA at the noise survey location, which exceeds the 45 dBA L_{50} noise standard at the nearest residence to the south, it is important to note that those measured levels also included ambient background noise from sources unrelated to Masroc Farms (i.e. distant traffic, wind in trees, insects, etc.). Because the measured sound levels included ambient noise sources unrelated to Masroc Farms operations, and because the measured sound levels were within 2 dBA of the County's nighttime noise standard, this analysis concludes that noise generated by operations at the Masroc Farms facility in isolation, were effectively within compliance with the Stanislaus County daytime and nighttime noise level standards. This analysis also concludes that the noise mitigation measures implemented by Masroc Farms have led to a successful reduction in overall facility sound generation at existing residences in the immediate vicinity. Based on ambient noise level measurements conducted by BAC, Masroc Farms facility hulling and shelling operations noise exposure is considered to be in compliance with the applicable Stanislaus County Noise Ordinance daytime and nighttime noise level limits at the nearest residential use to the south of the facility.

Staff has incorporated mitigation measures requiring the facility operations keep these noise attenuation measures in place in order to maintain compliance with the County's noise standards. Additionally, a mitigation measure has been incorporated into the project outlining the steps to be taken in the event that a verified noise complaint is received by staff.

The site is not located within an airport land use plan. Noise impacts associated with the proposed project are considered to be less than significant with mitigation included.

Mitigation:

1. Noise control measures, consisting of noise barriers, greaseable bearings, rubber surfaces, bag house exhaust silencers, acoustic screens, and equipment shielding, as identified in the Environmental Noise Assessment Update by Bollard Acoustical Consultants, Inc. dated October 25, 2024 shall be implemented and maintained during facility operations where noise-generating hulling, shelling, sorting equipment, and auger lines are used, unless alternative measures providing equivalent or greater noise attenuation are approved and implemented pursuant to Mitigation Measure No. 3.

2. Prior to start of the 2025 almond harvest season, the existing auger line motor shall be replaced with a quieter model, subject to all applicable building permitting requirements.

3. Noise levels associated with on-site activities shall comply with all applicable Stanislaus County noise standards. In the event that a documented noise complaint is received by the County, for noise resulting from activities associated with Use Permit No. PLN2019-0075, such complaint shall be investigated to determine if the allowable noise standards were exceeded. A documented noise complaint shall be considered one of the following:

   A) ~~m~~**M**ultiple **bona fide** complaints received during a 24-hour period from more than one property owner and/or resident of the surrounding area; or,

   B) ~~r~~**R**eceipt of noise measurements showing exceeded noise standards from a noise consultant determined by the County Planning Director to be qualified; or**,**

   C) ~~r~~**R**eceipt of results from noise monitoring equipment calibrated by a noise consultant determined by the County Planning Director to be qualified and showing exceeded noise standards.

   Upon receipt of a documented noise complaint, the County ~~may~~**shall** require additional noise analysis to be conducted, at the operator's/property owner's **expense**~~cost~~, in order to determine if noise standards may have been exceeded **or, to identify sound control measures to reduce the noise if the documented complaint via the methods identified in B or C above identified exceeded noise standards**.

   An exception to the noise analysis may be allowed by the County if the applicant has identified the source of the noise exceedance and provided verification of operational changes within 48 hours of being notified by the County, and the complaining party makes no further bona fide complaints for 48 hours.

   Any additional noise analysis required to be conducted, including review, acceptance, development of recommended sound controls, and/or inspection associated with noise mitigation, shall be conducted by a qualified noise consultant, whose contract shall be procured either by the County Planning Department or by the operator/property owner. Should the County Planning Department procure the contract, a deposit based on actual cost of the noise analysis shall be made with the Planning Department, by the operator/property owner, prior to any work being conducted. Should the operator/property owner choose to procure their own noise consultant, they shall be responsible to pay the County's costs to hire a third party to review the noise analysis if determined necessary. Upon receiving written notice from the County of the need for additional noise analysis or third-party review, the operator/property owner shall submit a deposit, in the amount determined necessary by the County, within 30-days of the deposit amount being identified by the County. The property owner/operator shall implement any additional sound control measures required to reduce noise to allowable levels within 30 days of the County having accepted the analysis as adequate. Additional time to implement County-approved sound control measures may be approved at the discretion of the Planning Director upon written request outlining the need for additional time and the interim steps to be taken to address the noise issues.

   In the event the facility is determined to have exceeded noise standards, all equipment determined to be the source of exceedances shall cease operation during the daytime (7:00 a.m. to 10:00 p.m.) or nighttime

(10:00 p.m. to 7:00 a.m.) period where exceedances occurred until sound reductions to comply with sound limits are achieved.

References: Environmental Noise Assessment, prepared by Bollard Acoustical Consultants, Inc (BAC), dated April 3, 2020; Environmental Noise Assessment Update, prepared by Bollard Acoustical Consultants, Inc (BAC), dated July 28, 2021; Environmental Noise Assessment Update, prepared by Bollard Acoustical Consultants, Inc (BAC), dated October 14, 2021; Environmental Noise Assessment Update, prepared by Bollard Acoustical Consultants, Inc (BAC), dated October 25, 2024; Referral response from Stanislaus County Environmental Review Committee, dated November 19, 2019; Stanislaus County General Plan and Support Documentation[1].

XIV. POPULATION AND HOUSING -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Induce substantial unplanned 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	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?			X	

Discussion: The site is not included in the vacant sites inventory for the 2016 Stanislaus County Housing Element, which covers the 5th cycle Regional Housing Needs Allocation (RHNA) for the County and will therefore not impact the County's ability to meet their RHNA. No population growth will be induced nor will any existing housing be displaced as a result of this project.

Mitigation: None.

References: Stanislaus County General Plan and Support Documentation[1].

XV. PUBLIC SERVICES --	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Would the project result in the 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	
Police protection?			X	
Schools?			X	
Parks?			X	
Other public facilities?			X	

Discussion: The County has adopted Public Facilities Fees, as well as Fire Facility Fees on behalf of the appropriate fire district, to address impacts to public services. No buildings are proposed as part of this project; however, a building permit will be required for the conversion of the 5,400 square-foot personal storage structure to bobtail truck and related equipment storage, permitting the 2,500 square-foot office and breakroom; the installation of the existing auger line and a future proposed extension. All applicable, adopted public facility fees will be required to be paid at the time of building permit issuance.

This project was circulated to all applicable school, fire, police, irrigation, and public works departments and districts during the Early Consultation referral period and no concerns were identified with regard to public services.

Mitigation: None.

References: Stanislaus County General Plan and Support Documentation[1].

XVI. RECREATION --	Potentially Significant Impact	Less Than Significant With Mitigation Included	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**	
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**	

Discussion: This project will not increase demands for recreational facilities, as such impacts typically are associated with residential development.

Mitigation: None.

References: Stanislaus County General Plan and Support Documentation[1].

XVII. TRANSPORTATION -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			**X**	
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			**X**	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			**X**	
d) Result in inadequate emergency access?			**X**	

Discussion: This use permit application is a request to legalize the expansion of the legal non-conforming (LNC) almond hulling facility, located on the southeast corner of County-maintained North Hopper Road and private Creekside Lane, by permitting: the addition of shelling equipment within the existing hulling building; on-site fumigation of almonds; the conversion of the 5,400 square-foot personal storage structure to bobtail truck and related equipment storage; permitting the 2,500 square-foot office and breakroom; the installation of the existing auger line and a future proposed extension; and facility's expansion onto a 7.5-acre footprint on the adjoining 32.20± acre parcel (APN 009-016-025) for outside stockpiles of shells and hulls, and bobtail trailer storage. This request also includes outdoor bin storage, typically stacked along the north and western edge of the facility's graveled footprint.

The permitted LNC operation included seven employees during peak season from August to December, and up to four part-time truck drivers. Historic operation included approximately 1,000 annual field run vehicle trips in 30-foot bobtail trucks, transporting up to three to 4.5 million meat pounds depending on annual crop. The facility currently operates with peak and off-peak seasonal operation, processing between five to seven million meat pounds annually. During peak season, the facility operates with seven employees (four full-time and three part-time) daily from mid-August to the end of November.

As discussed in Section XIII – *Noise*, although the facility is currently operating 24 hours per-day, a mitigation measure has been applied to the project restricting in hours of operation from 7:00 a.m. to 10:00 p.m. daily in order to bring the facility into compliance with adopted nighttime noise standards pursuant to Stanislaus County's General Plan Noise Element. 24 hour operation may be permitted during peak seasonal operation if additional sound controls are developed to bring the nighttime noise generated by the facility into compliance with County standards. Off-peak operation occurs from December to mid-August with hours of operation of Monday through Saturday 7:00 a.m. to 4:00 p.m., with two full-time employees.

Access to the facility is provided via a paved driveway onto County-maintained North Hopper Road. During peak season, vehicle trips are represented via the following: seven daily passenger vehicle trips occur by employees; 640 total truck trips occur for inbound almonds and outbound shelled and in-shell hulled almonds, consisting of 14 daily trips at most; and 10 customer trips per-week. From the mid-August until February, 170 total truck trips occur for outbound shells, consisting of two truck trips daily. Over the course of a year, hulls are transported off-site as the operator is able to sell them, consisting of up to 200 annual truck trips total. In January and February, over the course of approximately one to two days, up to 85 trips occur for trash and dirt disposal. During off-peak operation, two daily employee trips occur.

Although Senate Bill 743 (SB743) requires that the transportation impacts under the California Environmental Quality Act (CEQA) evaluate impacts by using Vehicle Miles Traveled (VMT) as a metric, the proposed project was submitted and determined complete prior to the bill's adoption; accordingly, the project's impacts to traffic are based on Level of Service (LOS). Stanislaus County has currently not adopted any significance thresholds for VMT, and projects are treated on a case-by-case basis for evaluation under CEQA. The stated trip generation would be consistent with a locally serving use classification for the purposes of analyzing VMT and per the 2018 OPR guidelines, locally serving uses would not be considered a significant impact. North Hopper Road is considered a two lane 60-foot rural local road, which has a level of service thresholds of 350 vehicles per-day per lane to be considered LOS A. Based on traffic counts taken for North Hopper Road, which occurred during harvest season for almond orchards and peak operating season for Masroc Farms, traffic on North Hopper Road, is approximately 193 max trips per-day, which is classified as LOS A. Taking into account the facility's unpermitted expansion, the facility does not contribute to a cumulative impact on North Hopper Road that results in a reduction of LOS.

During project review, several complaints were received by surrounding residents regarding the number of vehicle trips associated with the Masroc Farms facility, citing concerns about: the width of the MID canal not accommodating two-way traffic and providing limited visibility; the intersection of Yosemite Boulevard (State Highway 132) and North Hopper Road not accommodating truck traffic due to the required turning radius resulting in unintentional cross-over into the opposite travel lanes to fully turn onto and off of North Hopper Road; the width and condition of the road pavement on North Hopper Road; the quantity and frequency of truck traffic associated with the facility; truck traffic accessing the site from Creekside Lane; truck traffic accessing the site via the MID canal right-of-way; and the condition of the existing driveway on North Hopper Road. The complaints received from residents about the project's potential impacts to the County-maintained North Hopper Road and Yosemite Boulevard facilities were forwarded to the Department of Public Works and California Department of Transportation (Caltrans) who did not identify any concerns with the proposed project. Specifically, Public Works ordered traffic counts during a three week period on North Hopper Lane in October 2020 during peak season, partially in response to the submitted complaints. The traffic count results account for both facility traffic, as well as all traffic traveling to other destinations along North Hopper Road, Georgia Lane, and Creekside Lane. Of these measurements, based on the busiest seven day period (October 2, 2020 to October 8, 2020), the results indicated an average of 15 hourly peak trips in the morning, and 17 hourly peak trips in the PM. The average daily truck trips ranged from 67 to 85; however, the data does not attribute the number of vehicles or trucks to specific destinations. The maximum number of hourly trips on any given measured day was 24 trips from the hour of 5:00 p.m. to 6:00 p.m. Based on this data, both Caltrans and the Department of Public Works characterized the overall traffic volume as low and not triggering any additional analysis. A Department of Public Works staff inspected the project site's driveway condition and indicated a replacement driveway was not warranted based on the condition, but added a condition of approval prohibiting parking, loading, or unloading in the County right-of-way, and for the operator to pay for installation of any signs or marking if necessary.

With respect to concerns about accessing the site from the MID right-of-way, the complaint was referred to MID staff who indicated that access is prohibited without express authorization from MID's Board. This requirement has been added as a condition of approval and relayed to the applicant.

Increased traffic resulting from the proposed use of the site is insignificant; therefore, staff has no evidence to support that this project will significantly impact Yosemite Avenue (State Highway 132).

Mitigation: None.

References: Referral response from Caltrans, dated November 1, 2019; Referral response from Department of Public Works, dated November 4, 2019; Referral response from Modesto Irrigation District, dated November 22, 2019; Department of Public Works 2020 traffic counts; Stanislaus County General Plan and Support Documentation[1].

XVIII. TRIBAL CULTURAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or			**X**	
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set for the in subdivision (c) of Public Resource Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.			**X**	

Discussion: It does not appear that this project will result in significant impacts to any archaeological or cultural resources. The project site is currently developed with an existing almond hulling facility, single-family dwelling, and planted in almond orchard. The total developed area consists of approximately 3± acres, which will be enclosed from the remaining balance of the parcel by a chain link fence. In accordance with SB 18 and AB 52, this project was not referred to the tribes listed with the Native American Heritage Commission (NAHC) as the project is not a General Plan Amendment and no tribes have requested consultation or project referral noticing. A condition of approval regarding the discovery of cultural resources during the construction process will be added to the project.

Mitigation: None.

References: Application Materials; Stanislaus County General Plan and Support Documentation[1].

XIX. UTILITIES AND SERVICE SYSTEMS -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			**X**	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			**X**	

c) 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**	
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			**X**	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			**X**	

Discussion: Limitations on providing services have not been identified. As stated in Sections VII – *Geology and Soils* and X – *Hydrology and Water Quality*, the proposed project will not include any new water or wastewater facilities. The project's restroom facilities for employees are located in the existing office and breakroom on Assessor Parcel Number (APN) 009-016-024 and are served by an existing septic tank and domestic well. However, if any future new wells are to be constructed on-site, they will be subject to review under the County's Well Permitting Program, which will determine whether a new well will require environmental review. Additionally, any future development of a septic tank or alternative wastewater disposal system would require the approval of the Department of Environmental Resources (DER) through the building permit process, which also takes soil type into consideration within the specific design requirements. Department of Environmental Resources staff reviewed the project and had no comments.

The project proposes to handle stormwater drainage via an existing on-site drainage basin located on APN 009-016-025. A condition of approval requiring a grading, drainage, and erosion and sediment control plan to be submitted for the basin will be required, subject to Public Works review and Standards and Specifications. Additionally, drainage easements will be required if any stormwater is to be channeled to the adjacent parcel. Accordingly, runoff associated with the project will be reviewed as part of the grading review process and be required to be maintained on-site.

The project was referred to the Regional Water Quality Control Board who provided a standard response requiring regulatory permits to be obtained if triggered. A condition of approval will be added to the project requiring the operator to obtain all applicable permits from their agency.

The project site is served by Modesto Irrigation District (MID) for electrical service. A response was received from the MID that the project would not impact any MID electrical facilities; however, no discharge to the MID Main Canal may occur without authorization from MID's Board. This has been added as a condition of approval.

The project is not anticipated to have a significant impact to utilities and service systems.

Mitigation: None.

References: Referral response from Regional Water Quality Control Board, dated November 8, 2019; Referral response from the Department of Environmental Resources, dated November 22, 2019; Referral response from Modesto Irrigation District, dated November 22, 2019; Stanislaus County General Plan and Support Documentation[1].

XX. WILDFIRE – If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Included**	**Less Than Significant Impact**	**No Impact**
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			**X**	
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			**X**	

c) Require the installation of maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			**X**	
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			**X**	

Discussion: The Stanislaus County Local Hazard Mitigation Plan identifies risks posed by disasters and identifies ways to minimize damage from those disasters. The terrain of the site is relatively flat, and the site has access to a County-maintained Road, North Hopper Road. The site is located in a Local Responsibility Area (LRA) for fire protection and is served by the Stanislaus Consolidated Fire Protection District. The project was referred to the Stanislaus Consolidated Fire Protection District, and no comments have been received to date. California Building and Fire Code establishes minimum standards for the protection of life and property by increasing the ability of a building to resist intrusion of flame and burning embers. The project site is currently improved with a 10,000-gallon water tank for fire suppression. Building permits for change of use of the structures and installation of the auger extension will be required as conditions of approval for the project and will be reviewed by the County's Building Permits Division and Fire Prevention Bureau to ensure all State of California Building and Fire Code requirements are met prior to issuance of a building permit. If an increase in on-site water storage needs is identified, it will be required at the time of obtaining building permits.

Wildfire risk and risks associated with postfire land changes are considered to be less than significant.

Mitigation: None.

References: Stanislaus County General Plan and Support Documentation[1].

XXI. MANDATORY FINDINGS OF SIGNIFICANCE --	**Potentially Significant Impact**	**Less Than Significant With Mitigation Included**	**Less Than Significant Impact**	**No Impact**
a) Does the project have the potential to substantially 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, substantially 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**	

Discussion: The 12.14± acre project site is designated Agriculture by the Stanislaus County General Plan land use diagrams and zoned General Agriculture (A-2-40). The project sites soil Hanford fine sandy loam (HbA), 0 to 3 percent slopes; Hanford fine sandy loam, moderately deep over silt (HbpA), 0 to 1 percent slopes; Hanford fine sandy loam (HbsA),

deep over silt, 0 to 1 percent slopes; Modesto loam (MoA), 0 to 1 percent slopes; Oakdale sandy loam (OaA), 0 to 3 percent slopes; and Snelling sandy loam (SnA), 0 to 3 percent slopes. All on-site soils have a California Revised Storie Index Grade 1 rating ranging from 81 to 100.

The proposed use is considered a Tier One use, falling under the categories of warehouse for agricultural produce and a nut huller and sheller, which are agriculturally related industries. Policy 2.15 of the County Agricultural Element of the General Plan requires mitigation for the conversion of agricultural land resulting from a discretionary project requiring a General Plan or Community Plan amendment from agriculture to a residential land use designation at a 1:1 ratio with agricultural land of equal quality located in Stanislaus County. The project does not propose residential development and therefore the requirement for agricultural mitigation does not apply. Furthermore, the proposed project is for almond hulling, shelling, storage, and accessory uses which are considered agriculture-related uses in the A-2 zoning district; therefore, the project's expansion onto the adjoining parcel (APN: 009-016-025) would not constitute conversion of prime farmland to a non-agricultural use.

The project will not conflict with a Habitat Conservation Plan, a Natural Community Conservation Plan, or other locally approved conservation plans. Impacts to endangered species or habitats, locally designated species, or wildlife dispersal or mitigation corridors are considered to be less than significant.

It does not appear that this project will result in significant impacts to any archaeological or cultural resources. The project site has already been disturbed. Standard conditions of approval regarding the discovery of cultural resources during any future construction resulting from this request will be added to the project.

The project will not physically divide an established community. The surrounding area is composed of rural ranchettes, residential and agricultural accessory structures, irrigated pasture and orchard in all directions; a horse boarding facility and Dry Creek to the north; and State Route 132 (Yosemite Boulevard) and the MID Main Canal to the south. Any further development of the surrounding area would be subject to the permitted uses of the applicable zoning district or would require additional land use entitlements and environmental review.

The permitted LNC operation included seven employees during peak season from August to December, and up to four part-time truck drivers. Historic operation included approximately 1,000 annual field run vehicle trips in 30-foot bobtail trucks, transporting up to three to 4.5 million meat pounds depending on annual crop. The facility currently operates with peak and off-peak seasonal operation, processing between five to seven million meat pounds annually. During peak season, the facility operates with seven employees (four full-time and three part-time) daily from mid-August to end of November. As discussed in Section XIII – *Noise*, although the facility is currently operating 24 hours per-day, a mitigation measure has been applied to the project restricting in hours of operation from 7:00 a.m. to 10:00 p.m. daily in order to bring the facility into compliance with adopted nighttime noise standards pursuant to Stanislaus County's General Plan Noise Element. Twenty-four hour operation may be permitted during peak seasonal operation if additional sound controls are developed to bring the nighttime noise generated by the facility into compliance with County standards. Off-peak operation occurs from December to mid-August with hours of operation of Monday through Saturday 7:00 a.m. to 4:00 p.m., with two full-time employees. As these numbers below the threshold of significance for traffic as discussed in Section XVII - *Transportation*, no significant impacts from vehicle and truck trips to transportation are anticipated.

Review of this project has not indicated any features which might significantly impact the environmental quality of the site and/or the surrounding area.

Mitigation: None.

References: Initial Study; Stanislaus County General Plan and Support Documentation[1].

[1]Stanislaus County General Plan and Support Documentation adopted in August 23, 2016, as amended. ***Housing Element*** adopted on April 5, 2016.

Environmental Noise Assessment

Masroc Farms Hulling and Shelling Operations

Modesto (Stanislaus County), California

BAC Job # 2019-256

Prepared For:

Masroc Farms

Attn: David Zwald
616 North Hopper Road
Modesto, CA 95357

Prepared By:

Bollard Acoustical Consultants, Inc.

[redacted]

Paul Bollard, President

April 3, 2020

BOLLARD
Acoustical Consultants

ATTACHMENT I

Introduction

The Masroc Farms property is located at 616 North Hopper Road in Modesto (Stanislaus County), California (APN: 009-016-024 & 025). The property contains existing almond orchards and a hulling and shelling facility with associated processing buildings. Existing uses in the vicinity of the facility include agricultural with residences. The Masroc Farms facility and immediate surrounding area is shown on Figure 1.

Due to concerns expressed by local residents regarding the noise generation of the facility, the County of Stanislaus has requested that a noise analysis be conducted. Pursuant to that request, Bollard Acoustical Consultants, Inc. (BAC) was retained by the project applicant to prepare this noise analysis. Specifically, the purposes of this analysis are to quantify noise levels associated with facility hulling and shelling operations, and to compare those levels against the applicable Stanislaus County standards for acceptable noise exposure for residential uses.

Noise Fundamentals and Terminology

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are designated as sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second, or Hertz (Hz). Definitions of acoustical terminology are provided in Appendix A.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals of pressure) as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Noise levels associated with common noise sources are provided in Figure 2.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by filtering the frequency response of a sound level meter by means of the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels.

Legend

Long-Term Noise Measurement Locations

Short-Term Noise Measurement Locations

N

Scale (feet)

0 50 100

Masroc Farms
Hulling & Shelling Operations
Stanislaus County, California

Site Vicinity & Noise Measurement Locations

Figure 1

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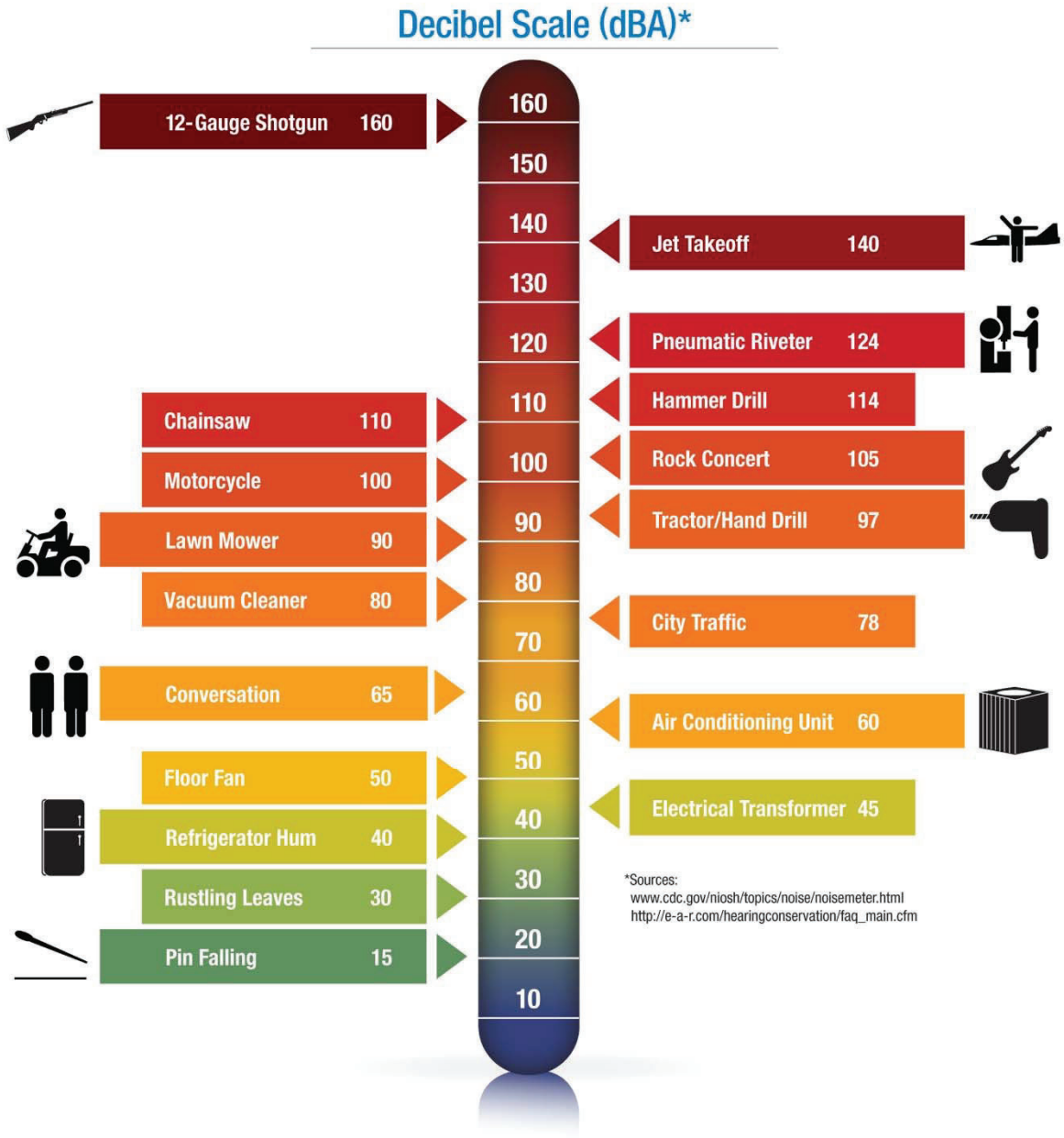
Figure 2
Noise Levels Associated with Common Noise Sources



Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptors, day-night average level (L_{dn}) and the community noise equivalent level (CNEL) and shows very good correlation with community response to noise for the average person. The median noise level descriptor, denoted L_{50}, represents the noise level which is exceeded 50% of the hour. In other words, half of the hour ambient conditions are higher than the L_{50} and the other half are lower than the L_{50}.

Criteria for Acceptable Noise Exposure

Stanislaus County Noise Ordinance

Section 10.46 of the Stanislaus County Code contains the County's Noise Ordinance. The sections of the County's Noise Ordinance which would be applicable to this evaluation are reproduced below.

10.46.050 Exterior Noise Level Standards

A. It is unlawful for any person at any location within the unincorporated area of the county to create any noise or to allow the creation of any noise which causes the exterior noise level when measured at any property situated in either the incorporated or unincorporated area of the county to exceed the noise level standards as set forth below (in Table 1):

1. Unless otherwise provided herein, the following exterior noise level standards shall apply to all properties within the designated noise zone:

Table 1
Exterior Noise Level Standards

Designated Noise Zone	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Noise Sensitive	45	45
Residential	50	45
Commercial	60	55
Industrial	75	75

Source: Stanislaus County Code Section 10.46.050, Table A.

2. Exterior noise levels shall not exceed the following cumulative duration allowance standards (shown in Table 2):

Table 2
Cumulative Duration Allowance Standards

Cumulative Duration	Allowance Decibels
Equal to or greater than 30 minutes per hour	Table 1 plus 0 dB
Between 15 and 30 minutes per hour	Table 1 plus 5 dB
Between 5 and 15 minutes per hour	Table 1 plus 10 dB
Between 1 and 5 minutes per hour	Table 1 plus 15 dB
Less than 1 minute per hour	Table 1 plus 20 dB

Source: Stanislaus County Code Section 10.46.050, Table B.

3. Pure Tone Noise, Speech and Music. The exterior noise level standards set forth in Table A shall be reduced by five dB(A) for pure tone noises, noises consisting primarily of speech or music, or reoccurring impulsive noise.

4. In the event the measured ambient noise level exceeds the applicable noise level standard above, the ambient noise level shall become the applicable exterior noise level standard.

B. Noise Zones Defined.

1. Noise Sensitive. Any public or private school, hospital, church convalescent home, cemetery, sensitive wildlife habitat, or public library regardless of its location within any land use zoning district.

2. Residential. All parcels located within a residential land use zoning district.

3. Commercial. All parcels located within a commercial or highway frontage land use zoning district.

4. Industrial. All parcels located within an industrial land use zoning district.

5. The noise zone definition of any parcel not located within a residential, commercial, highway frontage, or industrial land use zoning district shall be determined by the director of Stanislaus County planning and community development department, or designee, based on the permitted uses of the land use zoning district in which the parcel is located. (Ord. CS 1070 §2, 2010).

10.46.080 Exemptions

The following sources are exempt from the provisions of this chapter:

H. Agricultural activity, as such term is defined in Section 9.32.010(B), and any operation, facility or appurtenances thereof, that are conducted or maintained on agricultural lands for commercial purposes in a manner consistent with proper and accepted customs and standards as established and followed by similar agricultural operations in Stanislaus County.

In addition to the Noise Ordinance Provisions of County Code Section 10.46 (Noise Control), additional information regarding agricultural uses is provided in Section 9.32 (Agricultural Land Policies). The pertinent section of this part of the County Code is reproduced below.

9.32.050 Right-to-farm notice.

A. To provide all property owners with consecutive notice of Stanislaus County's right-to-farm policy, the ordinance codified in this chapter shall be recorded with the clerk recorder of the county.

All persons purchasing lots within the boundaries of this approved map should be prepared to accept the inconveniences associated with agricultural operations, such as noise, odors, flies, dust or fumes. Stanislaus County has determined that such inconveniences shall not be considered to be a nuisance if agricultural operations are consistent with accepted customs and standards.

F. The "right-to-farm notice" shall contain, and be substantially in the form of, the following:

Stanislaus County Right-to-Farm Notice

The County of Stanislaus recognizes and supports the right to farm agricultural lands in a manner consistent with accepted customs and standards. Residents of property on or near agricultural land should be prepared to accept the inconveniences or discomforts associated with agricultural operations, including but not limited to noise, odors, flies, dust, the operation of machinery of any kind during any 24-hour period (including aircraft), the storage and disposal of manure, and the application by spraying or otherwise of chemical fertilizers, soil amendments, herbicides and pesticides. Stanislaus County has determined that inconveniences or discomforts associated with such agricultural operations shall not be considered to be a nuisance if such operations are consistent with accepted customs and standards.

In light of Code Section 10.46.080, which exempts agricultural uses from the provisions of the Noise Ordinance (including the exterior noise standards), and the County's Right-to-Farm Ordinance, it does not appear that the Masroc Farms seasonal hulling and shelling operations would be subject to a specific noise standard. As a result, the following section pertaining to the noise generation of the Masroc Farms operations is provided for informational purposes only.

Masroc Farms Noise Survey Methodology and Results

To quantify the ambient noise environment at the two nearest residences within the Masroc Farms facility vicinity, BAC conducted a long-term (24-hour) noise level measurements at the locations identified on Figure 1 from December 22-23, 2019. In addition to the long-term noise surveys, short-term (1-minute) noise level measurements were conducted at the locations identified on Figure 1 on December 21, 2019. The short-term noise level survey locations are identified as sites ST-1 through ST-7 on Figure 1. Photographs of the noise level survey locations are provided in Appendix B.

Larson-Davis Laboratories (LDL) Models 820 and 831 precision integrating sound level meters were used to complete the noise level measurement surveys. The meters were calibrated immediately before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy off the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

The long-term noise level measurement survey results are summarized in Table 3. The detailed results of the ambient long-term noise level survey are contained in Appendix C in tabular format and graphically in Appendix D. Results from the short-term noise level measurement survey are presented in Table 4.

Table 3
Summary of Long-Term Noise Survey Measurement Results – December 22-23, 2019[1]

			Average Measured Hourly Noise Levels, dBA[3]			
			Daytime[4]		Nighttime[5]	
Site[2]	Date	L_{dn}	L_{eq}	L_{max}	L_{eq}	L_{max}
LT-1: Adjacent to residence at 700 N. Hopper Road	12/22/19	52	51 (40-56)	58 (52-64)	43 (38-48)	57 (48-73)
	12/23/19	61	63 (40-74)	63 (53-90)	39 (35-43)	52 (44-66)
LT-2: Adjacent to residence at 585 N. Hopper Road	12/22/19	50	48 (39-52)	58 (49-70)	42 (37-49)	55 (49-78)
	12/23/19	57	59 (39-61)	65 (50-80)	39 (34-46)	50 (43-72)

[1] Detailed summaries of the noise monitoring results are provided in Appendices C and D.
[2] Long-term noise survey locations are identified on Figure 1.
[3] Presented in terms of: Average (Low-High)
[4] Daytime hours: 7:00 a.m. to 10:00 p.m.
[5] Nighttime hours: 10:00 p.m. to 7:00 a.m.
Source: Bollard Acoustical Consultants, Inc. (2019)

Table 4
Summary of Short-Term Noise Survey Measurement Results – December 21, 2019

		Measured Noise Levels, dBA		
Site[1]	Time	L_{eq}	L_{max}	Notes
ST-1	12:04 p.m.	70	70	Building air handling unit primary noise source
ST-2	12:06 p.m.	75	75	Nearest facility bag house primary noise source
ST-3:	12:08 p.m.	71	72	Facility bag houses primary noise source
ST-4:	12:10 p.m.	76	78	Facility bag houses primary noise source
ST-5:	12:12 p.m.	77	75	Facility bag houses primary noise source
ST-6:	12:14 p.m.	74	75	Facility bag houses primary noise source
ST-7:	12:17 p.m.	88	89	Inside processing building

[1] Short-term noise survey locations are identified on Figure 1.
Source: Bollard Acoustical Consultants, Inc. (2019)

Analysis of Noise Measurement Results

Inspection of the Appendix D data indicated that the Masroc facility was in operation between approximately 8 am and 5 pm on Monday, December 23rd, 2019. Because the facility operations occurred continuously during the 8-am-5 pm period, the county noise standard applicable to noise present between 30 and 60 minutes out of the hour would be appropriate for this evaluation. As noted in Table 1, that standard is 50 dB at nearby residential zones.

Because the project site and neighboring parcels are zoned for agricultural land uses, it is important to note that the Masroc operations would not be subject to the noise standards applicable to residentially zoned lands. As a result, the following analysis is provided for informational purposes only.

As noted on Appendix D, the measured median noise levels associated with Masroc operations were approximately 54 dB and 60 dB at the nearest residences to the north and south, respectively, while the facility equipment was in operation. If the neighboring land uses were subject to the standards applicable to residentially zoned lands, then noise generated by the Masroc facility operations would exceed those standards by approximately 10 dB during daytime hours and 15 dB during nighttime hours at the nearest residence to the south.

As indicated in Table 4, the primary source associated with facility operations during the short-term noise level survey was determined to be the facility bag houses. Specifically, BAC staff noted that the bag house exhaust fans were the primary sources of facility operations noise during the survey.

Should the County determine that noise from Masroc Farms operations is compatible with the intent of the Right-to-Farm Notice, it is likely that noise from hulling and shelling operations at the Masroc facility would be exempted from the noise standards established in the General Plan. However, if the County determines that the Right-to-Farm Notice is not applicable to Masroc Farms operations noise, consideration of noise mitigation measures for the facility equipment would be warranted.

As mentioned previously, the primary noise source associated with facility operations was determined to be the bag house exhaust fans. In order to reduce bag house exhaust fan noise levels, the following equipment mitigation measures could be implemented:

- The construction of localized noise barriers around the bag house exhaust fans.
- The implementation of acoustic curtains and/or sound absorptive panels in the immediate vicinity of the noisiest plant equipment.
- The installation of duct silencers for the bag house exhaust fans.

Should the County determine that Masroc Farms noise levels are excessive at the nearby residences located on neighboring agricultural properties, additional equipment-specific noise measurements and analysis would need to be conducted to determine where such treatments would be required.

Conclusions and Recommendations

Based on ambient noise level measurements conducted by BAC, Masroc Farms facility hulling and shelling operations noise exposure exceeded Stanislaus County General Plan daytime and nighttime noise level limits at the nearest residential uses. However, the County's Noise Ordinance and Right-to-Farm Ordinance appear to exempt noise generated by agricultural operations such as Masroc Farms. If the County determines that the Right-to-Farm Notice is not applicable to Masroc Farms operations noise, and that the Noise Ordinance provisions do apply to this facility, consideration of noise mitigation measures for the facility equipment would be warranted. In order to comply with the applicable Stanislaus County General Plan noise level limits at the nearest residential uses, a site-specific equipment noise analysis would need to be conducted so that appropriate noise control measures could be identified.

This concludes BAC's environmental noise analysis of Masroc Farms facility hulling and shelling operations in Modesto (Stanislaus County), California. Please contact BAC at (916) 663-0500 or paulb@bacnoise.com with any questions regarding this assessment.

Appendix A
Acoustical Terminology

Acoustics The science of sound.

Ambient Noise The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.

Attenuation The reduction of an acoustic signal.

A-Weighting A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.

Decibel or dB Fundamental unit of sound. A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.

CNEL Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.

Frequency The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.

IIC Impact Insulation Class (IIC): A single-number representation of a floor/ceiling partition's impact generated noise insulation performance. The field-measured version of this number is the FIIC.

L_{dn} Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.

L_{eq} Equivalent or energy-averaged sound level.

L_{max} The highest root-mean-square (RMS) sound level measured over a given period of time.

Loudness A subjective term for the sensation of the magnitude of sound.

Masking The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.

Noise Unwanted sound.

Peak Noise The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the "Maximum" level, which is the highest RMS level.

RT_{60} The time it takes reverberant sound to decay by 60 dB once the source has been removed.

STC Sound Transmission Class (STC): A single-number representation of a partition's noise insulation performance. This number is based on laboratory-measured, 16-band (1/3-octave) transmission loss (TL) data of the subject partition. The field-measured version of this number is the FSTC.

Legend

A: LT-1: Looking south towards facility (37°38'53.15" N, 120°49'44.22" W)
B: ST-2: Looking north towards facility bag houses (37°38'47.94" N, 120°49'42.57" W)
C: ST-3: Looking west towards facility bag houses (37°38'49.94" N, 120°49'40.73" W)
D: ST-6: Looking south towards facility bag houses (37°38'50.69" N, 120°49'41.69" W)

Masroc Farms
Hulling & Shelling Operations
Stanislaus County, California

Photographs of Noise Survey Locations

Appendix B

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Appendix C-1
Ambient Noise Monitoring Results - Site LT-1
Masroc Farms Hulling & Shelling Operations - Stanislaus County
Sunday, December 22, 2019

Hour	Leq	Lmax	L50	L90
12:00 AM	40	57	38	34
1:00 AM	38	48	37	34
2:00 AM	38	49	36	33
3:00 AM	38	52	37	34
4:00 AM	41	62	39	36
5:00 AM	44	65	42	38
6:00 AM	48	57	47	43
7:00 AM	47	57	46	41
8:00 AM	47	56	46	43
9:00 AM	49	58	48	45
10:00 AM	49	57	48	45
11:00 AM	51	63	49	46
12:00 PM	56	64	55	51
1:00 PM	53	64	52	48
2:00 PM	53	57	52	50
3:00 PM	56	62	55	50
4:00 PM	56	63	56	51
5:00 PM	45	56	44	41
6:00 PM	44	53	44	41
7:00 PM	40	52	39	37
8:00 PM	40	52	39	37
9:00 PM	40	52	38	36
10:00 PM	41	50	41	37
11:00 PM	43	73	38	35

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	56	40	51	48	38	43
Lmax (Maximum)	64	52	58	73	48	57
L50 (Median)	56	38	47	47	36	39
L90 (Background)	51	36	44	43	33	36

Computed Ldn, dB	52
% Daytime Energy	93%
% Nighttime Energy	7%

GPS Coordinates	37°38'53.15" N
	120°49'44.22" W

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Appendix C-2
Ambient Noise Monitoring Results - Site LT-1
Masroc Farms Hulling & Shelling Operations - Stanislaus County
Monday, December 23, 2019

Hour	Leq	Lmax	L50	L90
12:00 AM	36	52	35	32
1:00 AM	36	48	35	31
2:00 AM	35	44	35	31
3:00 AM	36	46	35	32
4:00 AM	43	66	37	33
5:00 AM	40	52	40	38
6:00 AM	42	53	41	39
7:00 AM	54	60	54	44
8:00 AM	54	60	54	53
9:00 AM	55	63	55	53
10:00 AM	51	60	50	48
11:00 AM	54	59	54	53
12:00 PM	66	80	60	53
1:00 PM	74	90	69	55
2:00 PM	54	58	54	53
3:00 PM	54	65	54	53
4:00 PM	56	72	55	54
5:00 PM	55	62	55	54
6:00 PM	43	55	41	39
7:00 PM	41	54	40	38
8:00 PM	40	53	39	36
9:00 PM	40	58	39	36
10:00 PM	38	52	37	35
11:00 PM	39	57	38	36

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	74	40	63	43	35	39
Lmax (Maximum)	90	53	63	66	44	52
L50 (Median)	69	39	52	41	35	37
L90 (Background)	55	36	48	39	31	34

Computed Ldn, dB	61
% Daytime Energy	100%
% Nighttime Energy	0%

GPS Coordinates	37°38'53.15" N
	120°49'44.22" W

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Appendix C-3
Ambient Noise Monitoring Results - Site LT-2
Masroc Farms Hulling & Shelling Operations - Stanislaus County
Sunday, December 22, 2019

Hour	Leq	Lmax	L50	L90
12:00 AM	40	59	38	33
1:00 AM	38	49	36	32
2:00 AM	37	49	34	30
3:00 AM	37	52	35	30
4:00 AM	38	56	36	32
5:00 AM	49	78	39	35
6:00 AM	42	53	41	38
7:00 AM	44	62	42	39
8:00 AM	44	56	43	39
9:00 AM	47	59	47	44
10:00 AM	46	59	45	44
11:00 AM	49	70	46	43
12:00 PM	52	66	50	47
1:00 PM	48	56	47	44
2:00 PM	49	58	49	47
3:00 PM	52	67	51	48
4:00 PM	52	60	52	49
5:00 PM	44	53	43	40
6:00 PM	44	51	44	41
7:00 PM	40	52	38	35
8:00 PM	40	52	39	36
9:00 PM	39	49	38	35
10:00 PM	40	51	39	35
11:00 PM	39	51	38	34

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	52	39	48	49	37	42
Lmax (Maximum)	70	49	58	78	49	55
L50 (Median)	52	38	45	41	34	37
L90 (Background)	49	35	42	38	30	33

Computed Ldn, dB	50
% Daytime Energy	87%
% Nighttime Energy	13%

GPS Coordinates	37°38'45.99" N
	120°49'42.07" W

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Appendix C-4
Ambient Noise Monitoring Results - Site LT-2
Masroc Farms Hulling & Shelling Operations - Stanislaus County
Monday, December 23, 2019

Hour	Leq	Lmax	L50	L90
12:00 AM	36	45	34	32
1:00 AM	36	47	35	32
2:00 AM	34	43	33	31
3:00 AM	35	45	33	31
4:00 AM	46	72	36	33
5:00 AM	38	48	38	36
6:00 AM	41	51	40	38
7:00 AM	59	68	59	42
8:00 AM	61	68	61	60
9:00 AM	61	70	60	58
10:00 AM	57	69	56	55
11:00 AM	61	63	61	59
12:00 PM	61	65	61	60
1:00 PM	61	80	61	60
2:00 PM	61	79	60	59
3:00 PM	61	73	60	59
4:00 PM	60	65	60	59
5:00 PM	60	62	60	58
6:00 PM	42	54	41	38
7:00 PM	40	50	40	38
8:00 PM	40	53	39	37
9:00 PM	39	52	38	34
10:00 PM	36	47	35	32
11:00 PM	38	51	36	34

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	61	39	59	46	34	39
Lmax (Maximum)	80	50	65	72	43	50
L50 (Median)	61	38	55	40	33	35
L90 (Background)	60	34	52	38	31	33

Computed Ldn, dB	57
% Daytime Energy	99%
% Nighttime Energy	1%

GPS Coordinates	37°38'45.99" N
	120°49'42.07" W

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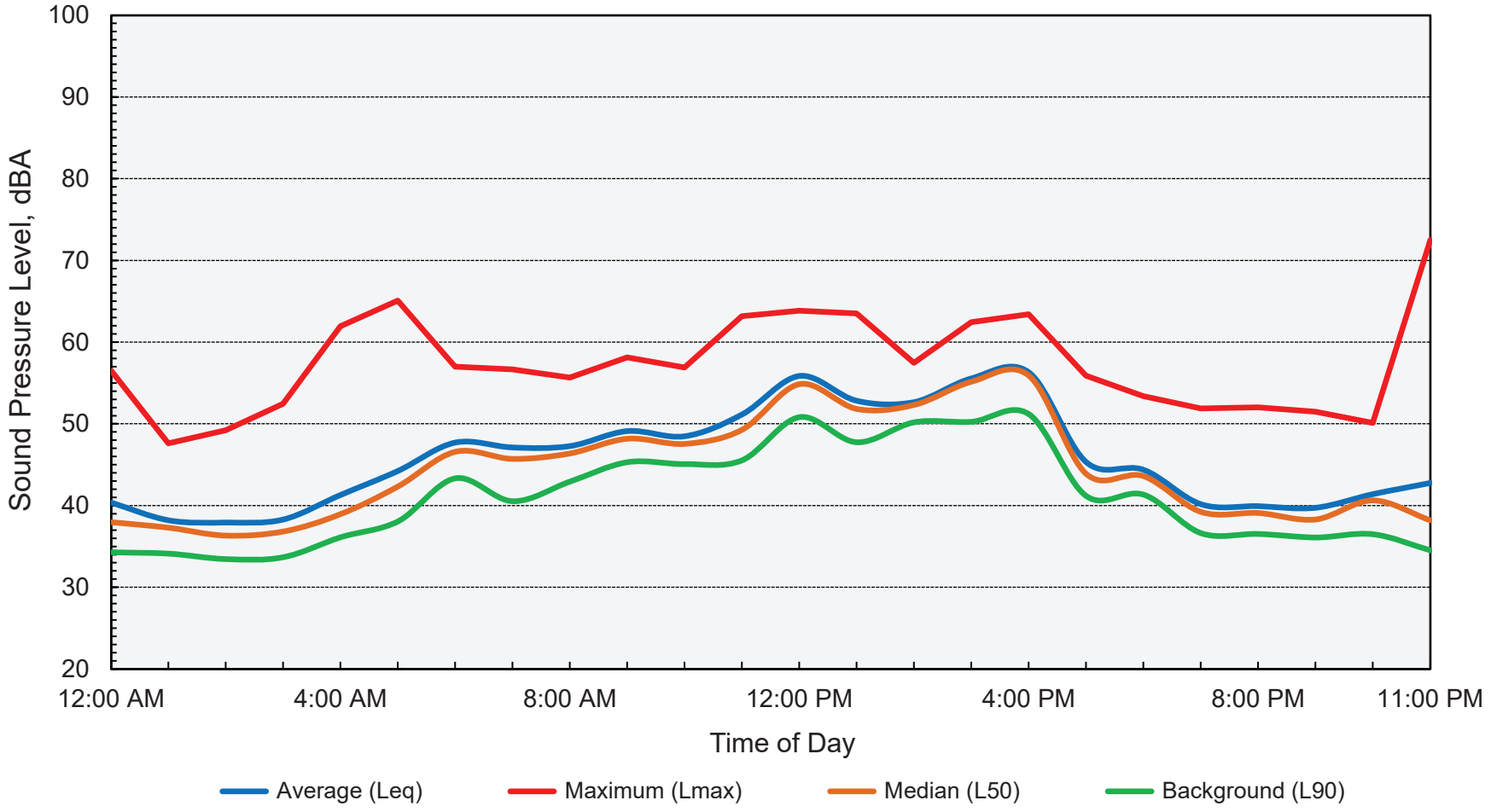
Appendix D-1
Ambient Noise Monitoring Results - Site LT-1
Masroc Farms Hulling & Shelling Operations - Stanislaus County
Sunday, December 22, 2019



Computed Ldn = 52 dB

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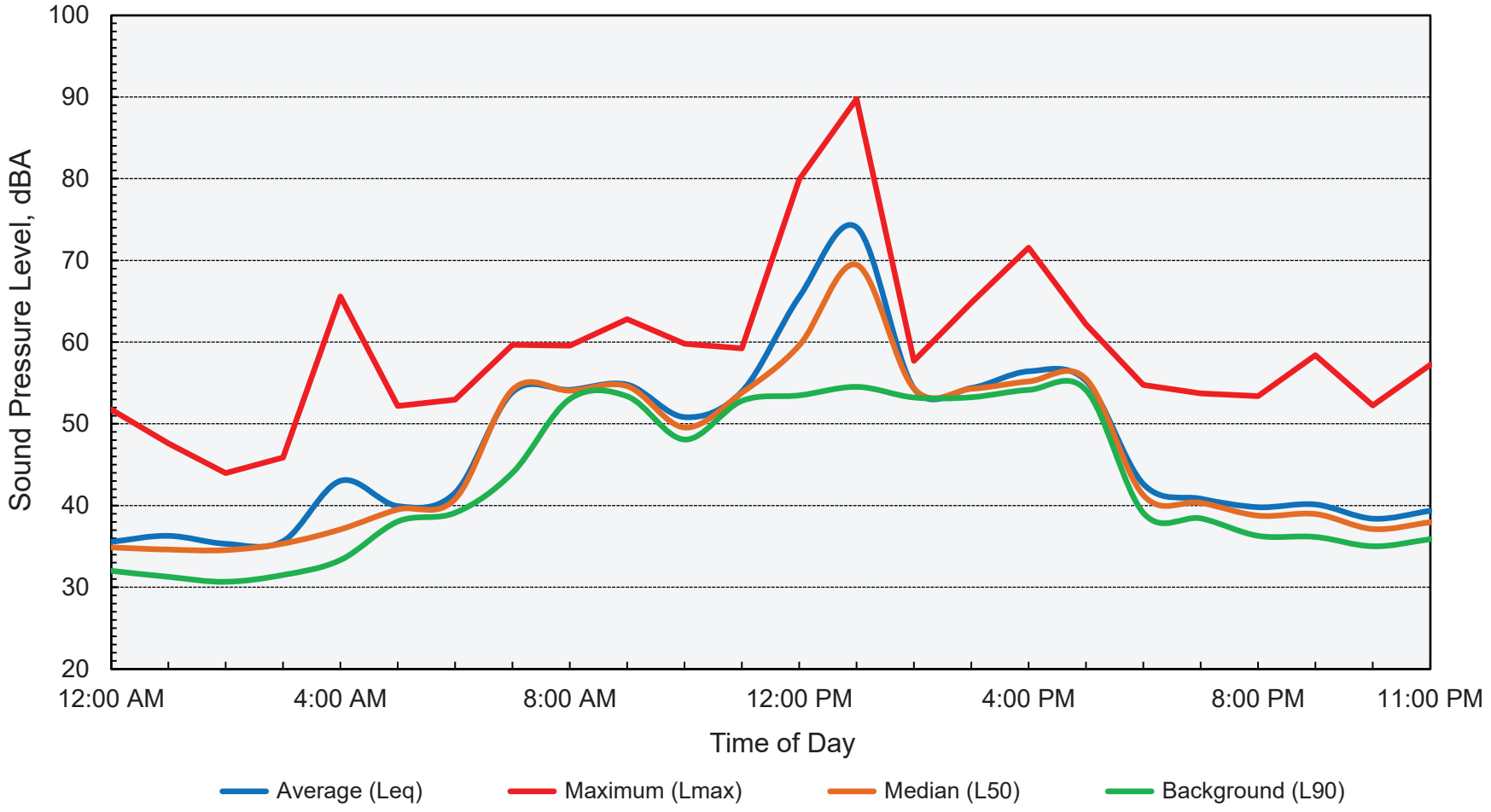
Appendix D-2
Ambient Noise Monitoring Results - Site LT-1
Masroc Farms Hulling & Shelling Operations - Stanislaus County
Monday, December 23, 2019



Computed Ldn = 61 dB

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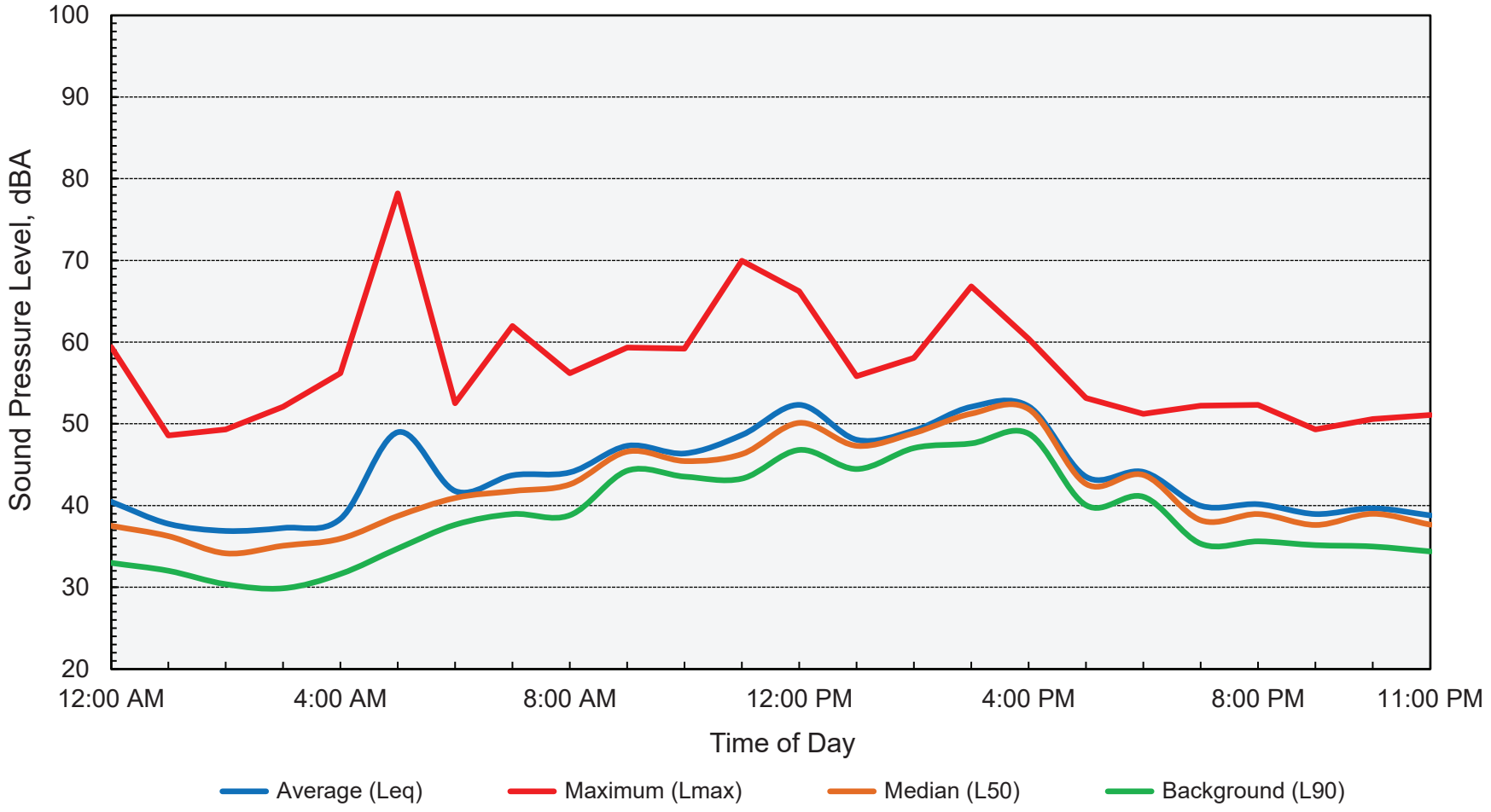
Appendix D-3
Ambient Noise Monitoring Results - Site LT-2
Masroc Farms Hulling & Shelling Operations - Stanislaus County
Sunday, December 22, 2019



Computed Ldn = 50 dB

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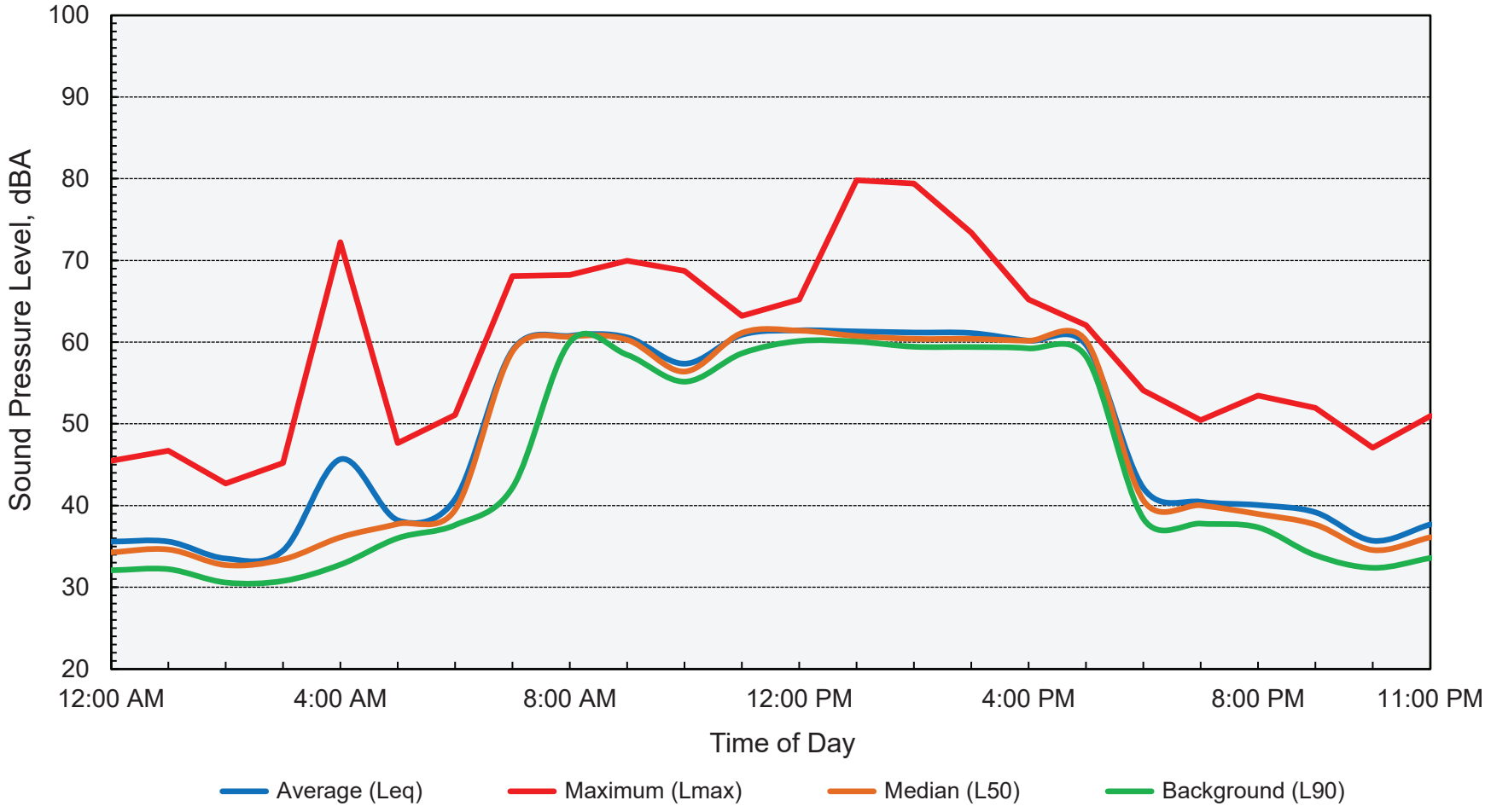
Appendix D-4
Ambient Noise Monitoring Results - Site LT-2
Masroc Farms Hulling & Shelling Operations - Stanislaus County
Monday, December 23, 2019



Computed Ldn = 57 dB

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July 28, 2021

Mr. David Zwald
Masroc Farms
616 N. Hopper Road
Modesto, CA. 95357

Transmitted via email: [redacted]

Subject: Status update on noise compliance evaluation for Masroc Farms almond hulling operation in Stanislaus County, CA.
BAC Project Number: 2019-256

Dear Mr. Zwald:

Per your request, I have prepared this letter to present a status report and recommendations since Bollard Acoustical Consultants, Inc. (BAC) was retained to prepare a noise analysis for your project.

April 4, 2020:

- BAC completed a written report documenting the results of our December 2019 noise survey conducted at your facility. Our report included conclusions and recommendations for noise mitigation measures.

- The noise surveys concluded that the noise generation of Masroc Farms exceeded the County's noise standards at the nearest residences to the facility by approximately 10 dB during daytime hours and 15 dB during nighttime hours.

Non-Operational Period of 2020:

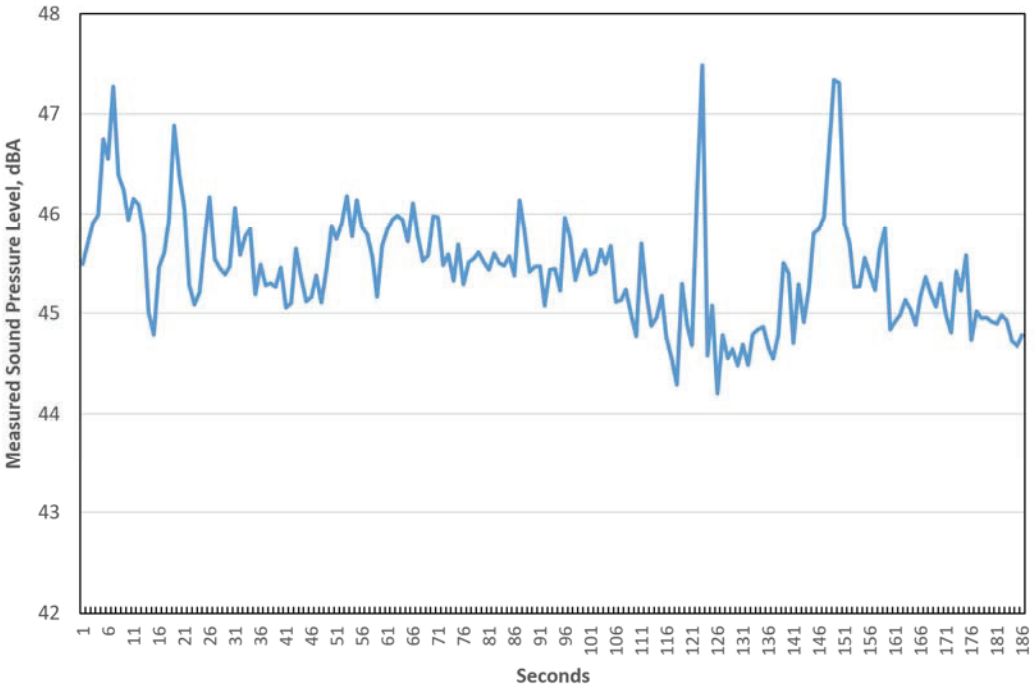
- In response to BAC's evaluation, Masroc Farms implemented several noise mitigation measures during the non-operational period (off-season) of 2020. Those measures included the replacement of wood bearings with greaseable bearings, the use of almond crates to create sound barriers along substantial portions of the southern, western and northern site boundaries, replacement of 4 noisy motors on the roof of the operations building, and installation of rubber surfaces at nut drop points (the nuts previously fell on metal hoppers). The figure below illustrates the use of almond boxes to provide acoustical shielding in the direction of nearby residences.

October 2020:

- Following startup of the 2020 almond harvesting/hulling season, BAC returned to Masroc Farms to conduct additional noise testing at the residence located at 548 North Hopper Road (Whitmore Residence), to evaluate the effectiveness of the noise mitigation measures and to determine the state of compliance of Masroc Operations with County noise standards. Photographs of the noise measurement location are shown below:

- The noise measurements were conducted on Friday, October 2nd, 2020, with both Debbie Whitmore (resident) and Kristen Anaya (County Planning department), present.

- The test results indicated that the measured average and maximum noise levels attributable to Masroc Farms operations were 45.6 dBA Leq and 47.5 dB dBA Lmax. A graph of the measurement results in the Whitmore backyard is provided below.



- The measured levels at this location were determined to be satisfactory relative to the County's Noise Ordinance 50 dB Leq daytime noise level limit but would have exceeded the County's 45 dB Leq nighttime noise level limit.

- BAC notified Masroc Farms of the test results and recommended that they implement the additional noise mitigation measure of installing bag-house exhaust vent fan silencers.

- Masroc Farms indicated that they would go forward with installation of those silencers during the 2021 off-season.

November 2020:

- Saxelby Acoustics prepared a noise study report detailing results of noise measurements conducted within the backyard of the Whitmore Residence in September and October of 2020.

- The Saxelby report indicated that noise levels in the Whitmore backyard were essentially 42 dBA with the huller not operating and 48 dB with the huller operating. These data showed very good agreement with the BAC noise measurement results.

- The Saxelby report also indicated that measured average nighttime noise levels within the Whitmore backyard area were approximately 50-52 dBA during 11-day monitoring period.

Non-Operational Period of 2021 (current period)

- You have indicated that Masroc Farms has reportedly installed the silencers on the bag house exhaust fans.

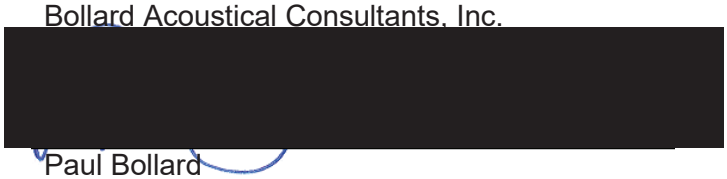
- Because the operation of the hulling equipment, including the bag houses, would generate considerably different noise levels during harvesting season when the plant is being fed with nuts, the effectiveness of the installation of the new silencers cannot feasibly be evaluated until the next operational season.

- Masroc Farms has retained us to have additional noise measurements conducted during the 2021 operational season to determine if the newly installed mitigation measures have reduced facility noise levels to a state of compliance with County noise standards.

Please contact BAC at 916-663-0500 or paulb@bacnoise.com if you have any comments or questions regarding this letter.

Sincerely,

Bollard Acoustical Consultants, Inc.



Paul Bollard
President

Environmental Noise Assessment Update

Masroc Farms Hulling and Shelling Operations

Modesto (Stanislaus County), California

BAC Job # 2019-256

Prepared For:

Masroc Farms

Attn: David Zwald
616 North Hopper Road
Modesto, CA 95357

Prepared By:

Bollard Acoustical Consultants, Inc.

[redacted]

Paul Bollard, President

October 14, 2021

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Acoustical Consultants

ATTACHMENT III

Introduction and Project History

The Masroc Farms property is located at 616 North Hopper Road in Modesto (Stanislaus County), California (APN: 009-016-024 & 025). The property contains existing almond orchards and a hulling and shelling facility with associated processing buildings. Existing uses in the vicinity of the facility include agricultural with residences. The Masroc Farms facility and immediate surrounding area is shown on Figure 1.

Due to concerns expressed by local residents regarding the noise generation of the facility, the County of Stanislaus previously requested that a noise analysis be conducted for the operation. In response to that request, Bollard Acoustical Consultants, Inc. (BAC) prepared a noise analysis dated April 2, 2020. In that report, BAC noted that Masroc noise levels exceeded the applicable Stanislaus County Noise Ordinance standards at the neighboring properties.

Following the April 2020 noise study, Masroc Farms has implemented several noise mitigation measures during the non-operational periods (off-season) of 2020 and 2021. Those measures included the replacement of wood bearings with greaseable bearings, the use of almond crates to create sound barriers along substantial portions of the southern, western and northern site boundaries, replacement of 4 noisy motors on the roof of the operations building, installation of rubber surfaces at nut drop points (the nuts previously fell on metal hoppers), and installation bag house fan exhaust silencers.

In August of 2021, BAC returned to Masroc Farms and conducted additional noise measurements at the two closest neighboring properties. This report, which is an update to the 2020 report, contains the results of the August 2021 noise level measurements in addition to acoustical fundamentals and the County's noise standards.

Noise Fundamentals and Terminology

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are designated as sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second, or Hertz (Hz). Definitions of acoustical terminology are provided in Appendix A.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals of pressure) as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Noise levels associated with common noise sources are provided in Figure 2.

Legend

Long-Term Noise Measurement Locations

N

Scale (feet)

0 50 100

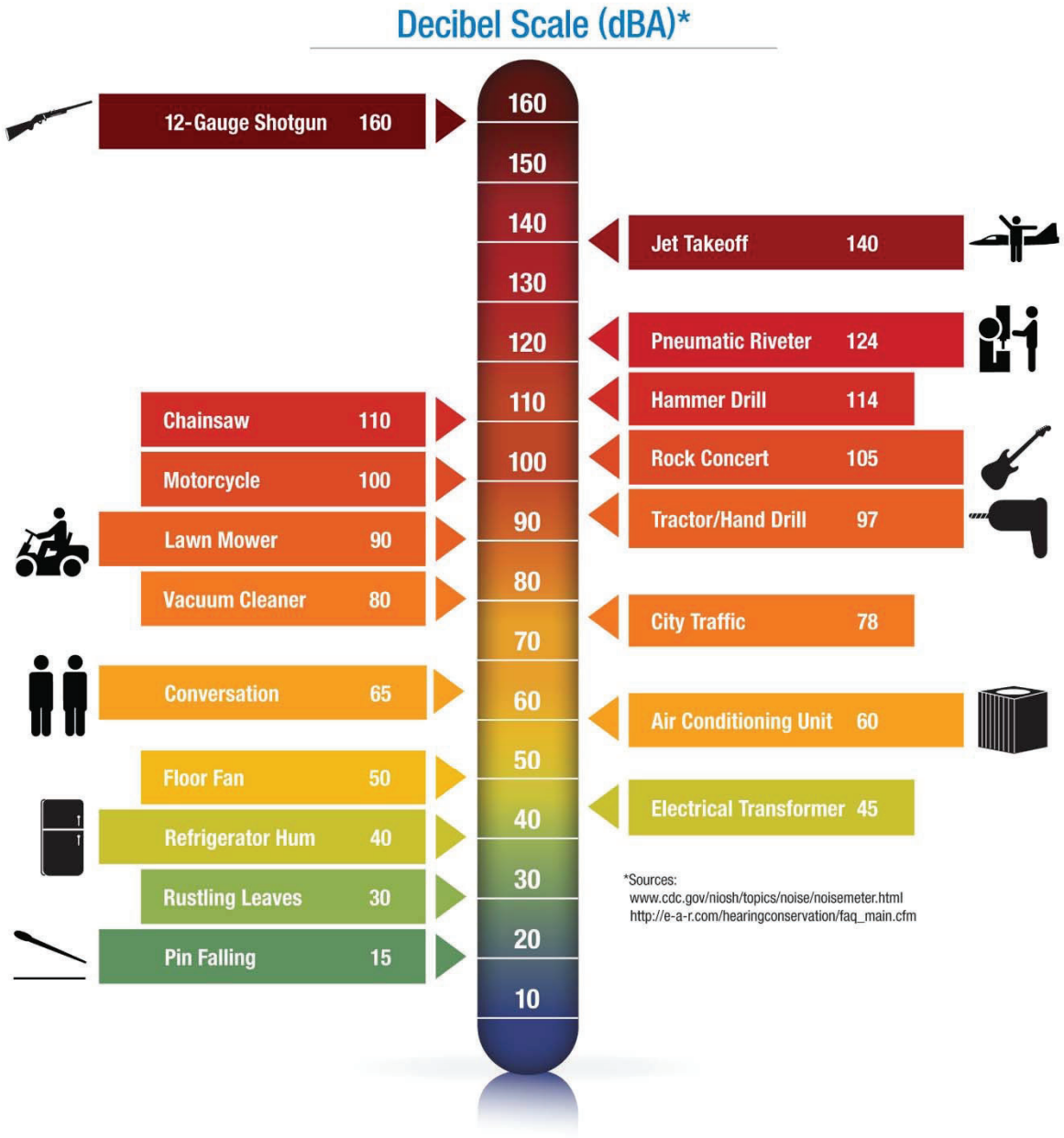
Masroc Farms
Hulling & Shelling Operations
Stanislaus County, California

Site Vicinity & Noise Measurement Locations

Figure 1

BOLLARD Acoustical Consultants

Figure 2
Noise Levels Associated with Common Noise Sources



The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by filtering the frequency response of a sound level meter by means of the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptors, day-night average level (L_{dn}) and the community noise equivalent level (CNEL) and shows very good correlation with community response to noise for the average person. The median noise level descriptor, denoted L_{50}, represents the noise level which is exceeded 50% of the hour. In other words, half of the hour ambient conditions are higher than the L_{50} and the other half are lower than the L_{50}.

Criteria for Acceptable Noise Exposure

Stanislaus County Noise Ordinance

Section 10.46 of the Stanislaus County Code contains the County's Noise Ordinance. The sections of the County's Noise Ordinance which would be applicable to this evaluation are reproduced below.

10.46.050 Exterior Noise Level Standards

A. It is unlawful for any person at any location within the unincorporated area of the county to create any noise or to allow the creation of any noise which causes the exterior noise level when measured at any property situated in either the incorporated or unincorporated area of the county to exceed the noise level standards as set forth below (in Table 1):

1. Unless otherwise provided herein, the following exterior noise level standards shall apply to all properties within the designated noise zone:

Table 1
Exterior Noise Level Standards

Designated Noise Zone	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Noise Sensitive	45	45
Residential	50	45
Commercial	60	55
Industrial	75	75

Source: Stanislaus County Code Section 10.46.050, Table A.

2. Exterior noise levels shall not exceed the following cumulative duration allowance standards (shown in Table 2):

Table 2
Cumulative Duration Allowance Standards

Cumulative Duration	Allowance Decibels
Equal to or greater than 30 minutes per hour	Table 1 plus 0 dB
Between 15 and 30 minutes per hour	Table 1 plus 5 dB
Between 5 and 15 minutes per hour	Table 1 plus 10 dB
Between 1 and 5 minutes per hour	Table 1 plus 15 dB
Less than 1 minute per hour	Table 1 plus 20 dB

Source: Stanislaus County Code Section 10.46.050, Table B.

3. Pure Tone Noise, Speech and Music. The exterior noise level standards set forth in Table A shall be reduced by five dB(A) for pure tone noises, noises consisting primarily of speech or music, or reoccurring impulsive noise.

4. In the event the measured ambient noise level exceeds the applicable noise level standard above, the ambient noise level shall become the applicable exterior noise level standard.

B. Noise Zones Defined.

1. Noise Sensitive. Any public or private school, hospital, church convalescent home, cemetery, sensitive wildlife habitat, or public library regardless of its location within any land use zoning district.

2. Residential. All parcels located within a residential land use zoning district.

3. Commercial. All parcels located within a commercial or highway frontage land use zoning district.

4. Industrial. All parcels located within an industrial land use zoning district.

5. The noise zone definition of any parcel not located within a residential, commercial, highway frontage, or industrial land use zoning district shall be determined by the director of Stanislaus County planning and community development department, or designee, based on the permitted uses of the land use zoning district in which the parcel is located. (Ord. CS 1070 §2, 2010).

10.46.080 Exemptions

The following sources are exempt from the provisions of this chapter:

H. Agricultural activity, as such term is defined in Section 9.32.010(B), and any operation, facility or appurtenances thereof, that are conducted or maintained on agricultural lands for commercial purposes in a manner consistent with proper and accepted customs and standards as established and followed by similar agricultural operations in Stanislaus County.

In addition to the Noise Ordinance Provisions of County Code Section 10.46 (Noise Control), additional information regarding agricultural uses is provided in Section 9.32 (Agricultural Land Policies). The pertinent section of this part of the County Code is reproduced below.

9.32.050 Right-to-farm notice.

A. To provide all property owners with consecutive notice of Stanislaus County's right-to-farm policy, the ordinance codified in this chapter shall be recorded with the clerk recorder of the county.

All persons purchasing lots within the boundaries of this approved map should be prepared to accept the inconveniences associated with agricultural operations, such as noise, odors, flies, dust or fumes. Stanislaus County has determined that such inconveniences shall not be considered to be a nuisance if agricultural operations are consistent with accepted customs and standards.

F. The "right-to-farm notice" shall contain, and be substantially in the form of, the following:

Stanislaus County Right-to-Farm Notice

The County of Stanislaus recognizes and supports the right to farm agricultural lands in a manner consistent with accepted customs and standards. Residents of property on or near agricultural land should be prepared to accept the inconveniences or discomforts associated with agricultural operations, including but not limited to noise, odors, flies, dust, the operation of machinery of any kind during any 24-hour period (including aircraft), the storage and disposal of manure, and the application by spraying or otherwise of chemical fertilizers, soil amendments, herbicides and pesticides. Stanislaus County has determined that inconveniences or discomforts associated with such agricultural operations shall not be considered to be a nuisance if such operations are consistent with accepted customs and standards.

In light of Code Section 10.46.080, which exempts agricultural uses from the provisions of the Noise Ordinance (including the exterior noise standards), and the County's Right-to-Farm Ordinance, it remains BAC's opinion that the Masroc Farms seasonal hulling and shelling operations would be exempt from the numeric noise standards. Following the submittal of the April 2020 noise which presented the exemption and right-to-farm ordinance provisions cited above, County Planning Department Staff determined that the exemption and Right-to-Farm Ordinance cited above are not applicable to the Masroc Farms operation. As a result, this analysis addresses compliance with the County's noise standards shown in Tables 1 and 2.

Masroc Farms Noise Survey Methodology and Results

To quantify the ambient noise environment at the two nearest residences within the Masroc Farms facility vicinity, BAC conducted a long-term (24-hour) noise level measurements at the locations identified on Figure 1 from December 22-23, 2019. In addition to the long-term noise surveys, short-term (1-minute) noise level measurements were conducted at the locations identified on Figure 1 on December 21, 2019. The short-term noise level survey locations are identified as sites ST-1 through ST-7 on Figure 1. Photographs of the noise level survey locations are provided in Appendix B.

Larson-Davis Laboratories (LDL) Model 820 precision integrating sound level meters were used to complete the August 2021 noise level measurement surveys. The meters were calibrated immediately before and after use with an LDL Model CAL200 acoustical calibrator to ensure the

accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

The detailed results of the ambient noise level survey are contained in Appendix C in tabular format and graphically in Appendix D.

Analysis of Noise Measurement Results

Inspection of the Appendix D data indicated that the Masroc facility was in continuous operation during the noise survey period with the exception of Sunday, August 29th at 7am to Monday, August 30th, 2021. During the periods when the facility were in operation, the measured daytime noise levels attributable to the facility were in compliance with the County's 50 dB L_{50} and 70 dB L_{max} daytime noise standards at the nearest residences. In addition, the measured maximum noise levels generated by the facility were determined to be in compliance with the County's 65 dB L_{max} nighttime standard at those residences. However, the measured nighttime median noise levels generated by the facility were found to exceed the County's 45 dB L_{50} nighttime noise standard at the nearest residence to the south.

As mentioned previously, the facility operator has implemented several noise control measures at this facility, including the replacement of wood bearings with greaseable bearings, the use of almond crates to create sound barriers along substantial portions of the southern, western and northern site boundaries, replacement of 4 noisy motors on the roof of the operations building, installation of rubber surfaces at nut drop points (the nuts previously fell on metal hoppers), and installation bag house fan exhaust silencers.

By comparing the current noise measurement results to the 2019 measurement results, BAC determined that these noise control measures resulted in a 5 dB decrease in noise levels at the nearest residence to the north and a 10 dB decrease in noise levels at the nearest residences to the south. However, BAC is unable identify additional feasible noise mitigation measures which could be implemented to further reduce facility noise levels to a state of compliance with the County's 45 dB L_{50} nighttime noise level standard at the residence to the south. As a result, unless a variance can be obtained to allow the current operations to continue to occur during nighttime hours despite exceeding the County Noise Ordinance standard by 5 dB at the nearest residences to the south, then operations at this facility would be required to be limited to daytime hours of 7 am – 10 pm.

Conclusions and Recommendations

Based on ambient noise level measurements conducted by BAC, Masroc Farms facility hulling and shelling operations noise exposure exceeded Stanislaus County Noise Ordinance nighttime noise level limits at the nearest residential use to the south of the facility.

At this time, BAC is unable identify additional feasible noise mitigation measures which could be implemented to further reduce facility noise levels to a state of compliance with the County's 45 dB L_{50} nighttime noise level standard at the residence to the south. As a result, unless a variance can be obtained to allow the current operations to continue to occur during nighttime hours despite exceeding the County Noise Ordinance standard by 5 dB at the nearest residences to the south, then operations at this facility would be required to be limited to daytime hours of 7 am – 10 pm.

This concludes BAC's environmental noise analysis update of Masroc Farms facility hulling and shelling operations in Modesto (Stanislaus County), California. Please contact BAC at (530) 537-2328 or paulb@bacnoise.com with any questions regarding this assessment.

Appendix A

Acoustical Terminology

Acoustics The science of sound.

Ambient Noise The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.

Attenuation The reduction of an acoustic signal.

A-Weighting A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.

Decibel or dB Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.

CNEL Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.

Frequency The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.

Ldn Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.

Leq Equivalent or energy-averaged sound level.

Lmax The highest root-mean-square (RMS) sound level measured over a given period of time.

Loudness A subjective term for the sensation of the magnitude of sound.

Masking The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.

Noise Unwanted sound.

Peak Noise The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the Maximum level, which is the highest RMS level.

RT_{60} The time it takes reverberant sound to decay by 60 dB once the source has been removed.

Sabin The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.

SEL A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy of the event into a 1-s time period.

Threshold of Hearing The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.

Threshold of Pain Approximately 120 dB above the threshold of hearing.

Legend

A: LT-1
B: LT-2

Masroc Farms
Hulling & Shelling Operations
Stanislaus County, California

Photographs of Noise Survey Locations

Appendix B

BOLLARD Acoustical Consultants

Appendix C-1
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 1
Friday, August 27, 2021

Hour	Leq	Lmax	L50	L90
12:00 AM				
1:00 AM				
2:00 AM				
3:00 AM				
4:00 AM				
5:00 AM				
6:00 AM				
7:00 AM				
8:00 AM				
9:00 AM				
10:00 AM				
11:00 AM				
12:00 PM				
1:00 PM				
2:00 PM	47	60	45	44
3:00 PM	47	65	45	44
4:00 PM	46	60	46	44
5:00 PM	48	65	46	45
6:00 PM	47	57	46	45
7:00 PM	48	62	48	47
8:00 PM	49	56	48	47
9:00 PM	49	53	49	47
10:00 PM	49	56	48	47
11:00 PM	49	53	49	48

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	49	46	45	49	49	42
Lmax (Maximum)	65	53	60	56	53	55
L50 (Median)	49	45	47	49	48	48
L90 (Background)	47	44	45	48	47	47

Computed DNL, dB	49
% Daytime Energy	75%
% Nighttime Energy	25%

GPS Coordinates	37°38'53.18"N
	120°49'43.86"W

BOLLARD
Acoustical Consultants

Appendix C-2
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 1
Saturday, August 28, 2021

Hour	Leq	Lmax	L50	L90
12:00 AM	49	54	48	47
1:00 AM	47	52	47	46
2:00 AM	47	52	47	46
3:00 AM	48	51	48	47
4:00 AM	48	51	48	47
5:00 AM	48	51	48	47
6:00 AM	48	56	48	47
7:00 AM	50	62	49	48
8:00 AM	49	57	49	47
9:00 AM	48	60	48	46
10:00 AM	49	61	47	46
11:00 AM	46	54	46	45
12:00 PM	46	55	45	44
1:00 PM	47	60	46	44
2:00 PM	48	64	46	45
3:00 PM	47	58	46	44
4:00 PM	51	66	48	46
5:00 PM	49	62	47	45
6:00 PM	50	65	48	46
7:00 PM	49	63	48	46
8:00 PM	48	51	48	47
9:00 PM	48	55	48	47
10:00 PM	48	55	48	47
11:00 PM	47	51	47	46

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	51	46	48	49	47	48
Lmax (Maximum)	66	51	59	56	51	53
L50 (Median)	49	45	47	48	47	48
L90 (Background)	48	44	46	47	46	47

Computed DNL, dB	54
% Daytime Energy	65%
% Nighttime Energy	35%

GPS Coordinates	37°38'53.18"N
	120°49'43.86"W

BOLLARD
Acoustical Consultants

Appendix C-3
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 1
Sunday, August 29, 2021

Hour	Leq	Lmax	L50	L90
12:00 AM	47	57	47	46
1:00 AM	47	54	47	46
2:00 AM	47	51	47	46
3:00 AM	48	53	48	47
4:00 AM	48	53	48	47
5:00 AM	48	56	48	47
6:00 AM	48	54	48	46
7:00 AM	42	54	41	38
8:00 AM	51	76	41	39
9:00 AM	44	68	39	37
10:00 AM	47	65	37	35
11:00 AM	38	55	34	31
12:00 PM	40	62	35	32
1:00 PM	40	56	35	32
2:00 PM	42	60	40	31
3:00 PM	41	51	41	32
4:00 PM	40	52	41	33
5:00 PM	40	55	40	34
6:00 PM	42	63	41	36
7:00 PM	40	56	40	36
8:00 PM	40	49	40	36
9:00 PM	40	50	39	35
10:00 PM	40	52	40	36
11:00 PM	38	51	37	33

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	51	38	44	48	38	47
Lmax (Maximum)	76	49	58	57	51	53
L50 (Median)	41	34	39	48	37	46
L90 (Background)	39	31	34	47	33	44

Computed DNL, dB	53
% Daytime Energy	44%
% Nighttime Energy	56%

GPS Coordinates	37°38'53.18"N
	120°49'43.86"W

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Appendix C-4
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 1
Monday, August 30, 2021

Hour	Leq	Lmax	L50	L90
12:00 AM	37	48	35	33
1:00 AM	35	43	34	32
2:00 AM	35	45	34	33
3:00 AM	36	46	34	33
4:00 AM	37	49	35	34
5:00 AM	39	51	39	36
6:00 AM	49	60	49	46
7:00 AM	Anomalous Data			
8:00 AM				
9:00 AM	50	63	49	47
10:00 AM	50	69	48	46
11:00 AM	50	68	47	46
12:00 PM	48	62	46	45
1:00 PM	50	68	47	45
2:00 PM	49	67	47	45
3:00 PM	48	60	47	45
4:00 PM	51	68	48	46
5:00 PM	51	67	47	45
6:00 PM	48	63	47	45
7:00 PM	48	51	48	46
8:00 PM	47	53	47	46
9:00 PM	47	50	46	45
10:00 PM	47	53	47	45
11:00 PM	48	57	47	46

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	51	47	49	49	35	44
Lmax (Maximum)	69	50	62	60	43	50
L50 (Median)	49	46	47	49	34	39
L90 (Background)	47	45	46	46	32	38

Computed DNL, dB	51
% Daytime Energy	84%
% Nighttime Energy	16%

GPS Coordinates	37°38'53.18"N
	120°49'43.86"W

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Appendix C-5
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 1
Tuesday, August 31, 2021

Hour	Leq	Lmax	L50	L90
12:00 AM	48	52	48	47
1:00 AM	49	56	49	47
2:00 AM	49	52	49	47
3:00 AM	49	53	49	48
4:00 AM	47	51	47	46
5:00 AM	48	51	48	47
6:00 AM	51	61	50	48
7:00 AM	55	64	55	48
8:00 AM	51	65	49	47
9:00 AM	50	64	48	46
10:00 AM	50	63	47	45
11:00 AM	49	62	47	45
12:00 PM	48	59	46	44
1:00 PM	49	66	46	44
2:00 PM	51	64	47	45
3:00 PM	54	63	47	44
4:00 PM				
5:00 PM				
6:00 PM				
7:00 PM				
8:00 PM				
9:00 PM				
10:00 PM				
11:00 PM				

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	55	48	49	51	47	48
Lmax (Maximum)	66	59	63	61	51	54
L50 (Median)	55	46	48	50	47	48
L90 (Background)	48	44	46	48	46	47

Computed DNL, dB	54
% Daytime Energy	69%
% Nighttime Energy	31%

GPS Coordinates	37°38'53.18"N
	120°49'43.86"W

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Appendix C-6
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 2
Friday, August 27, 2021

Hour	Leq	Lmax	L50	L90
12:00 AM				
1:00 AM				
2:00 AM				
3:00 AM				
4:00 AM				
5:00 AM				
6:00 AM				
7:00 AM				
8:00 AM				
9:00 AM				
10:00 AM				
11:00 AM				
12:00 PM				
1:00 PM				
2:00 PM	51	69	50	49
3:00 PM	51	70	50	49
4:00 PM	51	71	50	49
5:00 PM	50	60	49	48
6:00 PM	50	62	50	49
7:00 PM	51	56	51	50
8:00 PM	51	57	51	50
9:00 PM	52	58	52	51
10:00 PM	52	62	52	51
11:00 PM	52	56	52	51

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	52	50	48	52	52	45
Lmax (Maximum)	71	56	63	62	56	59
L50 (Median)	52	49	50	52	52	52
L90 (Background)	51	48	49	51	51	51

Computed DNL, dB	52
% Daytime Energy	76%
% Nighttime Energy	24%

GPS Coordinates	37°38'45.81"N
	120°49'42.49"W

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Appendix C-7
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 2
Saturday, August 28, 2021

Hour	Leq	Lmax	L50	L90
12:00 AM	52	55	52	50
1:00 AM	52	59	52	51
2:00 AM	51	58	51	50
3:00 AM	51	54	51	50
4:00 AM	51	61	51	50
5:00 AM	51	58	51	50
6:00 AM	51	61	51	50
7:00 AM	52	59	51	50
8:00 AM	51	56	51	50
9:00 AM	50	62	50	49
10:00 AM	51	62	50	49
11:00 AM	52	75	50	48
12:00 PM	53	62	50	49
1:00 PM	50	62	50	49
2:00 PM	50	59	50	49
3:00 PM	50	62	50	49
4:00 PM	51	66	50	49
5:00 PM	51	60	51	50
6:00 PM	51	60	51	50
7:00 PM	52	60	52	51
8:00 PM	52	59	52	51
9:00 PM	53	62	53	52
10:00 PM	52	63	52	51
11:00 PM	51	62	51	51

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	53	50	51	52	51	51
Lmax (Maximum)	75	56	62	63	54	59
L50 (Median)	53	50	51	52	51	51
L90 (Background)	52	48	50	51	50	50

Computed DNL, dB	58
% Daytime Energy	62%
% Nighttime Energy	38%

GPS Coordinates	37°38'45.81"N
	120°49'42.49"W

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Appendix C-8
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 2
Sunday, August 29, 2021

Hour	Leq	Lmax	L50	L90
12:00 AM	51	55	51	50
1:00 AM	52	64	52	51
2:00 AM	52	64	52	51
3:00 AM	53	58	53	52
4:00 AM	52	66	52	51
5:00 AM	52	55	52	51
6:00 AM	53	68	53	51
7:00 AM	44	67	40	38
8:00 AM	44	61	40	37
9:00 AM	46	69	39	36
10:00 AM	47	70	36	33
11:00 AM	48	75	39	33
12:00 PM	40	58	35	32
1:00 PM	52	80	38	32
2:00 PM	48	69	35	32
3:00 PM	45	60	40	33
4:00 PM	43	57	39	34
5:00 PM	41	62	36	34
6:00 PM	41	60	37	35
7:00 PM	40	58	37	35
8:00 PM	38	50	38	37
9:00 PM	38	50	37	36
10:00 PM	39	53	38	37
11:00 PM	39	48	38	36

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	52	38	46	53	39	51
Lmax (Maximum)	80	50	63	68	48	59
L50 (Median)	40	35	38	53	38	49
L90 (Background)	38	32	35	52	36	48

Computed DNL, dB	57
% Daytime Energy	31%
% Nighttime Energy	69%

GPS Coordinates	37°38'45.81"N
	120°49'42.49"W

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Appendix C-9
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 2
Monday, August 30, 2021

Hour	Leq	Lmax	L50	L90
12:00 AM	38	47	37	36
1:00 AM	36	42	36	35
2:00 AM	36	44	36	34
3:00 AM	35	46	35	34
4:00 AM	37	49	36	35
5:00 AM	40	50	39	37
6:00 AM	52	61	52	46
7:00 AM	53	61	53	52
8:00 AM	52	60	52	51
9:00 AM	52	58	51	50
10:00 AM	51	60	51	50
11:00 AM	51	57	50	49
12:00 PM	51	58	50	49
1:00 PM	51	58	51	50
2:00 PM	51	61	51	49
3:00 PM	52	57	51	50
4:00 PM	52	65	51	50
5:00 PM	52	66	51	50
6:00 PM	51	61	51	50
7:00 PM	52	59	51	50
8:00 PM	52	58	52	51
9:00 PM	52	57	52	51
10:00 PM	51	55	51	50
11:00 PM	52	61	52	51

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	53	51	51	52	35	47
Lmax (Maximum)	66	57	60	61	42	50
L50 (Median)	53	50	51	52	35	42
L90 (Background)	52	49	50	51	34	40

Computed DNL, dB	55
% Daytime Energy	82%
% Nighttime Energy	18%

GPS Coordinates	37°38'45.81"N
	120°49'42.49"W

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Appendix C-10
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 2
Tuesday, August 31, 2021

Hour	Leq	Lmax	L50	L90
12:00 AM	52	67	52	51
1:00 AM	52	61	52	50
2:00 AM	53	55	53	51
3:00 AM	53	59	53	52
4:00 AM	51	53	51	50
5:00 AM	52	55	52	51
6:00 AM	53	64	53	52
7:00 AM	53	71	53	52
8:00 AM	52	67	52	51
9:00 AM	52	58	52	51
10:00 AM	51	62	51	50
11:00 AM	51	60	51	50
12:00 PM	51	59	51	50
1:00 PM	52	64	51	50
2:00 PM	51	66	51	49
3:00 PM	53	74	51	50
4:00 PM				
5:00 PM				
6:00 PM				
7:00 PM				
8:00 PM				
9:00 PM				
10:00 PM				
11:00 PM				

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	53	51	50	53	51	51
Lmax (Maximum)	74	58	65	67	53	59
L50 (Median)	53	51	51	53	51	52
L90 (Background)	52	49	50	52	50	51

Computed DNL, dB	57
% Daytime Energy	55%
% Nighttime Energy	45%

GPS Coordinates	37°38'45.81"N
	120°49'42.49"W

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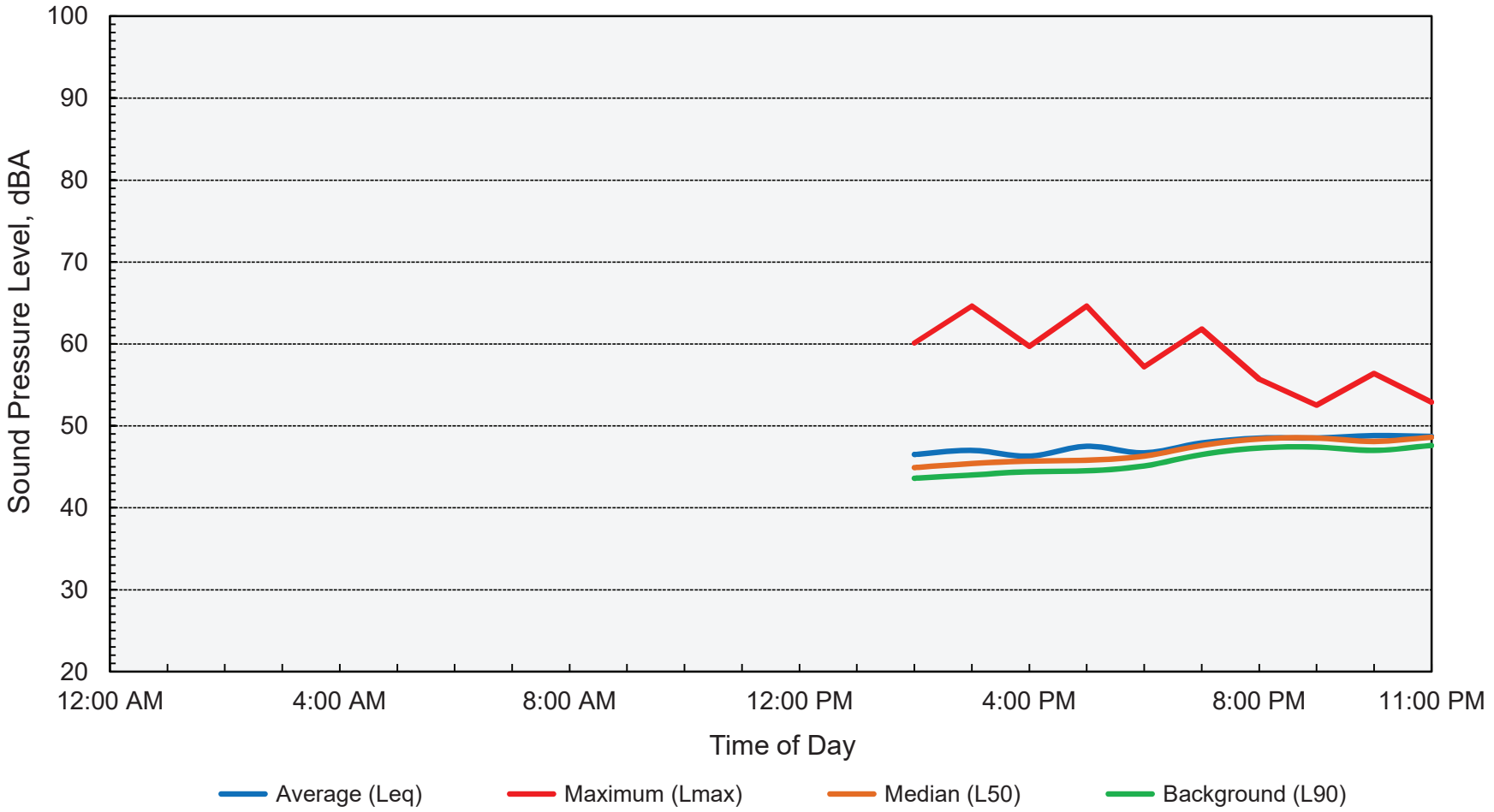
Appendix D-1
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 1
Friday, August 27, 2021



Computed DNL = 49 dB

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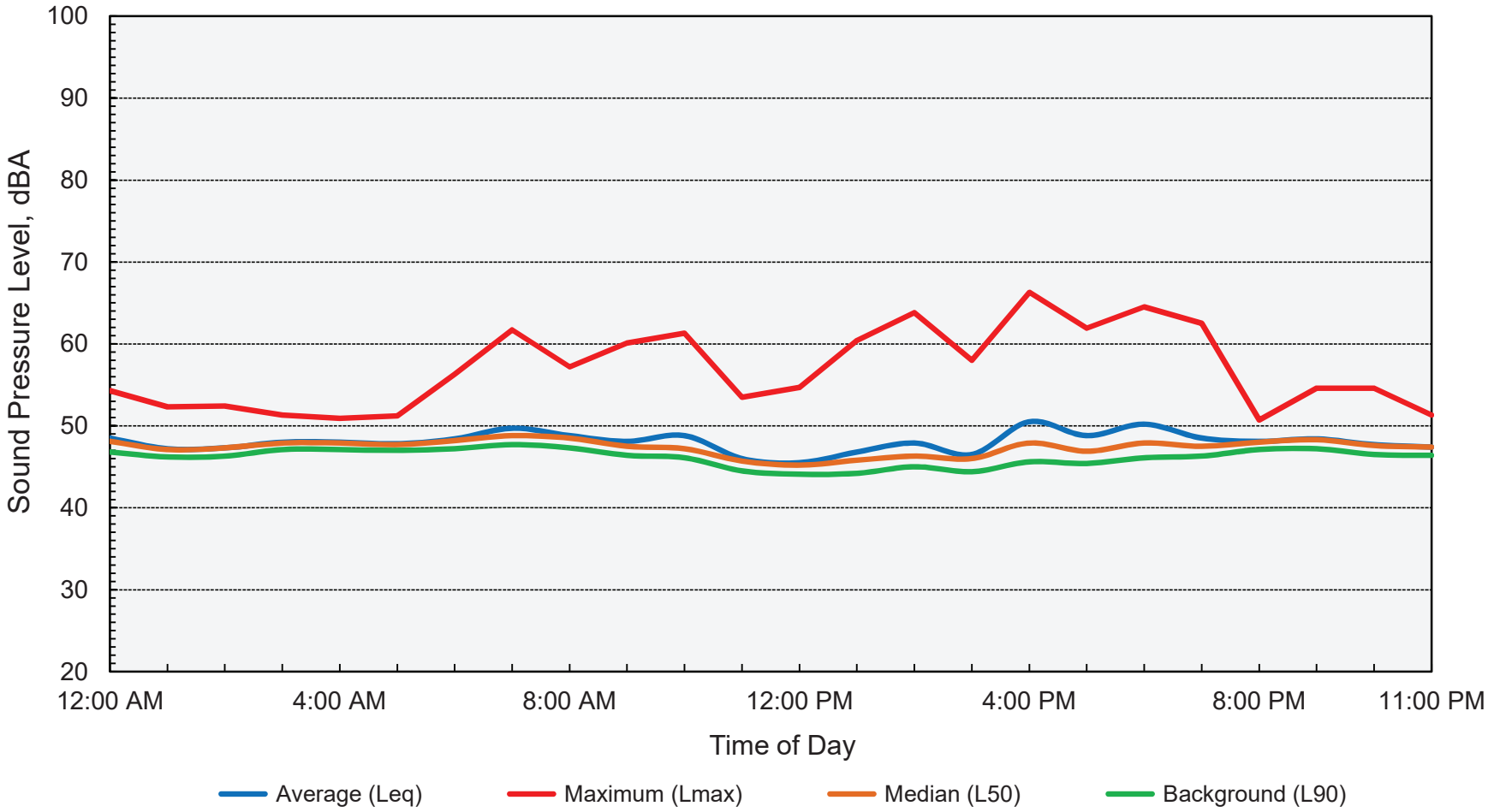
Appendix D-2
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 1
Saturday, August 28, 2021



Computed DNL = 54 dB

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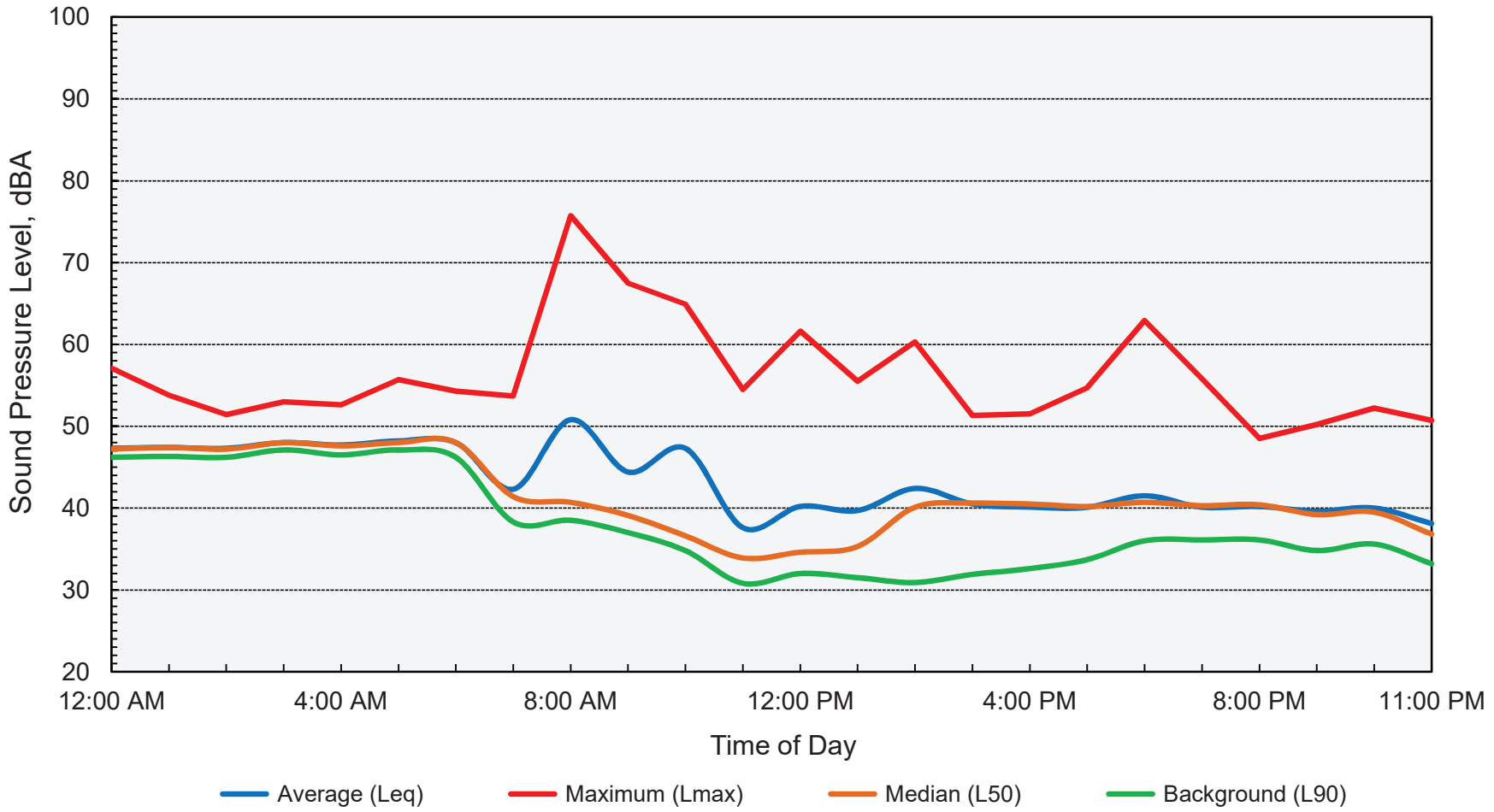
Appendix D-3
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 1
Sunday, August 29, 2021



Computed DNL = 53 dB

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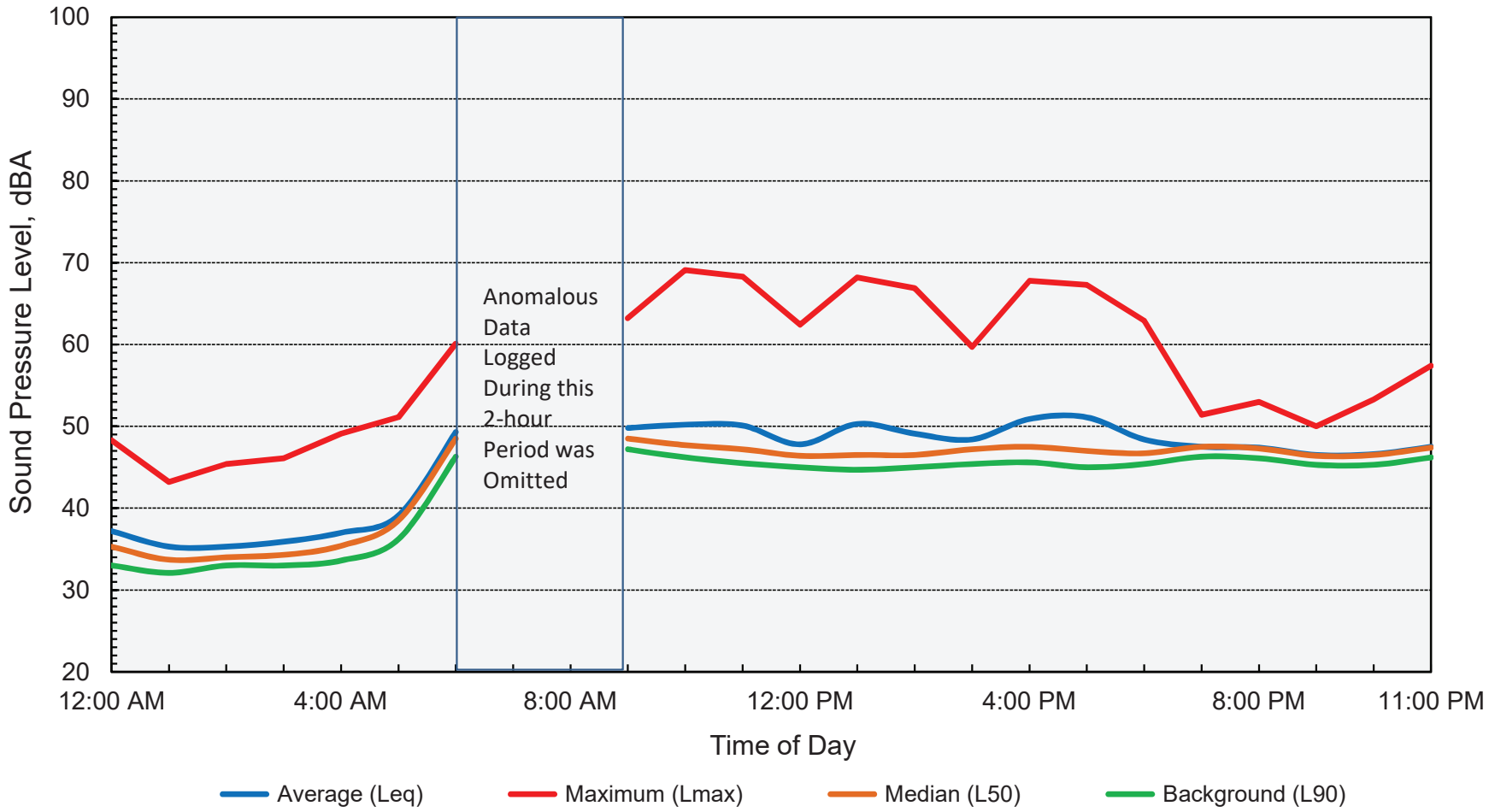
Appendix D-4
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 1
Monday, August 30, 2021



Computed DNL = 51 dB

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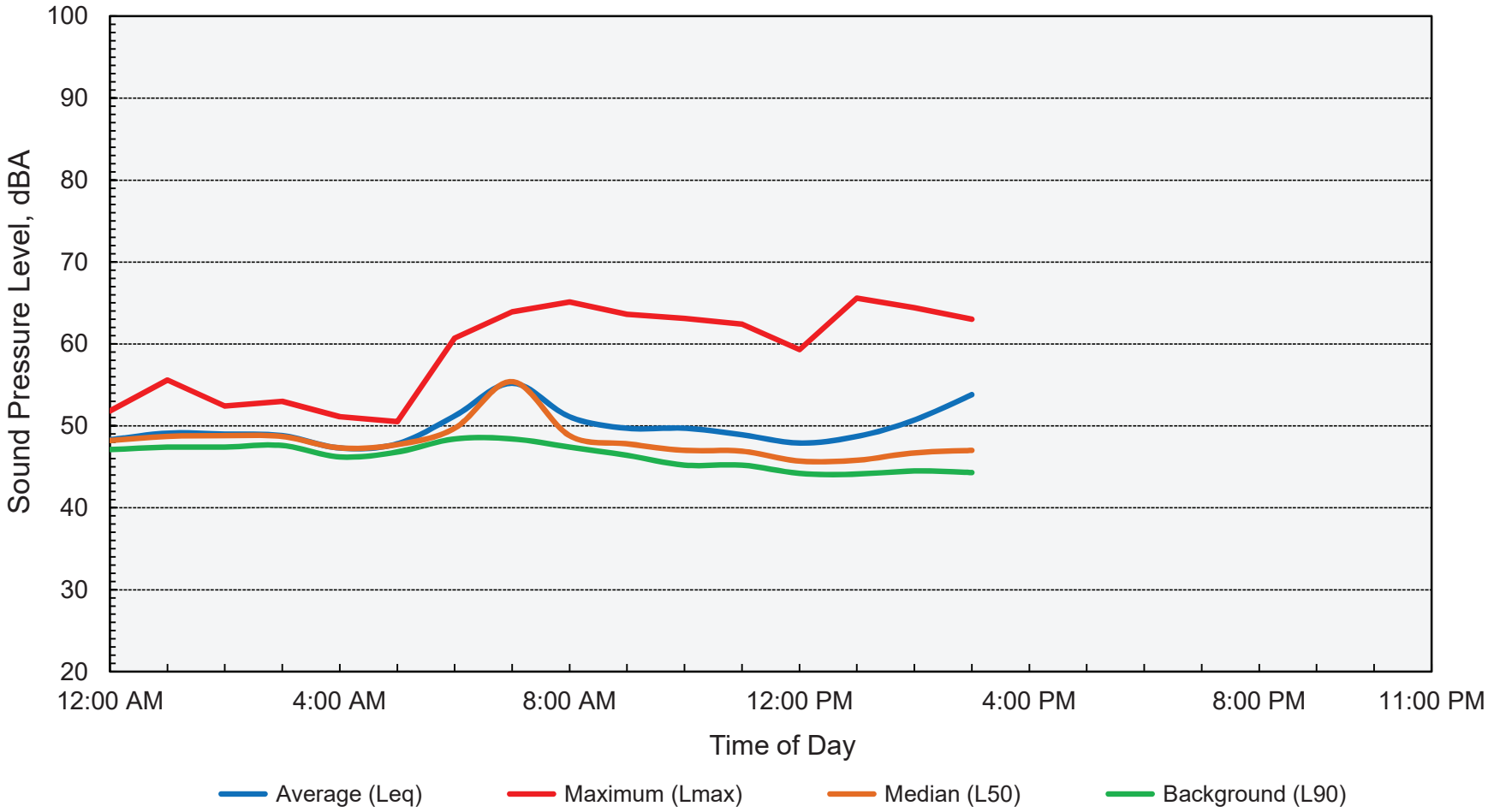
Appendix D-5
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 1
Tuesday, August 31, 2021



Computed DNL = 54 dB

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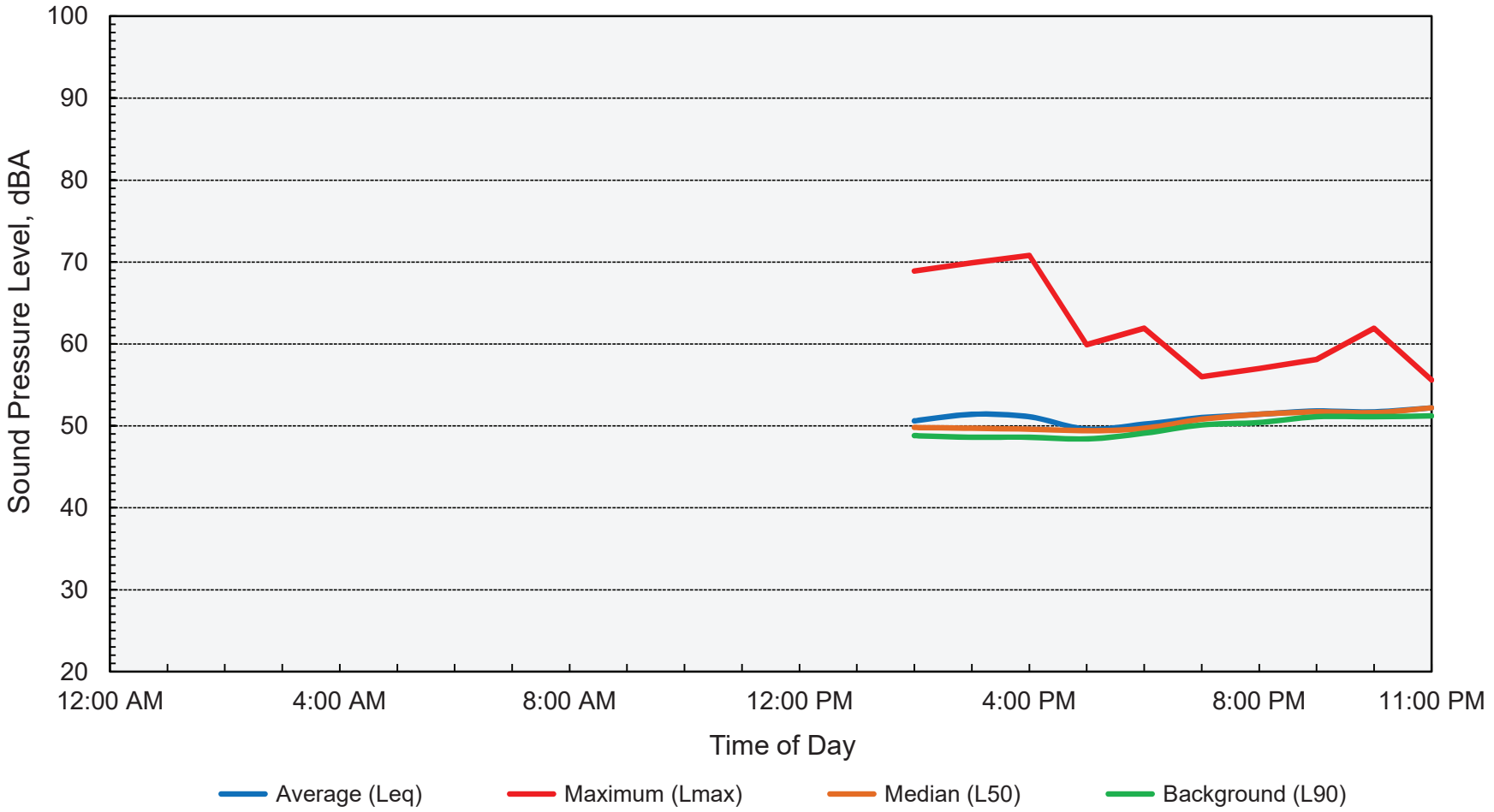
Appendix D-6
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 2
Friday, August 27, 2021



Computed DNL = 52 dB

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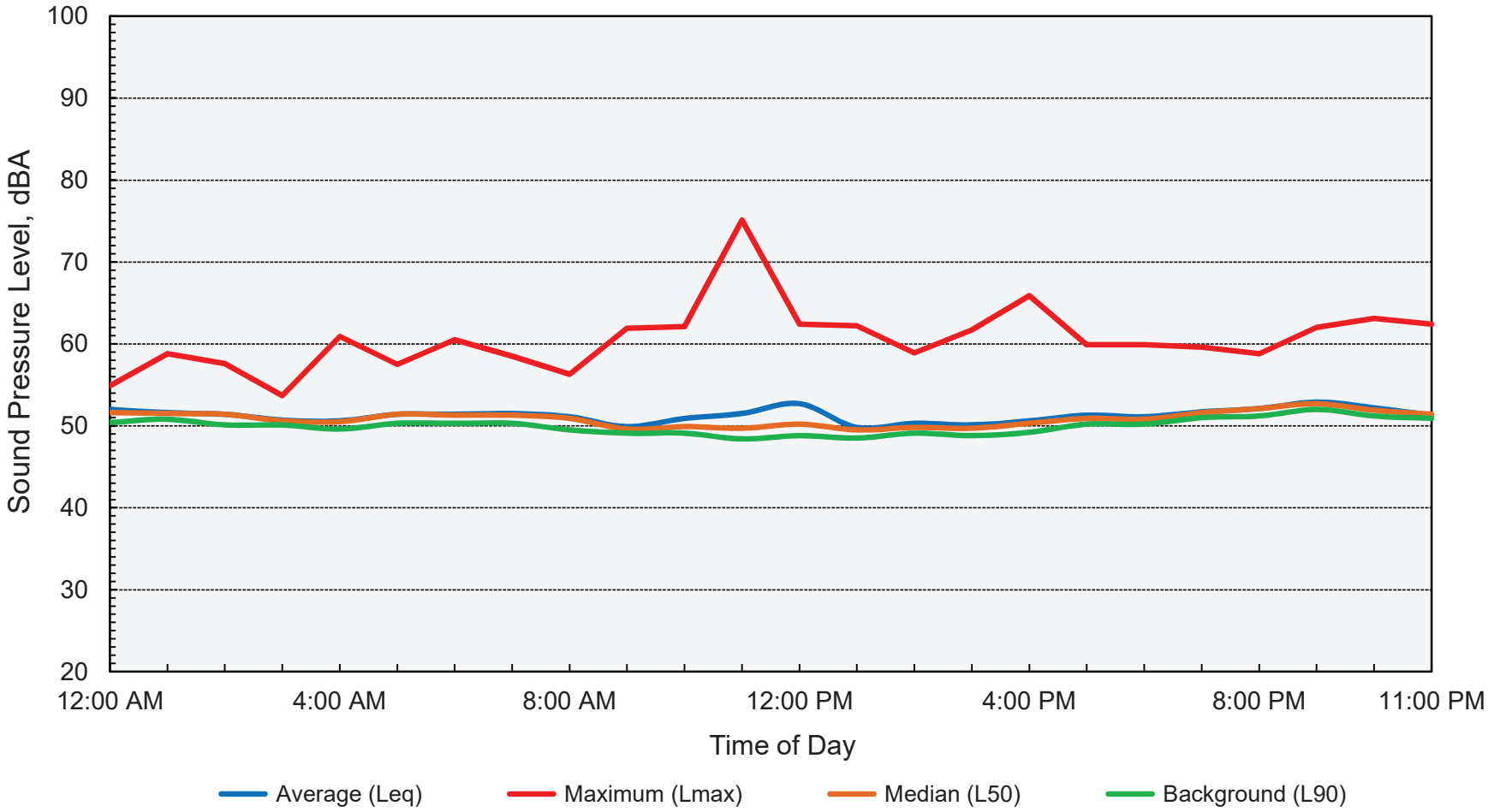
Appendix D-7
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 2
Saturday, August 28, 2021



Computed DNL = 58 dB

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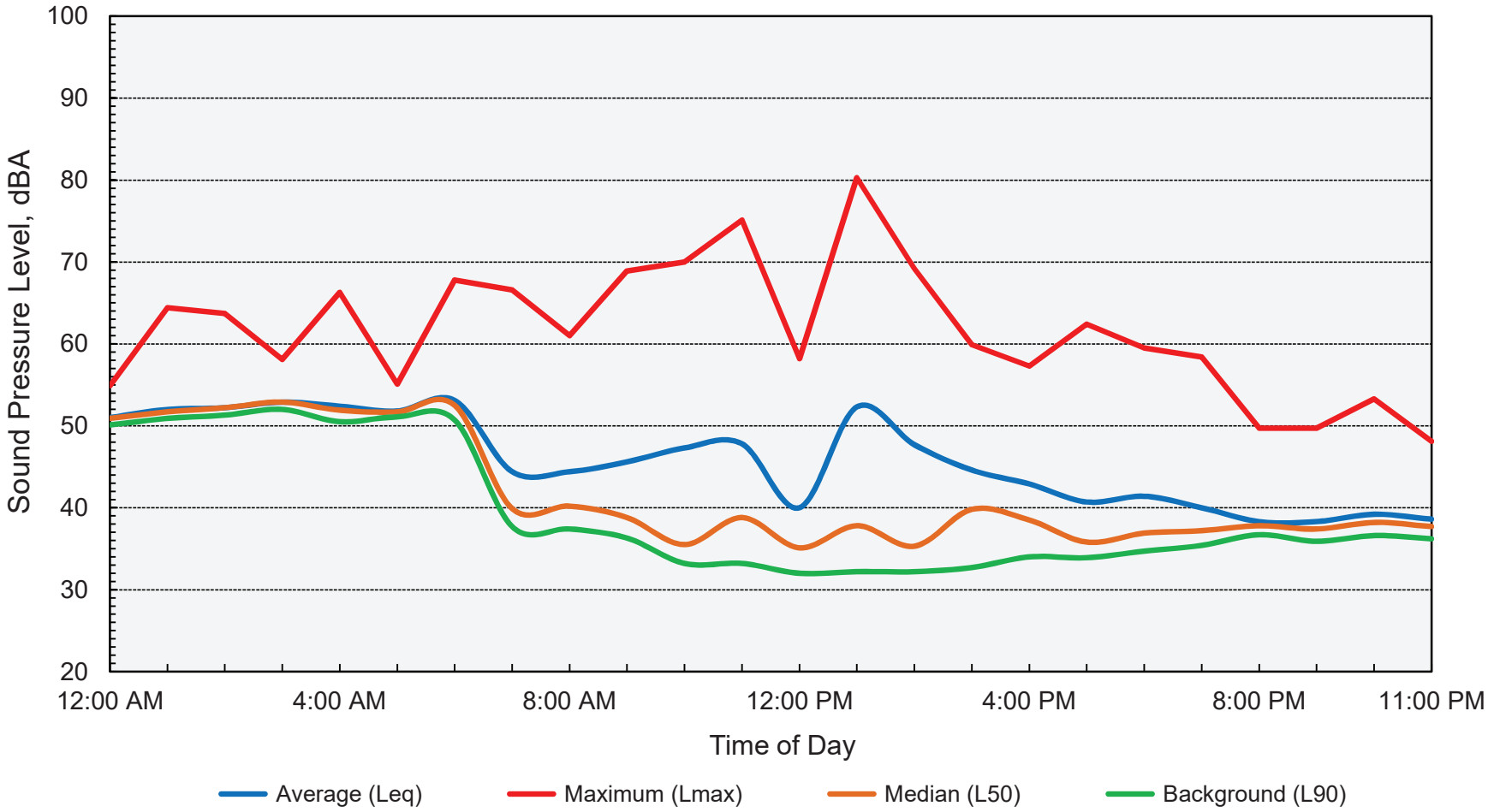
Appendix D-8
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 2
Sunday, August 29, 2021



Computed DNL = 57 dB

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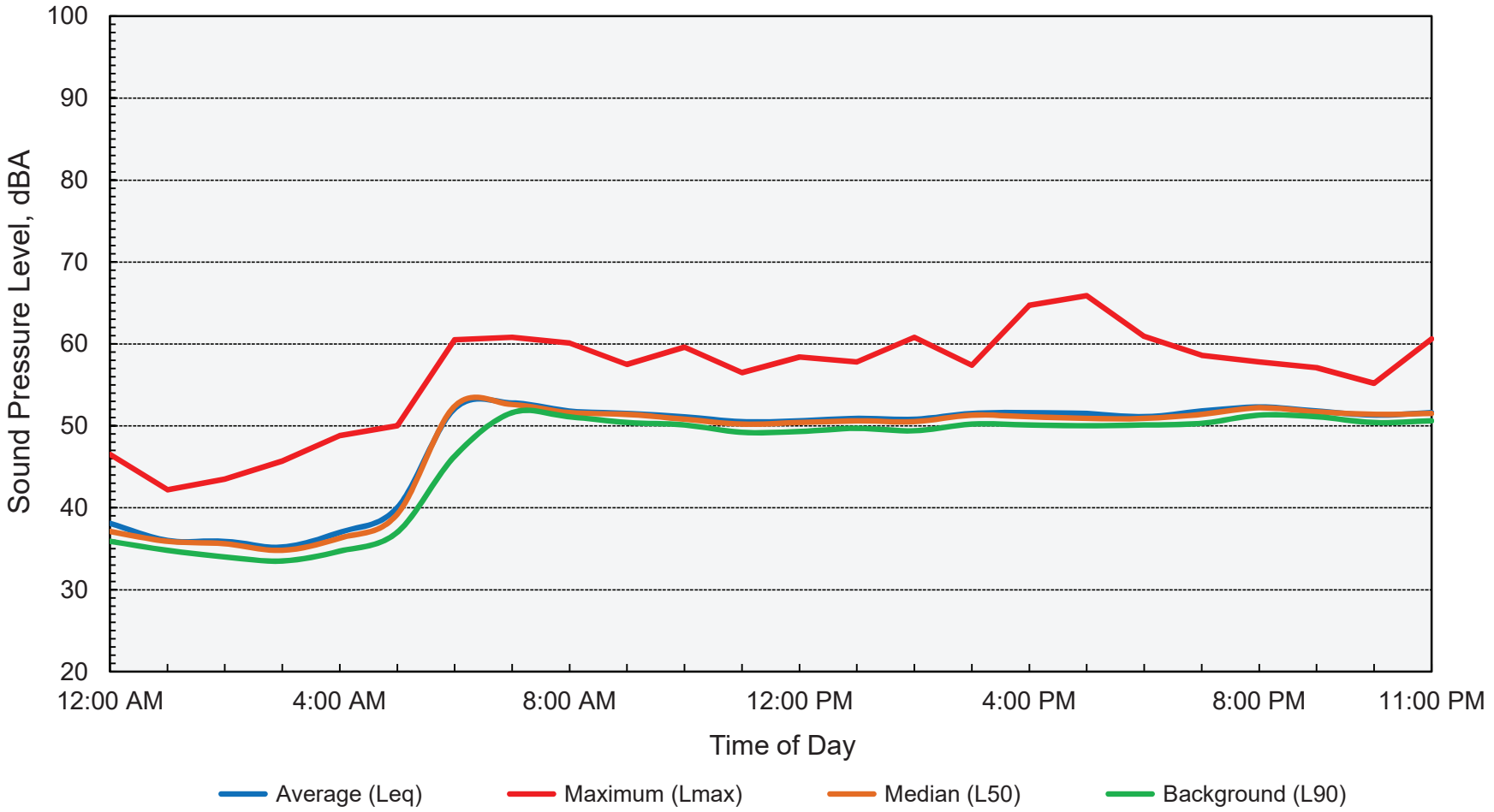
Appendix D-9
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 2
Monday, August 30, 2021



Computed DNL = 55 dB

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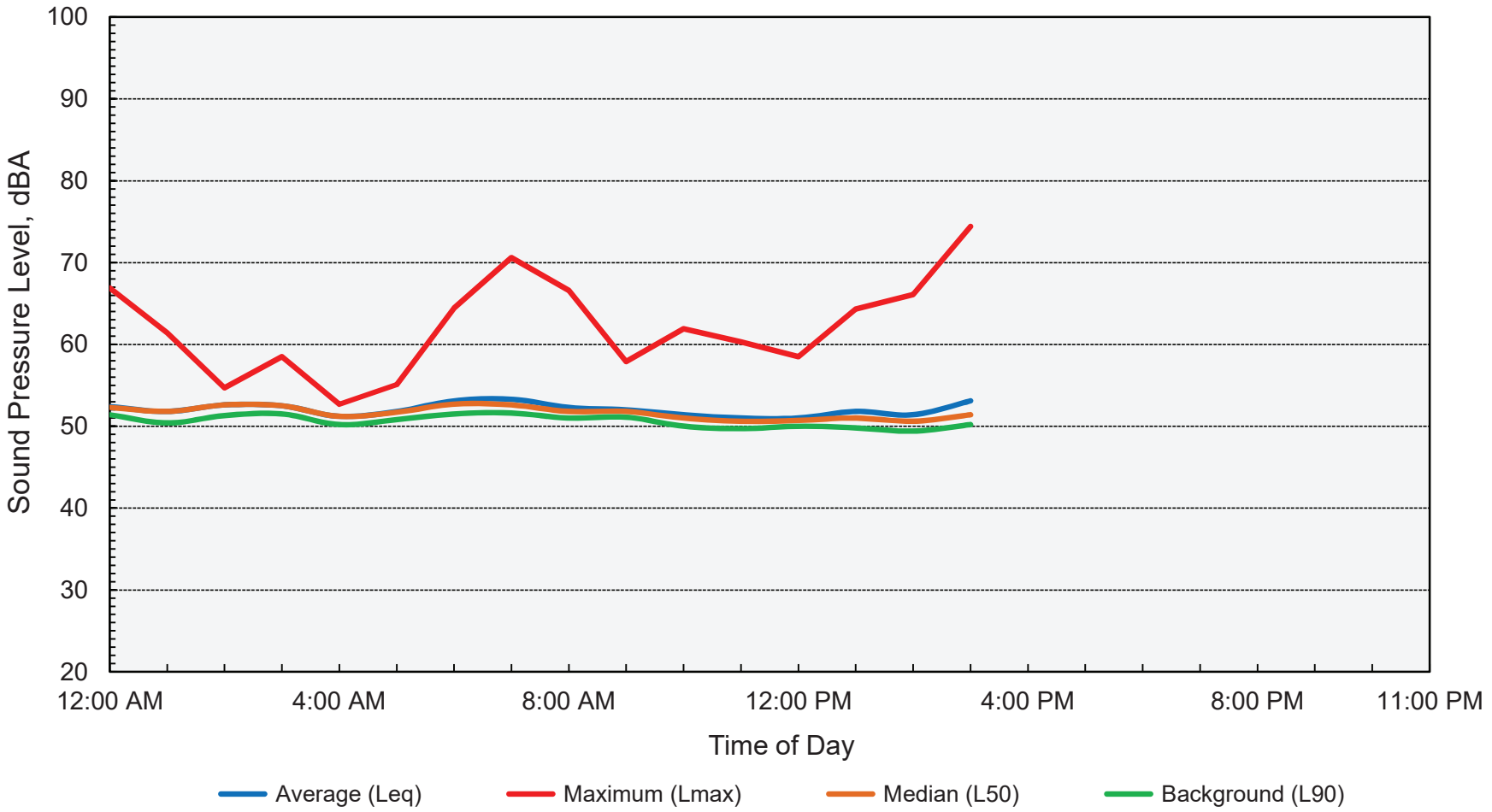
Appendix D-10
Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California - Site 2
Tuesday, August 31, 2021



Computed DNL = 57 dB

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Environmental Noise Assessment Update

Masroc Farms Hulling and Shelling Operations

Modesto (Stanislaus County), California

BAC Job # 2019-256

Prepared For:

Masroc Farms

Attn: David Zwald
616 North Hopper Road
Modesto, CA 95357

Prepared By:

Bollard Acoustical Consultants, Inc.

[redacted]
Paul Bollard, President

October 25, 2024

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ATTACHMENT IV

Introduction and Project History

The Masroc Farms property is located at 616 North Hopper Road in Modesto (Stanislaus County), California (APN: 009-016-024 & 025). The property contains existing almond orchards and a hulling and shelling facility with associated processing buildings. Existing uses in the vicinity of the facility include agricultural with residences. The Masroc Farms facility and immediate surrounding area is shown on Figure 1.

Bollard Acoustical Consultants, Inc. (BAC) has conducted noise level measurements at the nearest residents to Masroc Farms at various times in recent years. Those survey results indicated that Masroc noise levels exceeded the applicable Stanislaus County Noise Ordinance standards at the neighboring properties.

Following the previous noise surveys, Masroc Farms implemented several noise mitigation measures during the non-operational (off-season) periods. Those measures included the replacement of wood bearings with greaseable bearings, the use of almond crates to create sound barriers along substantial portions of the site boundaries, replacement of 4 noisy motors on the roof of the operations building, installation of rubber surfaces at nut drop points (the nuts previously fell on metal hoppers), and installation bag house fan exhaust silencers.

During the most recent period (2024) between almond harvesting seasons, Masroc Farms utilized additional stacking of almond crates to serve as noise barriers, they installed plywood noise barriers at rooftop elevators, created an acoustic screen using rubber belts by the pre-cleaner, and constructed an acoustic enclosure around a loud motor on the auger line. In addition, Masroc plans to replace that louder motor during the next off-season with a quieter motor.

In September of 2024, BAC returned to Masroc Farms and conducted additional noise measurements at the nearest neighboring property to the south. This report contains the results of the September 2024 noise level measurements in addition to acoustical fundamentals and the County's noise standards.

Noise Fundamentals and Terminology

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are designated as sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second, or Hertz (Hz). Definitions of acoustical terminology are provided in Appendix A.

Legend

Long-Term Noise Measurement Location

N

Scale (feet)

0 50 100

Masroc Farms
Hulling & Shelling Operations
Stanislaus County, California

Site Vicinity & Noise Measurement Locations

Figure 1

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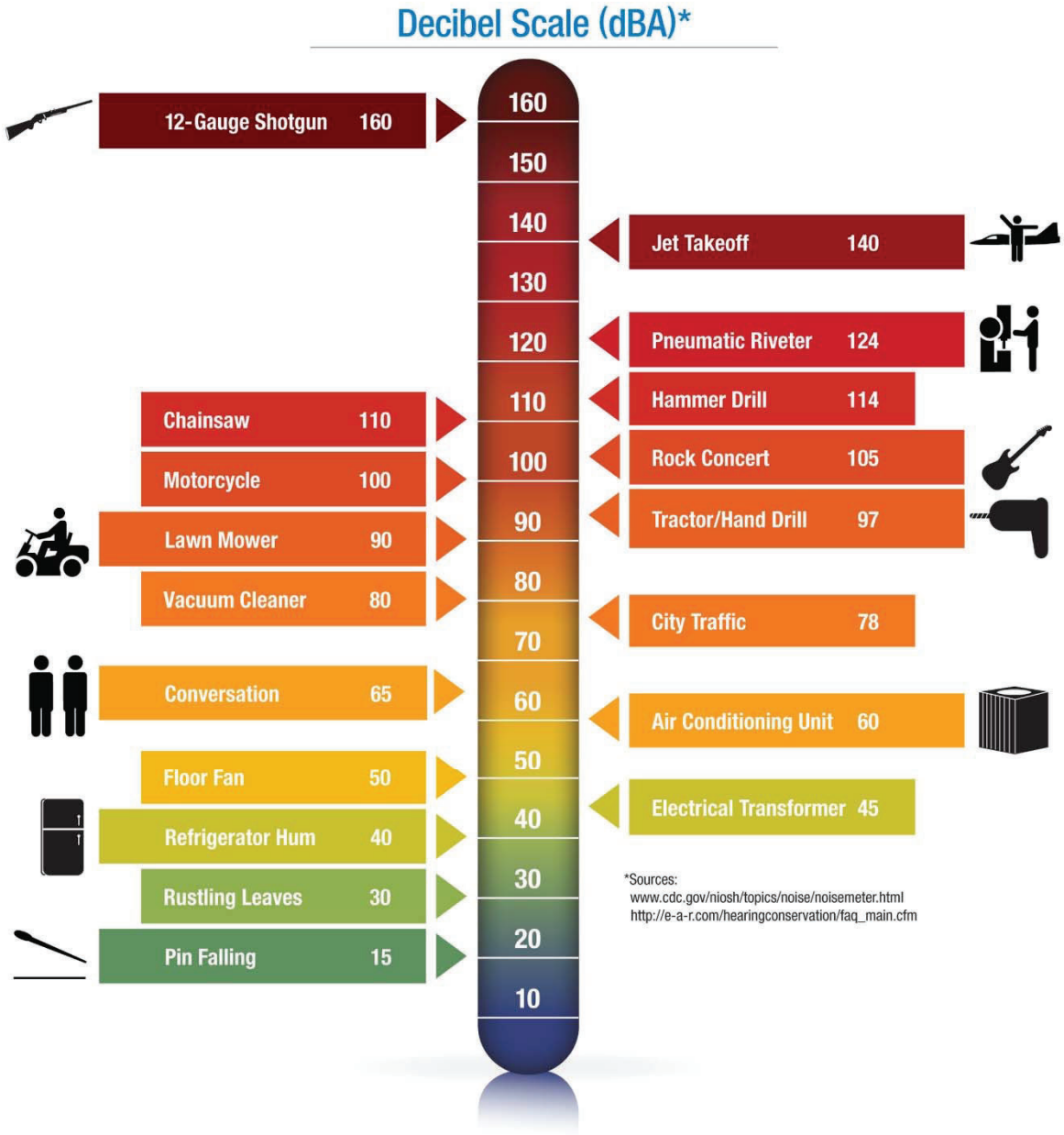
Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals of pressure) as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Noise levels associated with common noise sources are provided in Figure 2.

Figure 2
Noise Levels Associated with Common Noise Sources



The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by filtering the frequency response of a sound level meter by means of the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptors, day-night average level (L_{dn}) and the community noise equivalent level (CNEL) and shows very good correlation with community response to noise for the average person. The median noise level descriptor, denoted L_{50}, represents the noise level which is exceeded 50% of the hour. In other words, half of the hour ambient conditions are higher than the L_{50} and the other half are lower than the L_{50}.

Criteria for Acceptable Noise Exposure

Stanislaus County Noise Ordinance

Section 10.46 of the Stanislaus County Code contains the County's Noise Ordinance. The sections of the County's Noise Ordinance which would be applicable to this evaluation are reproduced below.

10.46.050 Exterior Noise Level Standards

A. It is unlawful for any person at any location within the unincorporated area of the county to create any noise or to allow the creation of any noise which causes the exterior noise level when measured at any property situated in either the incorporated or unincorporated area of the county to exceed the noise level standards as set forth below (in Table 1):

1. Unless otherwise provided herein, the following exterior noise level standards shall apply to all properties within the designated noise zone:

Table 1
Exterior Noise Level Standards

Designated Noise Zone	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Noise Sensitive	45	45
Residential	50	45
Commercial	60	55
Industrial	75	75

Source: Stanislaus County Code Section 10.46.050, Table A.

2. Exterior noise levels shall not exceed the following cumulative duration allowance standards (shown in Table 2):

Table 2
Cumulative Duration Allowance Standards

Cumulative Duration	Allowance Decibels
Equal to or greater than 30 minutes per hour	Table 1 plus 0 dB
Between 15 and 30 minutes per hour	Table 1 plus 5 dB
Between 5 and 15 minutes per hour	Table 1 plus 10 dB
Between 1 and 5 minutes per hour	Table 1 plus 15 dB
Less than 1 minute per hour	Table 1 plus 20 dB

Source: Stanislaus County Code Section 10.46.050, Table B.

3. Pure Tone Noise, Speech and Music. The exterior noise level standards set forth in Table A shall be reduced by five dB(A) for pure tone noises, noises consisting primarily of speech or music, or reoccurring impulsive noise.

4. In the event the measured ambient noise level exceeds the applicable noise level standard above, the ambient noise level shall become the applicable exterior noise level standard.

B. Noise Zones Defined.

1. Noise Sensitive. Any public or private school, hospital, church convalescent home, cemetery, sensitive wildlife habitat, or public library regardless of its location within any land use zoning district.

2. Residential. All parcels located within a residential land use zoning district.

3. Commercial. All parcels located within a commercial or highway frontage land use zoning district.

4. Industrial. All parcels located within an industrial land use zoning district.

5. The noise zone definition of any parcel not located within a residential, commercial, highway frontage, or industrial land use zoning district shall be determined by the director of Stanislaus County planning and community development department, or designee, based on the permitted uses of the land use zoning district in which the parcel is located. (Ord. CS 1070 §2, 2010).

This analysis addresses compliance with the County's noise standards shown in Tables 1 and 2.

Masroc Farms Noise Survey Methodology and Results

To quantify the ambient noise environment at the nearest residence to the south of the Masroc Farms facility, BAC conducted a long-term (72-consecutive hour) noise level measurements at the location identified on Figure 1 from September 3rd through 6th, 2024. Photographs of the noise level survey location and noise mitigation measures implemented by Masroc Farms are provided in Appendix B-1 and B-2, respectively.

A Larson-Davis Laboratories (LDL) Model 831 precision integrating sound level meter was used to complete the noise level measurements. The meter was calibrated immediately before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4). The detailed results of the ambient noise level survey are contained in Appendix C in tabular format and graphically in Appendix D.

Analysis of Noise Measurement Results

Inspection of the Appendix D data indicated that the Masroc facility was in continuous operation during the noise survey period. The measured daytime noise levels attributable to the facility were in compliance with the County's 50 dB L_{50} and 70 dB L_{max} daytime noise standards at the nearest residences. In addition, the measured maximum noise levels generated by the facility were determined to be in compliance with the County's 65 dB L_{max} nighttime standard at those residences.

Although the noise survey results indicate that measured median (L50) nighttime noise levels averaged 47 dBA at the noise survey location, which exceeds the 45 dBA L50 noise standard at the nearest residence to the south, it is important to note that those measured levels also included ambient background noise from sources unrelated to Masroc Farms (i.e. distant traffic, wind in trees, insects, etc.). Because the measured sound levels included ambient noise sources unrelated to Masroc Farms operations, and because the measured sound levels were within 2 dBA of the County's nighttime noise standard, this analysis concludes that noise generated by operations at the Masroc Farms facility in isolation, were effectively within compliance with the Stanislaus County daytime and nighttime noise level standards. This analysis also concludes that the noise mitigation measures implemented by Masroc Farms have led to a successful reduction in overall facility sound generation at existing residences in the immediate vicinity.

Conclusions and Recommendations

Based on ambient noise level measurements conducted by BAC, Masroc Farms facility hulling and shelling operations noise exposure is considered to be in compliance with the applicable Stanislaus County Noise Ordinance daytime and nighttime noise level limits at the nearest residential use to the south of the facility. This analysis also concludes that the noise mitigation measures implemented by Masroc Farms in recent years have been successful in steadily reducing the overall sound output of the facility at the existing residences in the vicinity of the facility.

This concludes BAC's September 2024 environmental noise analysis of Masroc Farms facility hulling and shelling operations in Modesto (Stanislaus County), California. Please contact BAC at (530) 537-2328 or paulb@bacnoise.com with any questions regarding this assessment.

Appendix A
Acoustical Terminology

Acoustics The science of sound.

Ambient Noise The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.

Attenuation The reduction of an acoustic signal.

A-Weighting A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.

Decibel or dB Fundamental unit of sound. A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.

CNEL Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.

Frequency The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.

IIC Impact Insulation Class (IIC): A single-number representation of a floor/ceiling partition's impact generated noise insulation performance. The field-measured version of this number is the FIIC.

L_{dn} Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.

L_{eq} Equivalent or energy-averaged sound level.

L_{max} The highest root-mean-square (RMS) sound level measured over a given period of time.

Loudness A subjective term for the sensation of the magnitude of sound.

Masking The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.

Noise Unwanted sound.

Peak Noise The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the "Maximum" level, which is the highest RMS level.

RT_{60} The time it takes reverberant sound to decay by 60 dB once the source has been removed.

STC Sound Transmission Class (STC): A single-number representation of a partition's noise insulation performance. This number is based on laboratory-measured, 16-band (1/3-octave) transmission loss (TL) data of the subject partition. The field-measured version of this number is the FSTC.

Legend

A: LT-1
B: LT-1

Masroc Farms
Hulling & Shelling Operations
Stanislaus County, California

Photographs of Noise Survey Location

Appendix B

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Legend

A: Almond boxes stacked as noise barrier
B: Localized rooftop equipment shielding
C: Almond boxes and suspended flaps as noise barriers
D: Almond boxes stacked as noise barrier

Masroc Farms
Hulling & Shelling Operations
Stanislaus County, California

Noise Attenuation Photos

Appendix B

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Appendix C-1
Long-Term Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California
Tuesday, September 3, 2024

Hour	Leq	Lmax	L50	L90
12:00 AM				
1:00 AM				
2:00 AM				
3:00 AM				
4:00 AM				
5:00 AM				
6:00 AM				
7:00 AM				
8:00 AM				
9:00 AM				
10:00 AM				
11:00 AM	49	70	48	47
12:00 PM	47	58	46	45
1:00 PM	46	53	46	45
2:00 PM	47	64	46	45
3:00 PM	47	53	47	45
4:00 PM	47	61	46	46
5:00 PM	48	60	47	46
6:00 PM	47	54	47	47
7:00 PM	46	50	46	46
8:00 PM	48	55	48	47
9:00 PM	49	52	49	48
10:00 PM	48	53	48	48
11:00 PM	48	52	48	47

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	49	46	47	48	48	48
Lmax (Maximum)	70	50	57	53	52	52
L50 (Median)	49	46	47	48	48	48
L90 (Background)	48	45	46	48	47	48

Computed DNL, dB	55
% Daytime Energy	58%
% Nighttime Energy	42%

GPS Coordinates
37°38'45.81"N
120°49'42.49"W

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Appendix C-2
Long-Term Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California
Wednesday, September 4, 2024

Hour	Leq	Lmax	L50	L90
12:00 AM	49	54	49	48
1:00 AM	48	53	48	47
2:00 AM	47	49	47	47
3:00 AM	47	52	47	47
4:00 AM	47	54	47	47
5:00 AM	48	54	48	47
6:00 AM	49	62	49	48
7:00 AM	51	65	50	49
8:00 AM	51	64	49	48
9:00 AM	50	64	49	48
10:00 AM	51	72	48	47
11:00 AM	48	63	48	46
12:00 PM	49	62	46	45
1:00 PM	56	67	54	46
2:00 PM	49	59	46	45
3:00 PM	46	62	45	45
4:00 PM	48	64	46	45
5:00 PM	47	65	46	45
6:00 PM	47	55	47	46
7:00 PM	48	58	47	47
8:00 PM	47	50	47	47
9:00 PM	48	53	47	47
10:00 PM	48	52	48	47
11:00 PM	47	49	47	46

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	56	46	50	49	47	48
Lmax (Maximum)	72	50	62	62	49	53
L50 (Median)	54	45	48	49	47	48
L90 (Background)	49	45	46	48	46	47

Computed DNL, dB	55
% Daytime Energy	73%
% Nighttime Energy	27%

GPS Coordinates
37°38'45.81"N
120°49'42.49"W

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Appendix C-3
Long-Term Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California
Thursday, September 5, 2024

Hour	Leq	Lmax	L50	L90
12:00 AM	47	49	47	46
1:00 AM	48	49	48	47
2:00 AM	48	56	48	47
3:00 AM	47	49	47	47
4:00 AM	47	49	47	47
5:00 AM	47	51	48	47
6:00 AM	48	58	48	48
7:00 AM	50	63	49	49
8:00 AM	52	70	49	48
9:00 AM	51	58	49	48
10:00 AM	50	62	48	47
11:00 AM	50	58	48	47
12:00 PM	49	59	47	46
1:00 PM	49	68	46	45
2:00 PM	48	58	46	45
3:00 PM	49	61	47	45
4:00 PM	47	53	47	46
5:00 PM	48	59	48	46
6:00 PM	48	54	48	47
7:00 PM	48	58	47	47
8:00 PM	47	54	47	47
9:00 PM	47	51	47	47
10:00 PM	47	49	47	47
11:00 PM	48	58	47	47

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	52	47	49	48	47	48
Lmax (Maximum)	70	51	59	58	49	52
L50 (Median)	49	46	48	48	47	47
L90 (Background)	49	45	47	48	46	47

Computed DNL, dB	54
% Daytime Energy	70%
% Nighttime Energy	30%

GPS Coordinates
37°38'45.81"N
120°49'42.49"W

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Appendix C-4
Long-Term Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California
Friday, September 6, 2024

Hour	Leq	Lmax	L50	L90
12:00 AM	48	51	48	47
1:00 AM	48	56	48	47
2:00 AM	45	51	44	43
3:00 AM	43	46	43	43
4:00 AM	43	51	43	43
5:00 AM	47	56	47	46
6:00 AM	50	65	49	47
7:00 AM	50	60	49	49
8:00 AM	49	57	49	48
9:00 AM	51	62	49	48
10:00 AM	48	55	48	47
11:00 AM	47	57	47	46
12:00 PM				
1:00 PM				
2:00 PM				
3:00 PM				
4:00 PM				
5:00 PM				
6:00 PM				
7:00 PM				
8:00 PM				
9:00 PM				
10:00 PM				
11:00 PM				

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	51	47	49	50	43	47
Lmax (Maximum)	62	55	58	65	46	54
L50 (Median)	49	47	48	49	43	46
L90 (Background)	49	46	47	47	43	45

Computed DNL, dB	54
% Daytime Energy	73%
% Nighttime Energy	27%

GPS Coordinates
37°38'45.81"N
120°49'42.49"W

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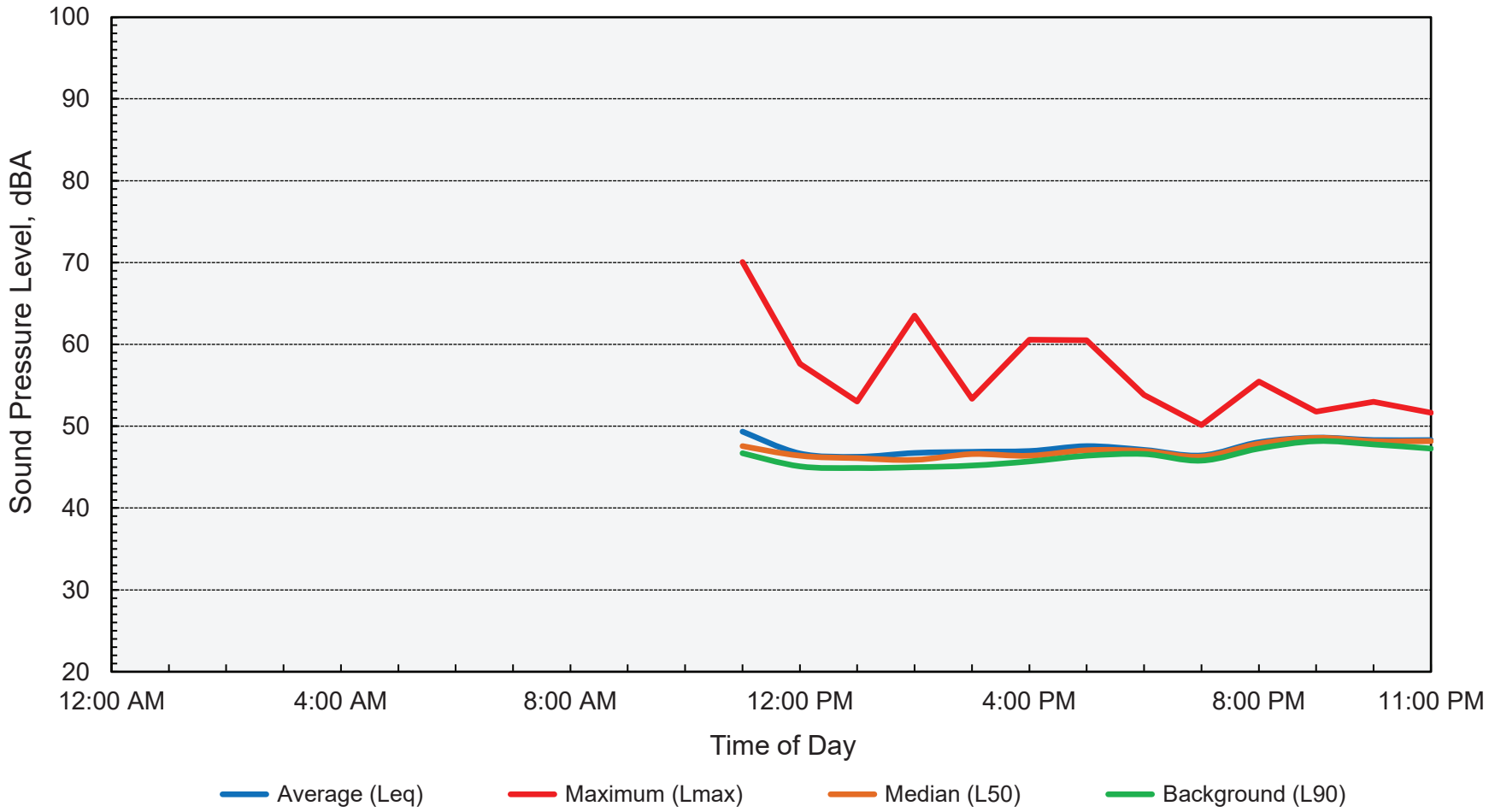
Appendix D-1
Long-Term Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California
Tuesday, September 3, 2024



Computed DNL = 55 dB

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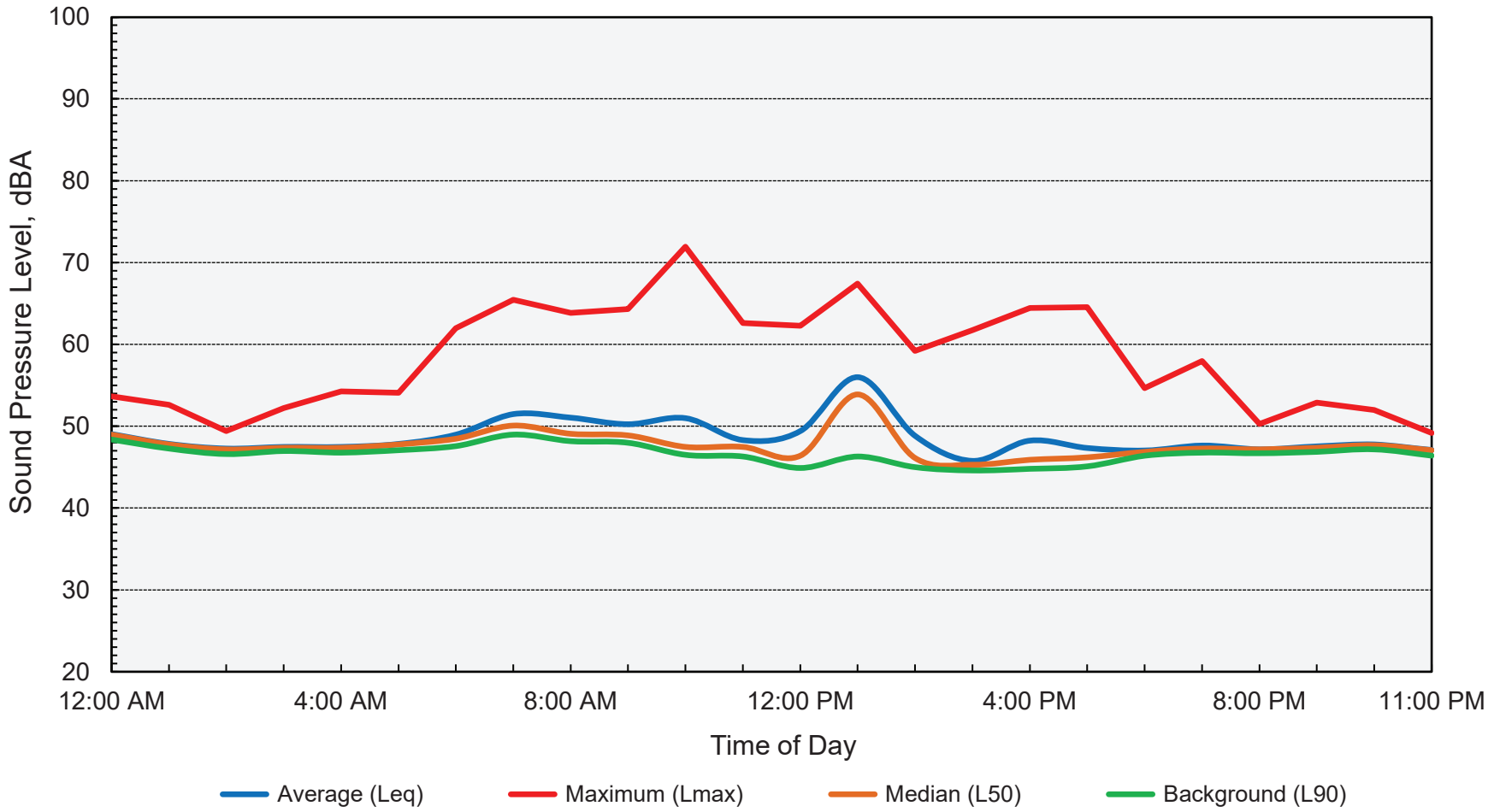
Appendix D-2
Long-Term Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California
Wednesday, September 4, 2024



Computed DNL = 55 dB

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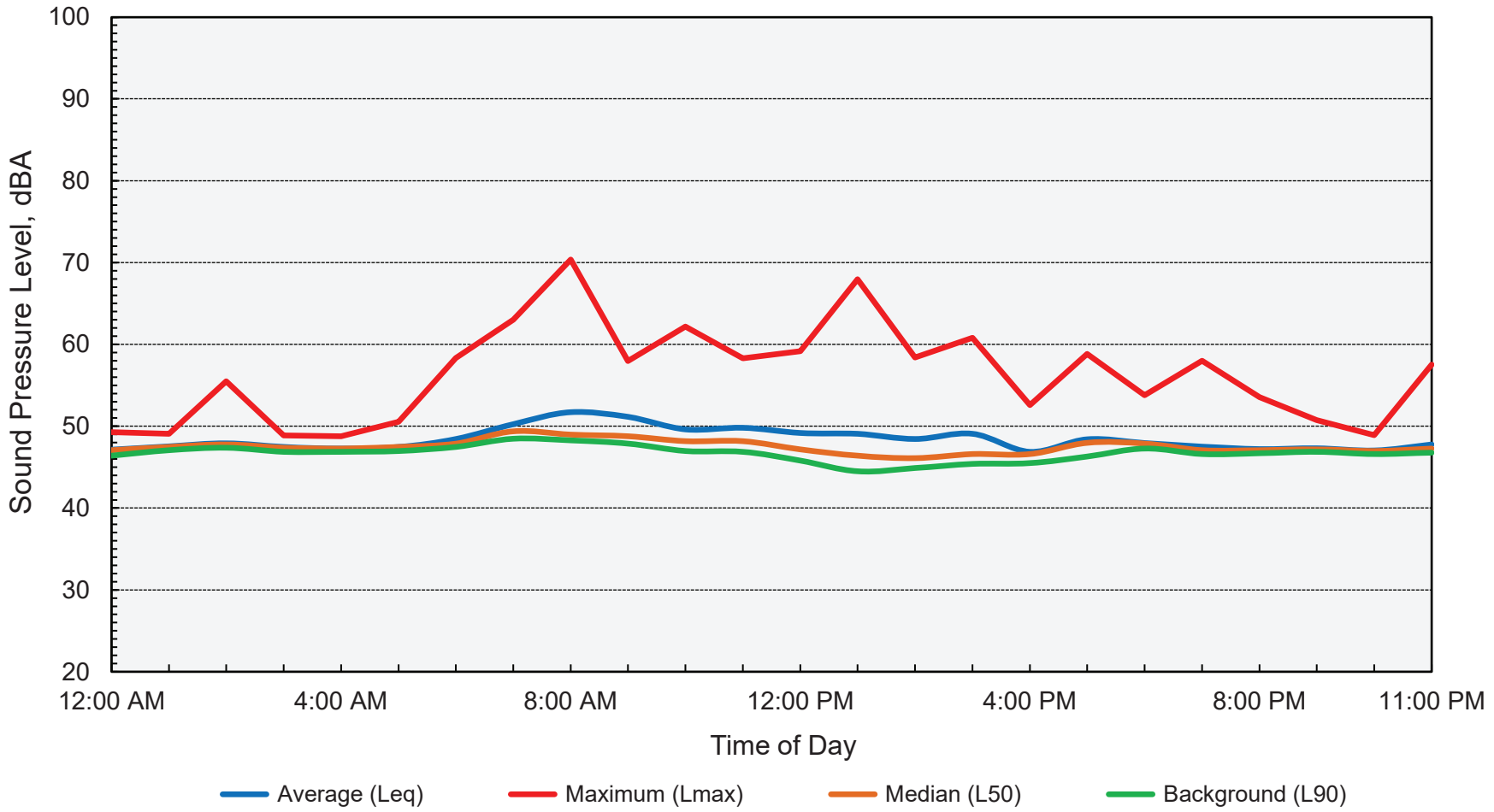
Appendix D-3
Long-Term Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California
Thursday, September 5, 2024



Computed DNL = 54 dB

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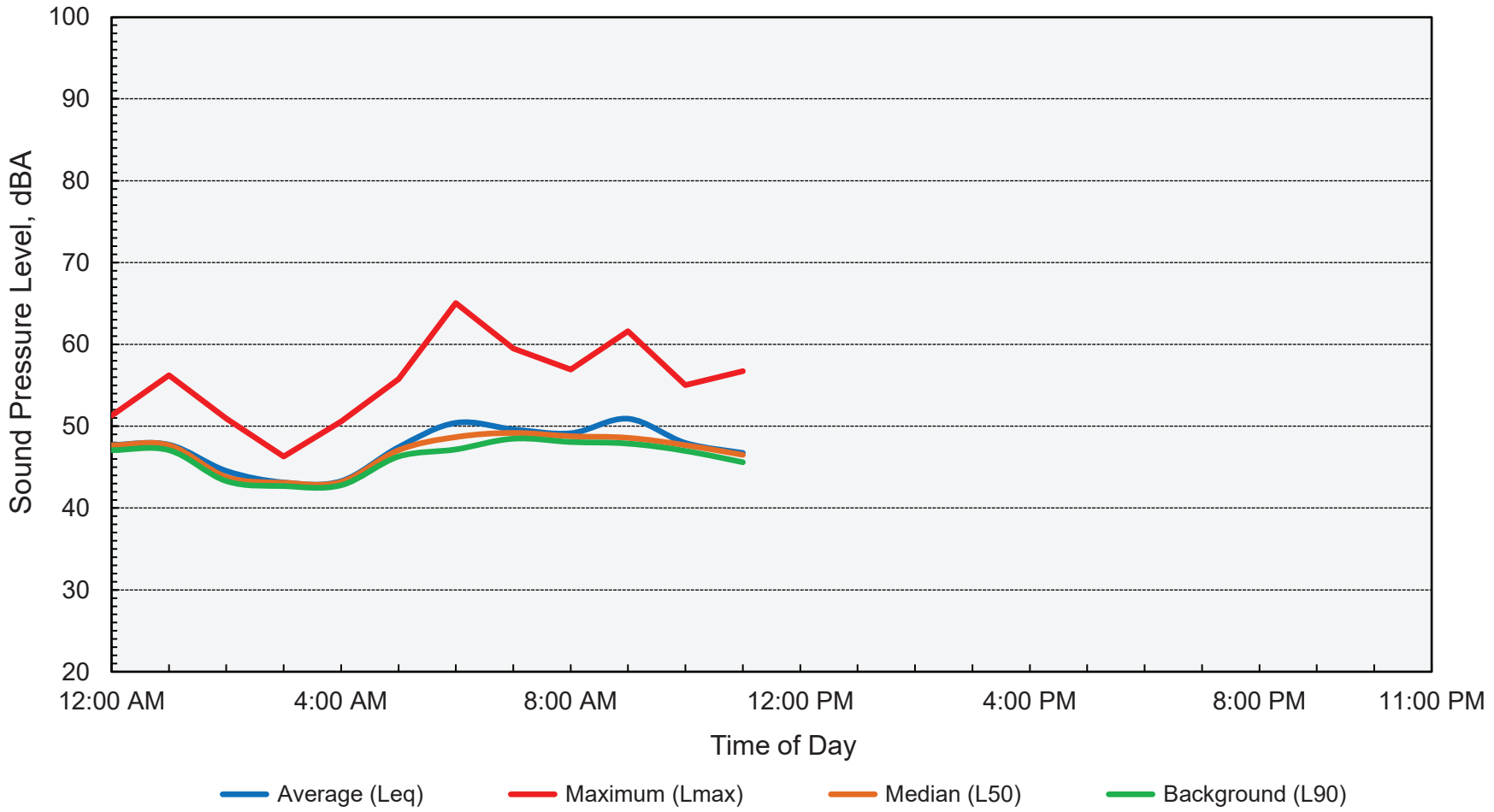
Appendix D-4
Long-Term Ambient Noise Monitoring Results
Masroc Farms Huller Operations - Stanislaus County, California
Friday, September 6, 2024



Computed DNL = 54 dB

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To: Massroc Farms Inc
Attn: David Zwald
616 N Hopper Rd
Modesto, CA 95357

From: Johnson Johnson and Miller Air Quality Consulting Services
Richard Miller, Air Quality Specialist
rmiller.jjm.environmental@gmail.com
kjohnson.jjm.environmental@gmail.com

Almond Sheller Project

Report Date: August 2, 2021 (Revised: June 2022)

Subject: Health Risk Assessment

This health risk assessment (HRA) evaluates potential health risks associated with the generation of toxic air contaminants (TACs) during operational activities associated with the Almond Sheller Project (project).

Project Location and Description

The Almond Sheller Project (project) involves a land use permit for an Almond Shelling facility and related on-site activities at the project site located in Stanislaus County, east of the City of Modesto. The project is located at 616 N Hopper Road near Modesto, CA. Operations of the facility involves the transport of goods and would be considered a trip generator of heavy-duty trucks. In addition, the project involves on-site operational activities that could generate PM_{10} (including fugitive dust).

The site plan for the proposed project is overlaid at the project location in Figure 1.

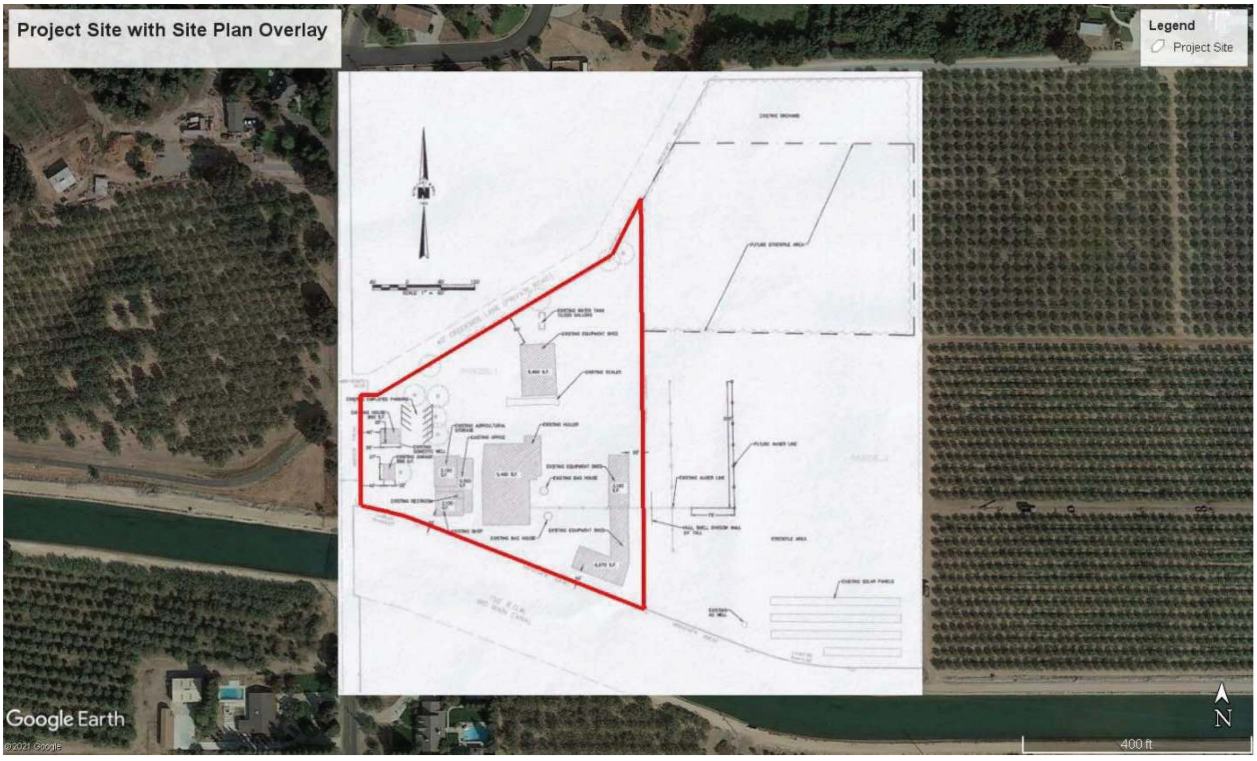


Figure 1 – Proposed Project Site Plan Overlay

Operations-Generated Air Toxics

Operations-related activities would result in intermittent, project-generated emissions of diesel particulate matter (DPM) from the exhaust of off-road, heavy-duty diesel equipment and from the exhaust of heavy-duty diesel-fueled trucks. For operational activity, DPM is the primary air toxic of concern. Particulate exhaust emissions from diesel-fueled engines (i.e., DPM) were identified as TACs by the California Air Resources Board (CARB) in 1998.

In addition, fugitive dust could be generated from the movement and handling of dirt and dirt-covered materials that would occurring during operations of the project. On-site travel of off-road equipment and on-site travel of heavy-duty trucks would also generate dust emissions during project operations. Dust from movement of dirt and handling of equipment would be controlled on-site.

An operational HRA was prepared for the proposed project and is included as Attachment A of this memorandum. To assess the project's total health risk impacts, impacts from operations were considered in this HRA; therefore, the operational HRA is summarized below.

The operational HRA evaluated DPM (represent as exhaust PM_{10}) and PM_{10} emissions (speciated to include all toxic emissions identified in the SJVAPCD's toxic profile for almond processing dust emissions) generated during operations of the project. The HRA also evaluated the the related health risk impacts for sensitive receptors located within approximately 1,000 feet of the project boundary. A project would result in a significant impact if it would individually expose sensitive receptors to TACs resulting in an increased cancer risk greater than 20 in one million or an increased non-cancer risk of greater than 1.0 on the hazard index. It should be noted that the SJVAPCD's latest threshold of significance for TAC emissions is an increase in cancer risk for the maximally exposed individual of 20 in one million (formerly 10 in one million).

The project site is located within 1,000 feet from existing sensitive receptors that could be exposed to diesel emission exhaust and other TACs during the operational periods of the project. Surrounding property to the north consists of multiple residential properties. Land uses to the west consist of vegetation and agricultural land. Agricultural uses including orchards are located to the east of the site. Property to the south consists of several single-family homes. The project site includes a single-family home that would be considered a sensitive receptor location that could be exposed to elevated levels of TAC emissions from operations of the project. The closest off-site sensitive receptor to the project area is a single-family residence approximately 176 feet to the north. Additional sensitive receptors include a single-family residence approximately 511 feet to the NNW, a single-family residence approximately 362 feet to the SSW, and another residential property 198 feet to the south.

Figure 2 shows the project site with a 1,000-foot buffer.

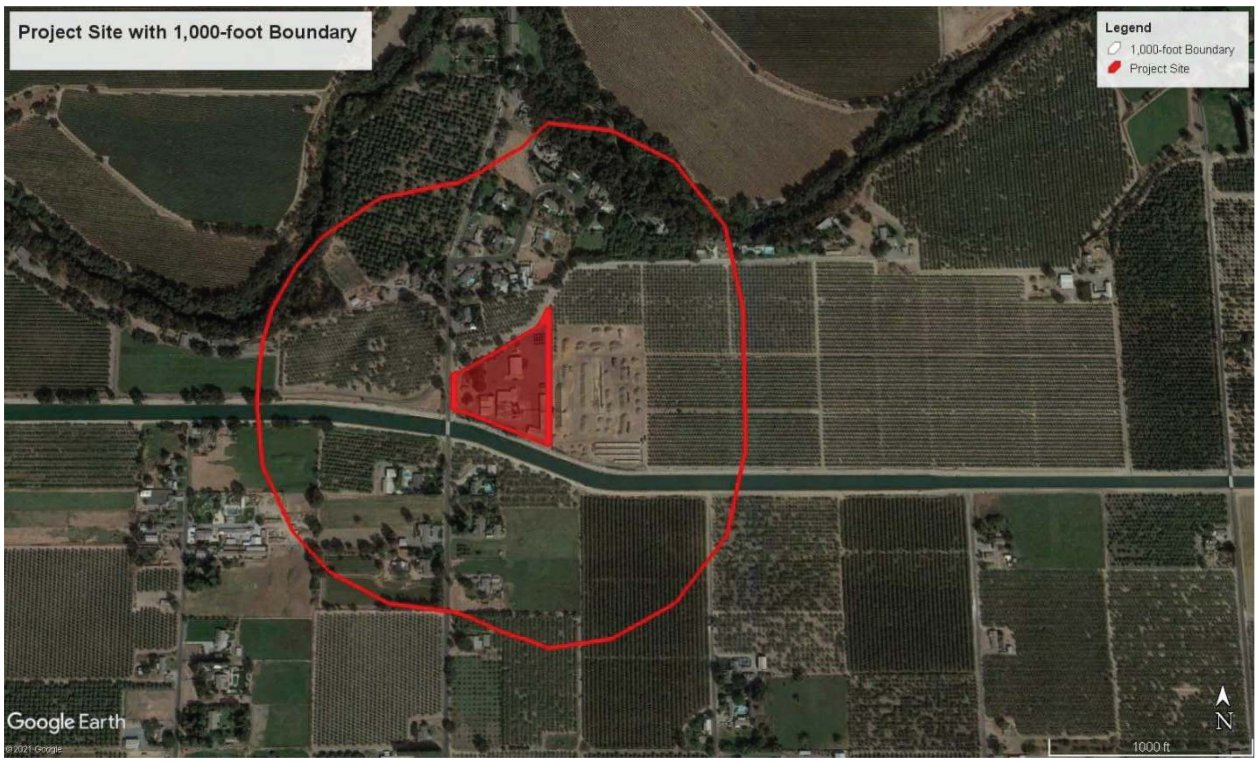


Figure 2 – Project Site with a 1,000-foot Buffer

The location of the Maximally Exposed Individual (MEI) for almond processing operations is shown in Figure 3. As shown in Figure 3, the MEI for almond processing operations was determined to be an existing single-family residence located within the project site boundaries.

Figure 3 – Location of Maximally Exposed Individual

The offsite MEI was determined to be an existing residence located approximately 200 feet northwest of the project site, at 670 N Hopper Rd (see Figure 4).

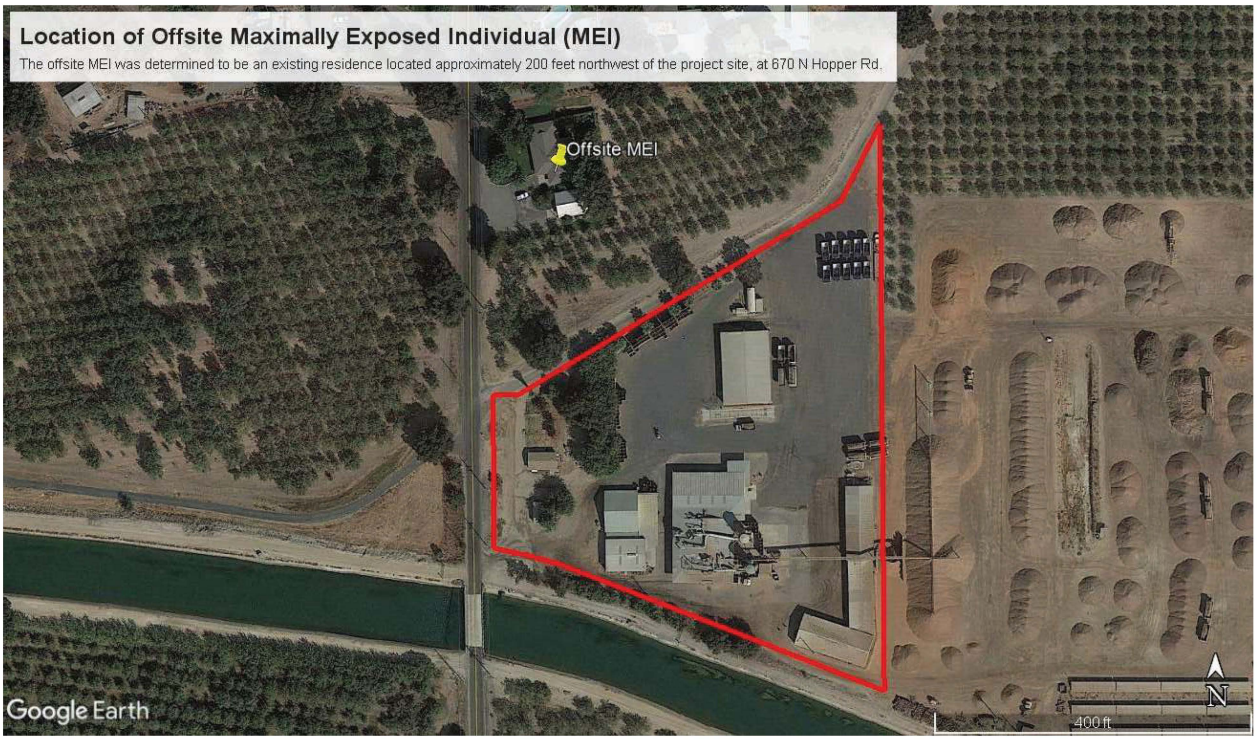


Figure 4 – Location of Offsite Maximally Exposed Individual

DPM

Studies indicate that diesel particulate matter (DPM) poses the greatest health risk among airborne TACs. The California Air Resources Board (CARB) conducted a 10-year research program that demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic long-term health risk.

For purposes of this study, DPM emissions are represented as exhaust emissions of particulate matter that is 10 micrometers in diameter and smaller (exhaust PM_{10}).

Fugitive Dust

Fugitive dust could be generated from the movement and handling of dirt and dirt-covered materials that would occurring during operations of the project. In addition, on-site travel of off-road equipment and on-site travel of heavy-duty trucks would also generate dust emissions during project operations. During operations, specific dust suppression technics are applied to limit the generation of dust. To control dust, soil stabilizers are used in traveled unpaved areas and dust from hulling/shelling are captured. In addition, the project includes design features that could control exposure and dust from on-site hulling/shelling operations.

For purposes of this study, fugitive dust emissions are represented as fugitive emissions of particulate matter that is 10 micrometers in diameter and smaller (fugitive PM_{10}). Emissions associated with fugitive PM_{10} were speciated to include all toxic emissions identified in the SJVAPCD's toxic profile for almond

processing dust emissions. The specific profile provided is shown in Table 1 below and was used in this analysis.

Table 1: SJVAPCD-Provided Toxic Profile ID for Almond Processing Dust Emissions

Pollutant Name	Emission Factor	Emission Factor Units
Aluminum	9.58E-02	lb/lb PM10
Ammonia	1.98E-03	lb/lb PM10
Antimony	1.02E-04	lb/lb PM10
Arsenic	5.00E-06	lb/lb PM10
Barium	8.75E-04	lb/lb PM10
Bromine	1.10E-05	lb/lb PM10
Cadmium	3.00E-06	lb/lb PM10
Chromium	1.20E-05	lb/lb PM10
Chromium, hexavalent (& compounds)	6.00E-07	lb/lb PM10
Cobalt	8.00E-06	lb/lb PM10
Copper	1.69E-04	lb/lb PM10
Lead	6.20E-05	lb/lb PM10
Manganese	1.04E-03	lb/lb PM10
Mercury	1.30E-05	lb/lb PM10
Nickel	1.20E-05	lb/lb PM10
Phosphorus	1.57E-03	lb/lb PM10
Selenium	3.00E-06	lb/lb PM10
Silver	3.00E-06	lb/lb PM10
Sulfates	1.01E-02	lb/lb PM10
Vanadium (fume or dust)	4.20E-05	lb/lb PM10
Zinc	1.58E-03	lb/lb PM10

Model Selection and Parameters

An air dispersion model is a mathematical formulation used to estimate the air quality impacts at specific locations (receptors) surrounding a source of emissions given the rate of emissions and prevailing meteorological conditions. The air dispersion model applied in this assessment was the United States Environmental Protection Agency (EPA) AERMOD (version 19191) air dispersion model. Specifically, the AERMOD model was used to estimate levels of air emissions at sensitive receptor locations from potential sources of project-generated TACs. The use of the AERMOD model provides a refined

methodology for estimating project impacts by utilizing long-term, measured representative meteorological data for the project site and representative terrain.

The modeling analysis also considered the spatial distribution and elevation of each emitting source in relation to the sensitive receptors. Direction-dependent calculations were obtained by identifying the Universal Transverse Mercator (UTM) coordinates for each source location. Terrain elevations were obtained for the project site using the AERMAP model, the AERMOD terrain data pre-processor. Specifically, National Elevation dataset (NED) data for the area were obtained and included in the model runs to account for complex terrain. The air dispersion model assessment used meteorological data from the Modesto 23258 Station, which is located approximately seven miles southwest of the project site. The meteorological data used was preprocessed for use with AERMOD by the SJVAPCD and included data for the years 2013 to 2017; all years were used in the assessment. To evaluate the proposed project's localized impacts at the point of maximum impact, all receptors were placed within the breathing zone at zero meters above ground level.

Figure 5 shows a representation of the modeling parameters, including a 1,000-foot buffer, the project area, modeled roadway segments, modeled on-site sources represented using line-volume sources, and locations of sensitive receptors. It should be noted the area sources shown in Figure 4 and Figure 5 do not depict modeling inputs in the most recent iteration of the modeling completed in June 2022.

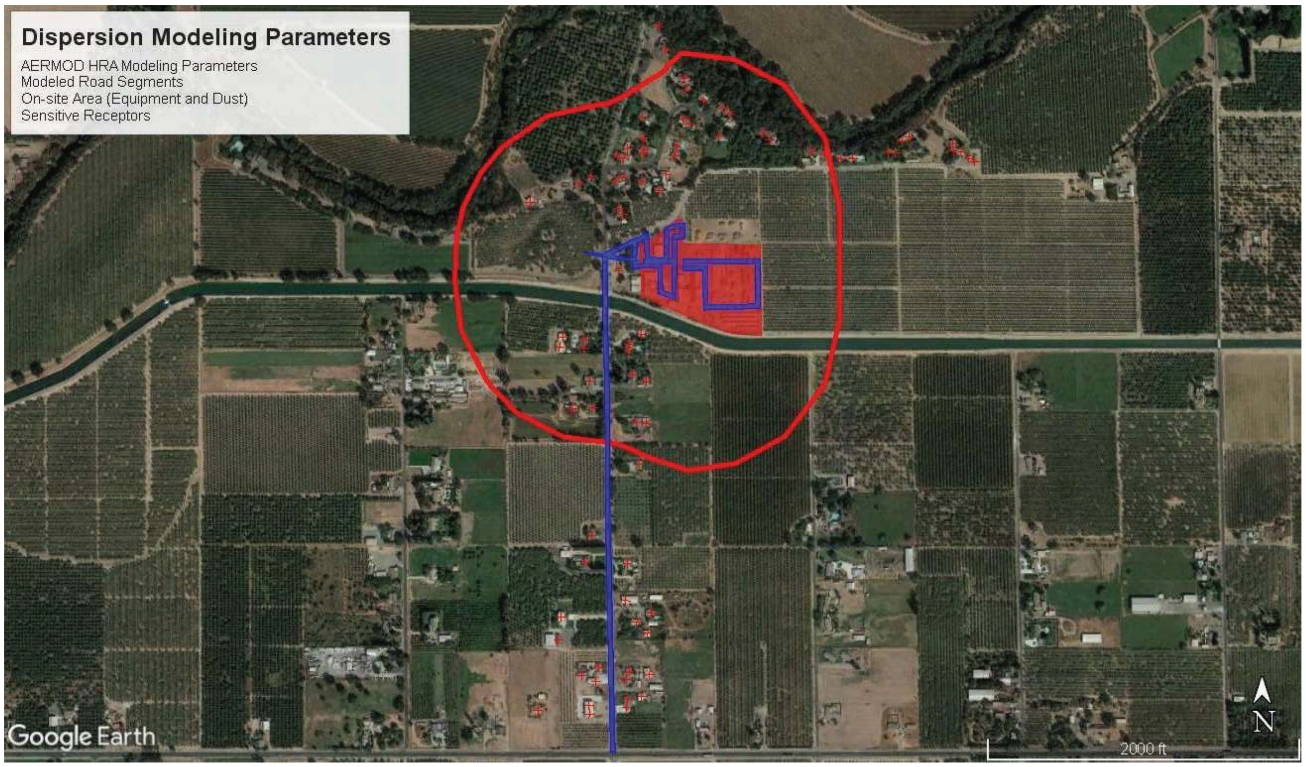


Figure 5 – Dispersion Modeling Parameters

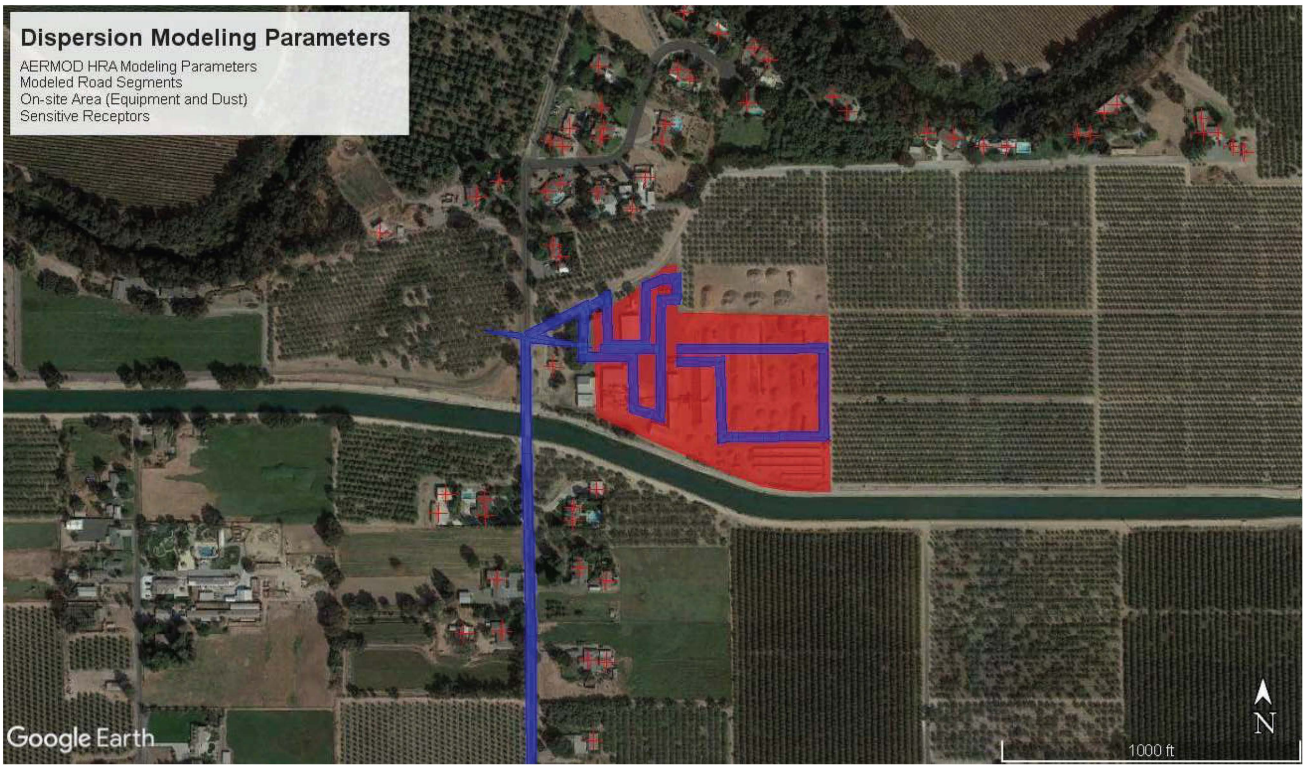


Figure 6 – Dispersion Modeling Parameters (Zoomed In Near the Project Site)

Air Toxics Generated during Operations

DPM

The project would primarily generate passenger vehicle trips from visitors traveling to and from the project site; however, the project would also be served with truck deliveries. The main source of DPM from the long-term operations of the proposed project would be from combustion of diesel fuel in diesel-powered engines in on-road delivery trucks and other visiting diesel vehicles. Motor vehicle emissions refer to DPM exhaust emissions from the motor vehicle traffic that would travel to and from the project site, as well as within the project site, each day.

The vehicle fleet mix for trucks would consist of Light-Heavy-Duty truck (LHDT), Medium-Heavy-Duty truck (MHDT), and Heavy-Heavy-Duty truck (HHDT). Emission factors are assigned to the expected vehicle mix as a function of vehicle age, vehicle class, speed, and fuel type. The operational fleet mix used to assess emissions from the proposed project is included in as part of Attachment A.

Each operational emission source to be evaluated requires geometrical and emission release specifications for use in the air dispersion model. The emission source configurations applied in this assessment of operational DPM emissions are shown in Table 2.

Table 2: Summary of Select Operational Emission Source Configurations

Emission Source Type	Relevant Assumptions

On-site Truck Traffic	• Configuration: line volume sources
	• Release height: 10.2 feet (3.1 meters)
	• Vehicle Speed: 5 mph
	• Vehicle types:
	  ○ Heavy-heavy-duty trucks (HHDT)
	  ○ Medium-heavy-duty trucks (MHDT)
	  ○ Heavy ag trucks (T7 Ag)
	• Emission factors: EMFAC2017

On-site Truck Idling	• Configuration: line volume source • Release height: 10.2 feet (3.1 meters) • Vehicle type: Diesel trucks • Emission factors: CalEEMod Version 2020.4.0

Off-site Traffic	• Configuration: line volume source
	• Eight travel links from the project to outlying areas within 1,000 feet of the project site were identified based and emissions were estimated along each travel link.
	• Vehicle speeds: 25 mph (trucks)
	• Vehicle types:
	  ○ Heavy-heavy-duty trucks (HHDT)
	  ○ Medium-heavy-duty trucks (MHDT)
	  ○ Heavy ag trucks (T7 Ag)
	• Emission factors: EMFAC 2017

Facility Operations	• 24 hours per day/365 days per year, with truck trips and on-site activity occurring at different levels in the peak season and offseason
	  ○ Peak Season: 153 of the year days assumed based on longest period of increased operations (August to January)
	  ○ Off Season: Remaining days
	• Facility operations sources in addition to DPM emissions from trucks:
	  ○ On-site equipment use (including offroad equipment)
	  ○ Almond processing operations (e.g. hulling and shelling)

Source: Attachment A.	

Operational emissions for the proposed project were assessed assuming the first year of operations would occur in 2021. Emission factors were obtained for the following years: 2021, 2022, 2025, 2030, 2040, and 2050. Exhaust emissions of DPM (as PM_{10} exhaust) were estimated using EMFAC2017. Emissions from the use of offroad equipment were estimated using CalEEMod 2020.4.0. The emission factors, AERMOD data, and emission estimation spreadsheets used to estimate motor vehicle DPM emissions during project operations are provided in Attachment A.

Cancer Risk

The model was run to obtain annual average concentration in micrograms per cubic meter [$\mu g/m^3$] at existing off-site sensitive residential receptors within approximately 1,000 feet of the project site. Consistent with SJVAPCD guidance, a health risk computation was performed to determine the risk of

developing an excess cancer risk calculated on a 70-year exposure scenario. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the U.S. EPA Human Health Evaluation Manual (1991) and the Office of Environmental Health Hazard Assessment (OEHHA) Guidance Manual (2015).[1]

Based on the OEHHA methodology, the residential inhalation cancer risk from the annual average DPM concentrations are calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor (ASF), the frequency of time spent at home (for residents only), and the exposure duration divided by averaging time, to yield the excess cancer risk. These factors are discussed in more detail below. Cancer risk must be separately calculated for specified age groups, because of age differences in sensitivity to carcinogens and age differences in intake rates (per kg body weight). Separate risk estimates for these age groups provide a health-protective estimate of cancer risk by accounting for greater susceptibility in early life, including both age-related sensitivity and amount of exposure.

Exposure through inhalation (Dose-air) is a function the breathing rate, the exposure frequency, and the concentration of a substance in the air. For residential exposure, the breathing rates are determined for specific age groups, so Dose-air is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. To estimate cancer risk, the dose was estimated by applying the following formula to each ground-level concentration:

$$\text{Dose-air} = (C_{air} * \{BR/BW\} * A * EF * 10^{-6})$$

Where:

Dose-air	=	dose through inhalation (mg/kg/day)
Cair	=	air concentration (µg/m3) from air dispersion model
{BR/BW}	=	daily breathing rate normalized to body weight (L/kg body weight – day) (361 L\kg BW-day for 3rd Trimester, 1,090 L/kg BW-day for 0<2 years, 631 L/kg BW-day for 2<9 years, 572 L/kg BW-day for 2<16 years, 261 L/kg BW-day for 16<30 years, and 233 L/kg BW-day 16<70 years)
A	=	Inhalation absorption factor (unitless [1])
EF	=	exposure frequency (unitless), days/365 days (0.96 [approximately 350 days per year])
10^{-6}	=	conversion factor (micrograms to milligrams, liters to cubic meters)

The breathing rates used in the analysis were based on OEHHA factors. Specifically, rates for the trimester and 0<2 age bins used breathing rates from the 95th percentile. Other age bins used rates from the 80th percentile, which are each higher than their respective mean values. The daily breathing rate

[1] Office of Environmental Health Hazard Assessment (OEHHA). 2015. Risk Assessment Guidelines. Website: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

distributions by age group for residential stochastic analysis from the OEHHA guidance document are provided below (Table 3), while the specific breathing rates used in the analysis are provided in Table 4.

Table 3: Daily Breathing Rate Distributions by Age Group for Residential Stochastic Analysis (L/kg BW-day)

	3rd Trimester	0<2 years	2<9 years	0<16 years	16<30 years	16-70 years
Mean	225	658	535	452	210	185
Percentiles						
5%	127	416	328	216	96	86
10%	142	454	367	259	118	104
25%	176	525	427	331	161	141
50%	212	618	504	432	207	181
75%	260	723	602	545	252	222
80%	273	758	631	572	261	233
90%	333	934	732	652	307	262
95%	361	1090	861	745	335	290
99%	412	1430	1140	996	432	361
Source: Office of Environmental Health Hazard Assessment (OEHHA). 2015. Risk Assessment Guidelines. Website: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.						

Table 4: Daily Breathing Rate Distributions Used in the Assessment (liters/kg-day)

	3rd Trimester	0<2 years	2-9 years	9-16 years	16-30 years	30-70 years
Daily Beathing Rates	361	1090	631	572	261	233
Source: Appendix A.						

OEHHA developed ASFs to take into account the increased sensitivity to carcinogens during early-in-life exposure. In the absence of chemical-specific data, OEHHA recommends a default ASF of 10 for the third trimester to age 2 years, an ASF of 3 for ages 2 through 15 years to account for potential increased sensitivity to carcinogens during childhood and an ASF of 1 for ages 16 through 70 years.

Fraction of time at home (FAH) during the day is used to adjust exposure duration and cancer risk from a specific facility's emissions, based on the assumption that exposure to the facility's emissions are not occurring away from home. The following FAH values were used in this assessment:

- From the third trimester to age <2 years: 85 percent (the OEHHA-recommended value is 85 percent of time is spent at home;
- From age 2 through <16 years: 72 percent (the OEHHA-recommended value is 72 percent of time is spent at home; and

- From age 16 years and greater: 73 percent (the OEHHA-recommended value is 73 percent of time is spent at home).

To estimate the cancer risk, the dose is multiplied by the cancer potency factor, the ASF, the exposure duration divided by averaging time, and the frequency of time spent at home (for residents only):

$Risk_{inh\text{-}res} = (Dose_{air} * CPH * ASF * ED/AT * FAH)$

Where:

$Risk_{inh\text{-}res}$	=	residential inhalation cancer risk (potential chances per million)
$Dose_{air}$	=	daily dose through inhalation (mg/kg-day)
CPF	=	inhalation cancer potency factor ($mg/kg\text{-}day^{-1}$)
ASF	=	age sensitivity factor for a specified age group (unitless)
ED	=	exposure duration (in years) for a specified age group
AT	=	averaging time of lifetime cancer risk (years)
FAH	=	fraction of time spent at home (unitless)

Chronic Non-Cancer Hazard

Non-cancer chronic impacts are calculated by dividing the annual average concentration by the Reference Exposure Level (REL) for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The following equation was used to determine the non-cancer risk:

Hazard Quotient = Ci/RELi

Where:

Ci	=	Concentration in the air of substance i (annual average concentration in $\mu g/m^3$)
RELi	=	Chronic noncancer Reference Exposure Level for substance i ($\mu g/m^3$)

IMPACT ASSESSMENT

The SJVAPCD considers permitted and non-permitted emission sources separately when making significance determinations related to criteria pollutants. However, the purpose of this HRA is to estimate the adverse health impacts from exposure to TACs generated by operations of the project. Therefore, impacts were assessed together for permitted and un-permitted sources. In addition, the assumptions that were used to estimate the potential risk of harm to public health are based on methods consistent with SJVAPCD guidance and published OEHHA guidance and err on the side of health protection to avoid underestimation of risk.

Non-permitted Sources (DPM)

For reasons previously discussed, an analysis of TACs (including DPM) was performed using the EPA-approved AERMOD model. AERMOD version 19191 was used for this analysis. Non-permitted sources analyzed in the HRA include exhaust emissions from heavy-duty and agricultural trucks, exhaust emissions from on-site offroad equipment use, and dust (represented as PM_{10}) from travel on unpaved roads and unpaved portions of the project site. The full HRA from unpermitted sources is included as Attachment A of this memorandum.

Results of the health risk analysis from non-permitted operations are summarized in Table 5. The primary source of the emissions responsible for chronic risk are from diesel trucks. As DPM does not have an acute risk factor, non-cancer acute hazards are not shown in Table 5. The complete cumulative HRA prepared for the proposed project, including calculations and AERMOD output data used in the HRA, are included in Attachment A of this memorandum.

Table 5: Summary of the Health Risk Metrics from Non-permitted Operations of the Project (70-year Scenarios)

Exposure Scenario	Maximum Cancer Risk (Risk per Million)	Chronic Non-Cancer Hazard Index
70-Year Exposure at the On-site MEI[1]	9.86	0.008
70-Year Exposure at the Offsite MEI[2]	12.12	0.008

Source: Attachment A.
MEI = Maximally Exposed Individual
[1] The MEI was determined to be an existing residence within the project site.
[2] The offsite MEI was determined to be an existing residence located approximately 200 feet northwest of the project site, at 670 N Hopper Rd.

Notes Related to Assumptions Used in this Assessment

It should be noted that several assumptions were made in this analysis that support the statement that the results from this HRA represent a conservative estimate of health impacts. A notable assumption is listed below.

Exposure Assumptions. The estimated risks in this HRA are based primarily on a series of conservative assumptions related to predicted environmental concentrations, exposure, and chemical toxicity. Although

it would be speculative to attempt to quantify the uncertainties associated with the assumptions made in this HRA, the use of conservative assumptions is results in higher estimates of exposure and associated health risks.

Permitted Sources (Dust-generating Almond Processing Operations)

In response comments received by the SJVAPCD, an analysis of TACs was performed using the EPA-approved AERMOD model to assess TACs from on-site almond processing activities. This assessment replaced the assessment of dust-generating activities included in earlier iterations of this report. Since the project is expected to process almonds or other nut types (e.g. pre-cleaning, hulling, drying, shelling, etc.), the SJVAPCD recommended that the HRA be revised to include additional toxic emissions associated with almond processing. The SJVAPCD was contacted to determine the toxic emission speciation profile(s) that should be included in the HRA for the project. The specific profile provided is shown in Table 1 and was used in this analysis.

AERMOD version 21112 was used for this analysis. The health risk analysis was conducted in HARP2 and used the input parameters detailed in Appendix B. Results of the health risk analysis from almond processing activities that would be subject permitting (e.g. pre-cleaning, hulling, drying, shelling, etc.) are summarized in Table 6. The complete HRA prepared for the proposed project's activities subject to permitting, including calculations and AERMOD output data used in the HRA, are included in Attachment B of this memorandum.

Table 6: Summary of the Health Risk Metrics from Permitted Almond Processing Operations of the Project (70-year Scenarios)

Exposure Scenario	Maximum Cancer Risk (Risk per Million)	Chronic Non-Cancer Hazard Index	Acute Non-Cancer Hazard Index
70-Year Exposure at the On-site MEI[1]	9.65	0.313	0.940
70-Year Exposure at the Offsite MEI[2]	5.64	0.183	0.414

Source: Attachment A.
MEI = Maximally Exposed Individual
[1] The on-site MEI was determined to be an existing residence within the project site.
[2] The offsite MEI was determined to be an existing residence located approximately 200 feet northwest of the project site, at 670 N Hopper Rd.

Project Impact Summary (All Operational Sources)

Results of the health risk analysis from project-generated TACs during the operational period have been combined and compared to the applicable thresholds of significance in Table 7 below. Results are shown for the on-site MEI and the off-site MEI.

Table 7: Summary of the Health Risk Impacts from Total Operations of the Project (70-year Scenarios)

Exposure Scenario	Maximum Cancer Risk (Risk per Million)	Chronic Non-Cancer Hazard Index	Acute Non-Cancer Hazard Index
70-Year Exposure at the On-site MEI[1]			
Health Risks from DPM	9.86	0.008	0.000
Health Risks from Dust-Generating Almond Processing Operations	9.65	0.313	0.940
70-Year Exposure from Total Project Operations	*19.51*	*0.321*	*0.940*
70-Year Exposure at the On-site MEI[2]			
Health Risks from DPM	12.12	0.008	0.000
Health Risks from Dust-Generating Almond Processing Operations	5.64	0.183	0.414
70-Year Exposure from Total Project Operations	*17.76*	*0.191*	*0.414*
Highest Health Risk at any Individual Receptor			
On-site MEI	**19.51**	**0.321**	**0.940**
Applicable Threshold of Significance	**20**	**1**	**1**
Threshold Exceeded in Either Scenario?	**No**	**No**	**No**

Source of Health Risks from Non-Permitted Sources: Table 5 (full analysis in Attachment A).
Source of Health Risk from Non-Permitted Sources: Table 6 (full analysis in Attachment B).
MEI = Maximally Exposed Individual
[1] The on-site MEI was determined to be an existing residence within the project site.
[2] The offsite MEI was determined to be an existing residence located approximately 200 feet northwest of the project site, at 670 N Hopper Rd.

As shown in Table 7, risks associated with the operations of the project would not exceed the cancer risk and non-cancer hazard index significance thresholds. Therefore, operations of the project would not result in a significant impact on nearby sensitive receptors from toxic air contaminants.

Attachments:

Attachment A – Health Risk Assessment (DPM from Operations of the Project)

Attachment B – Health Risk Assessment (Dust-generating Almond Processing Operations)

ATTACHMENT A
Health Risk Assessment (DPM from Operations of the Project)

Health Risk Assessment

Almond Sheller Project

Summary of Total Cancer Risk from DPM at the On-site Maximally Exposed Individual (MEI)

Almond Sheller Project Total DPM from All Operational Activities

Maximally Exposed Individual (MEI) UTM: 691506.70, 4168892.79
The on-site MEI was determined to be an existing residence within the project site.

	X	Y	Operations 2021 Total DPM (ug/m3)	Operations 2022 Total DPM (ug/m3)	Operations 2025 Total DPM (ug/m3)	Operations 2030 Total DPM (ug/m3)	Operations 2040 Total DPM (ug/m3)	Operations 2050 Total DPM (ug/m3)
Peak Season	691506.70	4168892.79	4.0765E-02	3.7906E-02	1.5918E-02	1.5898E-02	1.5906E-02	1.5897E-02
Off Season	691506.70	4168892.79	4.9715E-03	4.5989E-03	2.5422E-03	2.5388E-03	2.5386E-03	2.5371E-03

Almond Sheller Project

70-year Lifetime Cancer Risk—Operations

Maximally Exposed Individual (MEI) UTM: 691506.70, 4168892.79

Peak Season Duration 0.419178082 years (percent of the year)

	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations
	2021	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2037	2038	2039	2040-2051	2052-2091
Age	3rd Trimester	0-<1	0-<1	1-<2	2-<3	3-<4	4-<5	5-<6	6-<7	7-<8	8-<9	9-<16	16-<17	17-<18	18-<30	30-<31
DBR (liters/kg-day)	361	1,090	1,090	1,090	631	631	631	631	631	631	631	572	261	261	261	233
ASF	10	10	10	10	3	3	3	3	3	3	3	3	1	1	1	1
TAH	0.85	0.85	0.85	0.85	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.73	0.73	0.73	0.73
Duration (years)	0.25	0.17	0.419178082	0.419178082	0.419178082	0.419178082	0.419178082	0.419178082	0.419178082	0.419178082	0.419178082	2.934246575	0.419178082	0.419178082	5.030136986	16.34794521
Frequency (days)	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350
Averaging time (days)	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550
CPF (milligrams/kg-day)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Unit Risk Factor $(ug/m^3)^{-1}$	11.56	23.62	58.52	58.52	8.61	8.61	8.61	8.61	8.61	8.61	8.61	54.63	1.20	1.20	14.44	41.90

Maximum Peak Season Concentration (ug/m3)

		2021														
X	Y	3rd Trimester	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2037	2038	2039	2040-2051	2052-2091
691506.70	4168892.79	4.0765E-02	4.0765E-02	3.7906E-02	3.0577E-02	2.3247E-02	1.5918E-02	1.5914E-02	1.5910E-02	1.5906E-02	1.5902E-02	1.5898E-02	1.5898E-02	1.5898E-02	1.5898E-02	1.5906E-02	1.5897E-02

Maximally Exposed Individual (MEI) UTM: 691506.70, 4168892.79

Annual Risk (risk/million)—Peak Season

		2021															
X	Y	3rd Trimester	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2037	2038	2039	2040-2051	2052-2091	Total
691506.70	4168892.79	0.4712	0.9628	2.2183	1.7894	0.2001	0.1370	0.1370	0.1370	0.1369	0.1369	0.1369	0.8685	0.0191	0.0191	0.2297	0.6661	8.2661

Off Season Duration 0.580821918 years (percent of the year)

	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations
	2021	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2037	2038	2039	2040-2051	2052-2091
Age	3rd Trimester	0-<1	0-<1	1-<2	2-<3	3-<4	4-<5	5-<6	6-<7	7-<8	8-<9	9-<16	16-<17	17-<18	18-<30	30-<31
DBR (liters/kg-day)	361	1,090	1,090	1,090	631	631	631	631	631	631	631	572	261	261	261	233
ASF	10	10	10	10	3	3	3	3	3	3	3	3	1	1	1	1
TAH	0.85	0.85	0.85	0.85	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.73	0.73	0.73	0.73
Duration (years)	0.25	0.33	0.580821918	0.580821918	0.580821918	0.580821918	0.580821918	0.580821918	0.580821918	0.580821918	0.580821918	4.065753425	0.580821918	0.580821918	6.969863014	22.65205479
Frequency (days)	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350
Averaging time (days)	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550
CPF (milligrams/kg-day)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Unit Risk Factor $(ug/m^3)^{-1}$	11.56	46.19	81.09	81.09	11.93	11.93	11.93	11.93	11.93	11.93	11.93	75.69	1.67	1.67	20.01	58.06

Maximum Off-Season Concentration (ug/m3)

		2021														
X	Y	3rd Trimester	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2037	2038	2039	2040-2051	2052-2091
691506.70	4168892.79	4.9715E-03	4.9715E-03	4.5989E-03	3.9133E-03	3.2278E-03	2.5422E-03	2.5415E-03	2.5408E-03	2.5401E-03	2.5395E-03	2.5388E-03	2.5388E-03	2.5386E-03	2.5386E-03	2.5386E-03	2.5371E-03

Annual Risk (risk/million)—Off-Season

		2021															
X	Y	3rd Trimester	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2037	2038	2039	2040-2051	2052-2091	Total
691506.70	4168892.79	0.0575	0.2296	0.3729	0.3173	0.0385	0.0303	0.0303	0.0303	0.0303	0.0303	0.0303	0.1922	0.0042	0.0042	0.0508	0.1473	1.5964

Annual Risk (risk/million)—Total (Peak Season and Off-Season)

		2021															
X	Y	3rd Trimester	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2037	2038	2039	2040-2051	2052-2091	Total
691506.70	4168892.79	0.5287	1.1924	2.5912	2.1067	0.2386	0.1674	0.1673	0.1673	0.1672	0.1672	0.1672	1.0607	0.0234	0.0234	0.2805	0.8134	9.8625

Almond Sheller Project

70-year Lifetime Cancer Risk—Operations

Maximally Exposed Individual (MEI) UTM: 691506.70, 4168892.79

Cancer Risk at the MEI (On-site Residence)
9.86
Threshold of Significance
20
Exceeds threshold?
No

Estimates of Chronic Non-Cancer Hazard Index (CNCHI)
Unmitigated
Chronic Non-Cancer Hazard Index at the MEI
Maximally Exposed Individual (MEI) UTM: 691506.70, 4168892.79
Reference Exposure Level (REL) for DPM: 5
CNCHI = DPM/REL

X (m)	Y (m)	Maximum Annual Average DPM (ug/m3)	CNCHI
691506.70	4168892.79	0.04	0.008153

Chronic Non-Cancer Hazard Index
0.008153
Threshold of Significance
1
Exceeds threshold?
No

Health Risk Assessment

Almond Sheller Project

Summary of Total Cancer Risk from DPM at the Offsite Maximally Exposed Individual (MEI)

Almond Sheller Project Total PM10 from All Operational Activities

Offsite Maximally Exposed Individual (MEI) UTM: 691511.55, 4169004.64

This summary shows the health risks at the offsite MEI. The offsite MEI was determined to be an existing residence located approximately 200 feet northwest of the project site, at 670 N Hopper Rd.

	X	Y	Operations 2021 Total DPM (ug/m3)	Operations 2022 Total DPM (ug/m3)	Operations 2025 Total DPM (ug/m3)	Operations 2030 Total DPM (ug/m3)	Operations 2040 Total DPM (ug/m3)	Operations 2050 Total DPM (ug/m3)
Peak Season	691511.55	4169004.64	4.1956E-02	3.9801E-02	2.4005E-02	2.3986E-02	2.3992E-02	2.3980E-02
Off Season	691511.55	4169004.64	5.6070E-03	5.3276E-03	3.8514E-03	3.8483E-03	3.8484E-03	3.8466E-03

Almond Sheller Project

70-year Lifetime Cancer Risk—Operations

Offsite Maximally Exposed Individual (MEI) UTM: 691511.55, 4169004.64
Peak Season Duration 0.419178082 years (percent of the year)

		Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations
		2021	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2037	2038	2039	2040-2051	2052-2091	
Age		3rd Trimester	0-<1	0-<1	1-<2	2-<3	3-<4	4-<5	5-<6	6-<7	7-<8	8-<9	9-<16	16-<17	17-<18	18-<30	30-<31	
DBR (liters/kg-day)		361	1,090	1,090	1,090	631	631	631	631	631	631	631	572	261	261	261	233	
ASF		10	10	10	10	3	3	3	3	3	3	3	3	1	1	1	1	
TAH		0.85	0.85	0.85	0.85	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.73	0.73	0.73	0.73	
Duration (years)		0.25	0.17	0.419178082	0.419178082	0.419178082	0.419178082	0.419178082	0.419178082	0.419178082	0.419178082	0.419178082	2.934246575	0.419178082	0.419178082	5.030136986	16.34794521	
Frequency (days)		350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	
Averaging time (days)		25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	
CPF (milligrams/kg-day)		1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Unit Risk Factor $(ug/m^3)^{-1}$		11.56	23.62	58.52	58.52	8.61	8.61	8.61	8.61	8.61	8.61	8.61	54.63	1.20	1.20	14.44	41.90	

Maximum Peak Season Concentration (ug/m3)

		2021																
X	Y	3rd Trimester	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2037	2038	2039	2040-2051	2052-2091	
691511.55	4169004.64	4.1956E-02	4.1956E-02	3.9801E-02	3.4536E-02	2.9270E-02	2.4005E-02	2.4001E-02	2.3997E-02	2.3993E-02	2.3990E-02	2.3986E-02	2.3986E-02	2.3986E-02	2.3986E-02	2.3992E-02	2.3980E-02	

Offsite Maximally Exposed Individual (MEI) UTM: 691511.55, 4169004.64

Annual Risk (risk/million)—Peak Season

		2021																
X	Y	3rd Trimester	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2037	2038	2039	2040-2051	2052-2091	Total
691511.55	4169004.64	0.4850	0.9910	2.3292	2.0211	0.2520	0.2067	0.2066	0.2066	0.2066	0.2065	0.2065	1.3103	0.0289	0.0289	0.3465	1.0047	10.0369

Off Season Duration 0.580821918 years (percent of the year)

		Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations	Operations
		2021	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2037	2038	2039	2040-2051	2052-2091	
Age		3rd Trimester	0-<1	0-<1	1-<2	2-<3	3-<4	4-<5	5-<6	6-<7	7-<8	8-<9	9-<16	16-<17	17-<18	18-<30	30-<31	
DBR (liters/kg-day)		361	1,090	1,090	1,090	631	631	631	631	631	631	631	572	261	261	261	233	
ASF		10	10	10	10	3	3	3	3	3	3	3	3	1	1	1	1	
TAH		0.85	0.85	0.85	0.85	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.73	0.73	0.73	0.73	
Duration (years)		0.25	0.33	0.580821918	0.580821918	0.580821918	0.580821918	0.580821918	0.580821918	0.580821918	0.580821918	0.580821918	4.065753425	0.580821918	0.580821918	6.969863014	22.65205479	
Frequency (days)		350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	
Averaging time (days)		25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550	
CPF (milligrams/kg-day)		1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Unit Risk Factor $(ug/m^3)^{-1}$		11.56	46.19	81.09	81.09	11.93	11.93	11.93	11.93	11.93	11.93	11.93	75.69	1.67	1.67	20.01	58.06	

Maximum Off-Season Concentration (ug/m3)

		2021																
X	Y	3rd Trimester	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2037	2038	2039	2040-2051	2052-2091	
691511.55	4169004.64	5.6070E-03	5.6070E-03	5.3276E-03	4.8355E-03	4.3435E-03	3.8514E-03	3.8508E-03	3.8502E-03	3.8495E-03	3.8489E-03	3.8483E-03	3.8483E-03	3.8484E-03	3.8484E-03	3.8484E-03	3.8466E-03	

Annual Risk (risk/million)—Off-Season

		2021																
X	Y	3rd Trimester	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2037	2038	2039	2040-2051	2052-2091	Total
691511.55	4169004.64	0.0648	0.2590	0.4320	0.3921	0.0518	0.0459	0.0459	0.0459	0.0459	0.0459	0.0459	0.2913	0.0064	0.0064	0.0770	0.2233	2.0797

Annual Risk (risk/million)—Total (Peak Season and Off-Season)

		2021																
X	Y	3rd Trimester	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2037	2038	2039	2040-2051	2052-2091	Total
691511.55	4169004.64	0.5498	1.2499	2.7612	2.4132	0.3038	0.2526	0.2526	0.2525	0.2525	0.2524	0.2524	1.6016	0.0353	0.0353	0.4235	1.2281	12.1166

Almond Sheller Project

70-year Lifetime Cancer Risk—Operations

Offsite Maximally Exposed Individual (MEI) UTM: 691511.55, 4169004.64

Cancer Risk at the Offsite MEI
12.12
Threshold of Significance
20
Exceeds threshold?
No

Estimates of Chronic Non-Cancer Hazard Index (CNCHI)
Unmitigated
Chronic Non-Cancer Hazard Index at the Offsite MEI
Offsite Maximally Exposed Individual (MEI) UTM: 691511.55, 4169004.64
Reference Exposure Level (REL) for DPM: 5
CNCHI = DPM/REL

X (m)	Y (m)	Maximum Annual Average DPM (ug/m3)	CNCHI
691511.55	4169004.64	0.04	0.008391

Chronic Non-Cancer Hazard Index
0.008391
Threshold of Significance
1
Exceeds threshold?
No

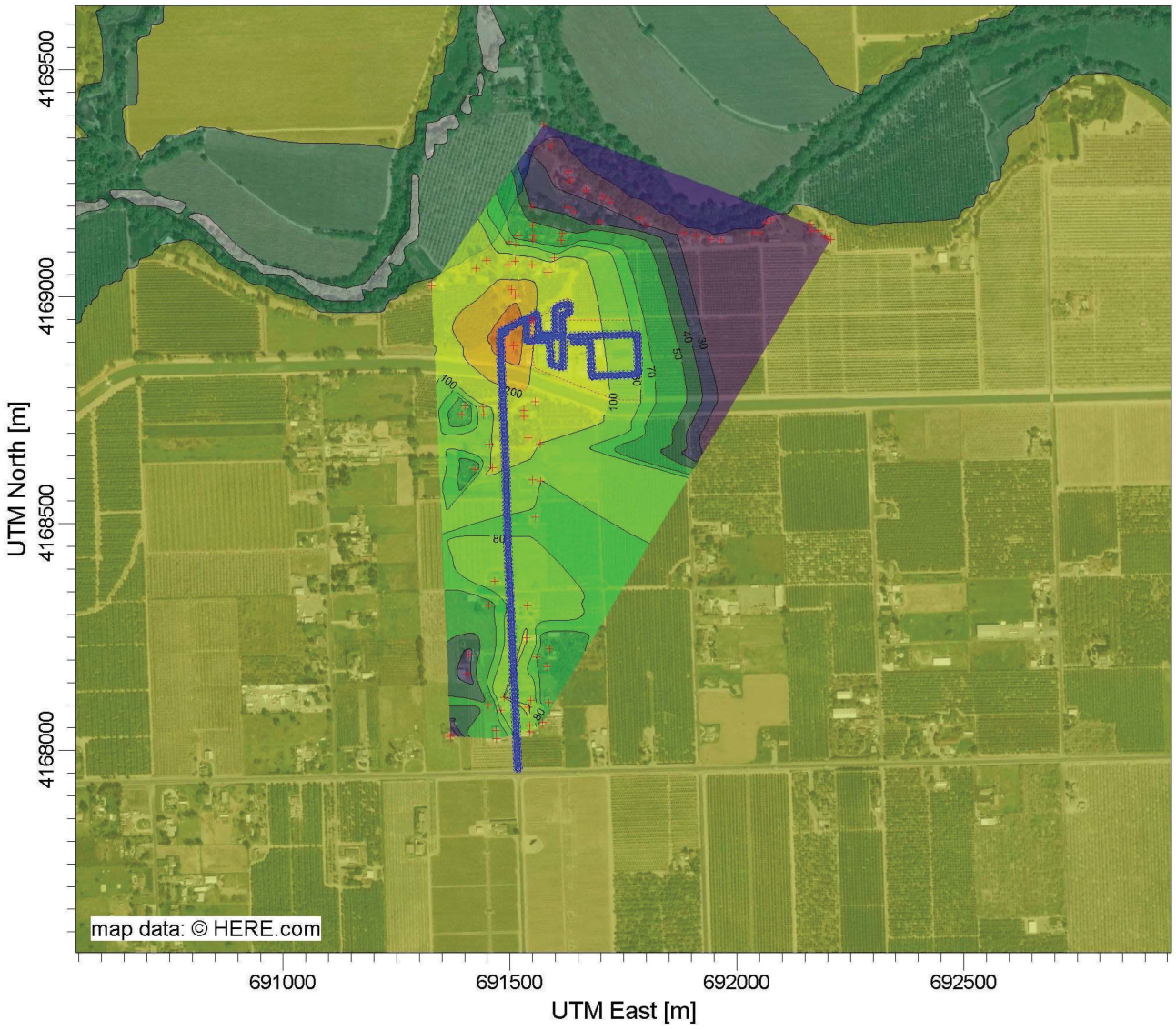
Health Risk Assessment

Almond Sheller Project

Parameters and Supporting Information

PROJECT TITLE:

Dispersion Trend (Unit Emissions)



PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 5 YEARS FOR SOURCE GROUP: ALL ug/m^3

Max: 375 [ug/m^3] at (691506.70, 4168892.79)

13 30 40 50 70 80 100 200 300 375

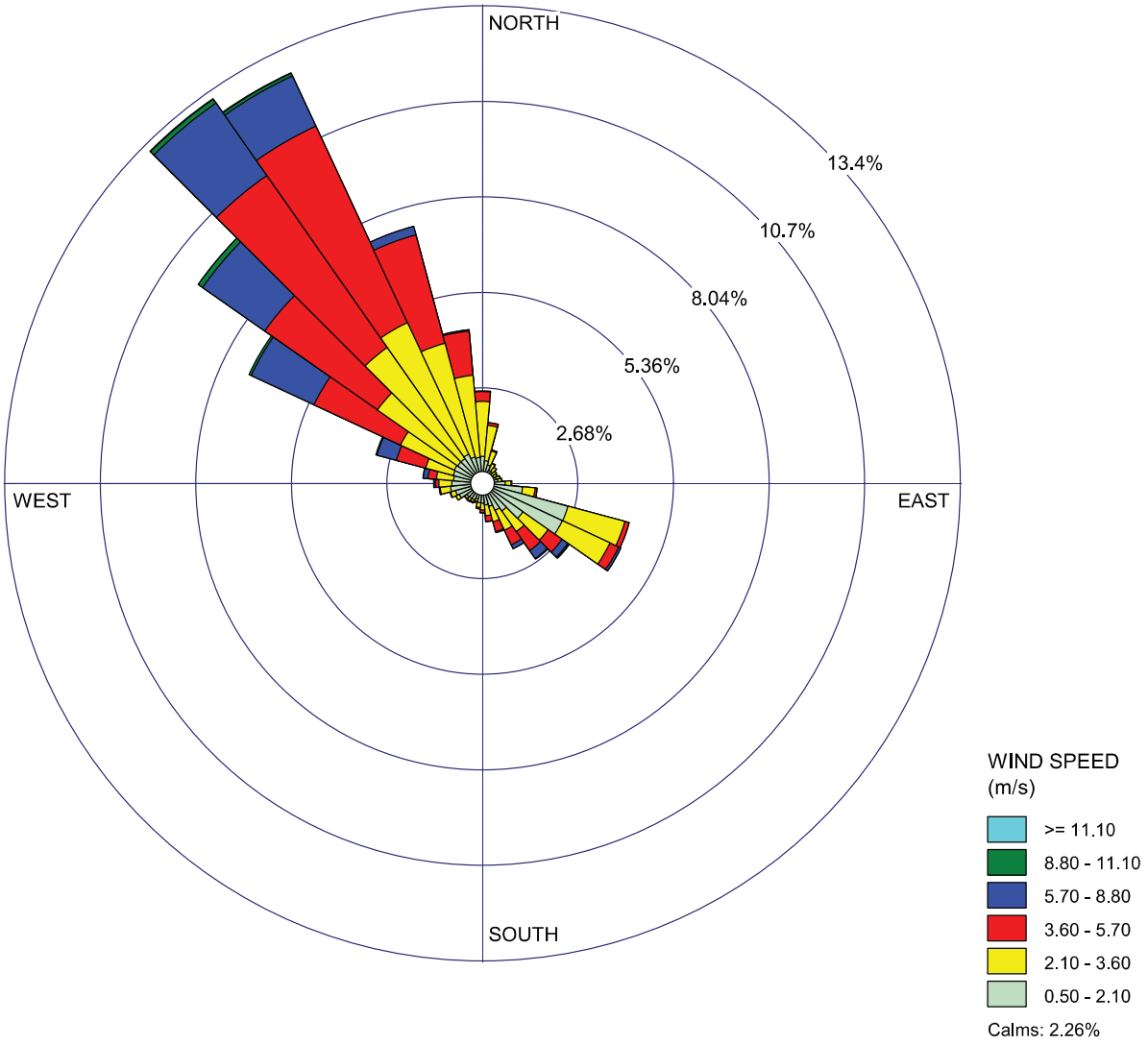
COMMENTS:	SOURCES: **5**		
	RECEPTORS: **81**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:15,185 0 0.5 km	
	MAX: **375 ug/m^3**	DATE: **7/19/2021**	PROJECT NO.:

WIND ROSE PLOT:

Wind Rose - Station #23258 (Blowing From)

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD: **Start Date: 1/1/2013 - 00:00** **End Date: 12/31/2017 - 23:59**		
	CALM WINDS: **2.26%**	TOTAL COUNT: **43582 hrs.**	
	AVG. WIND SPEED: **3.23 m/s**	DATE: **7/19/2021**	PROJECT NO.:

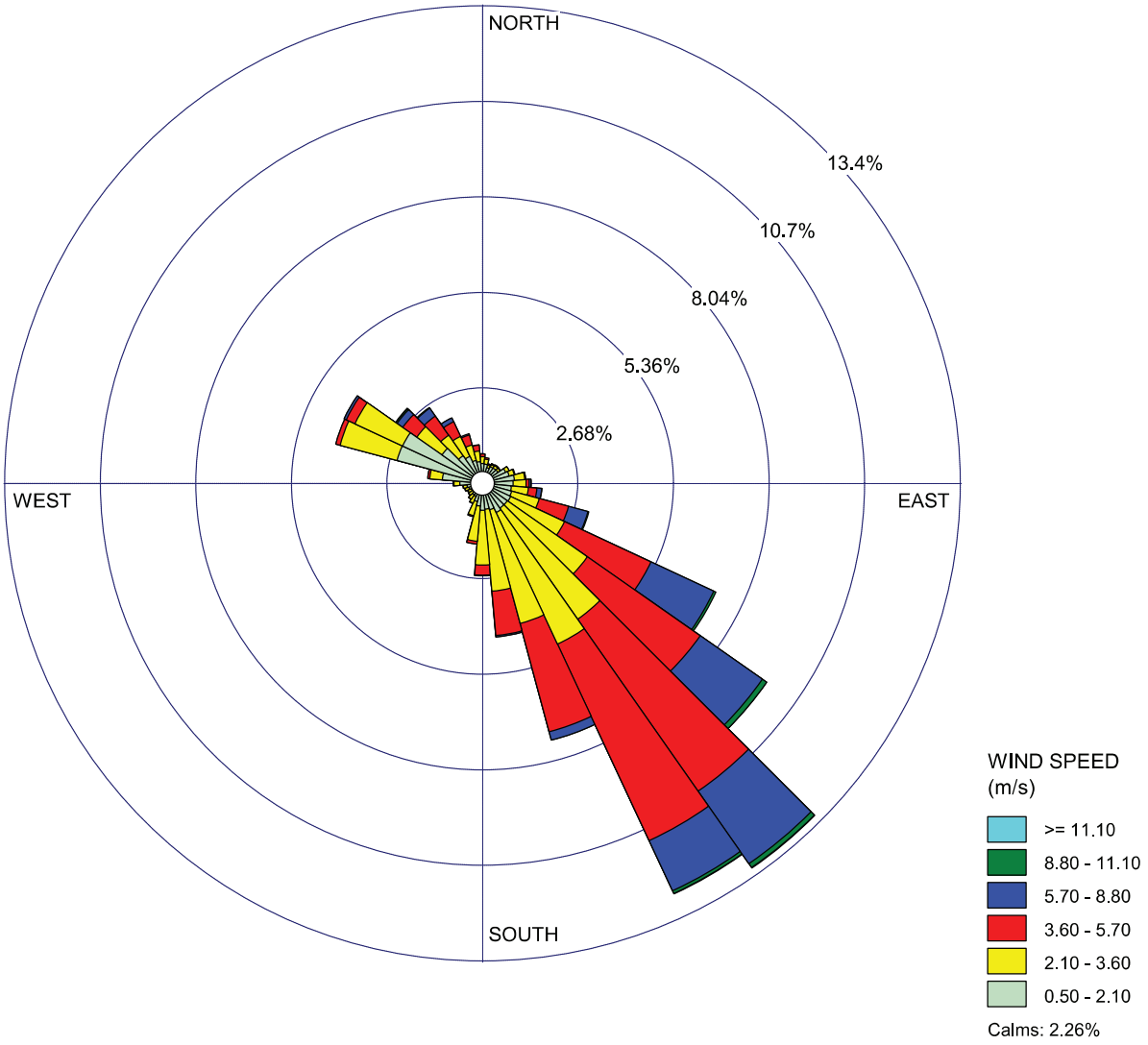
WRPLOT View - Lakes Environmental Software

WIND ROSE PLOT:

Wind Rose - Station #23258 (Blowing To)

DISPLAY:

Wind Speed
Flow Vector (blowing to)



COMMENTS:	DATA PERIOD: **Start Date: 1/1/2013 - 00:00** **End Date: 12/31/2017 - 23:59**		
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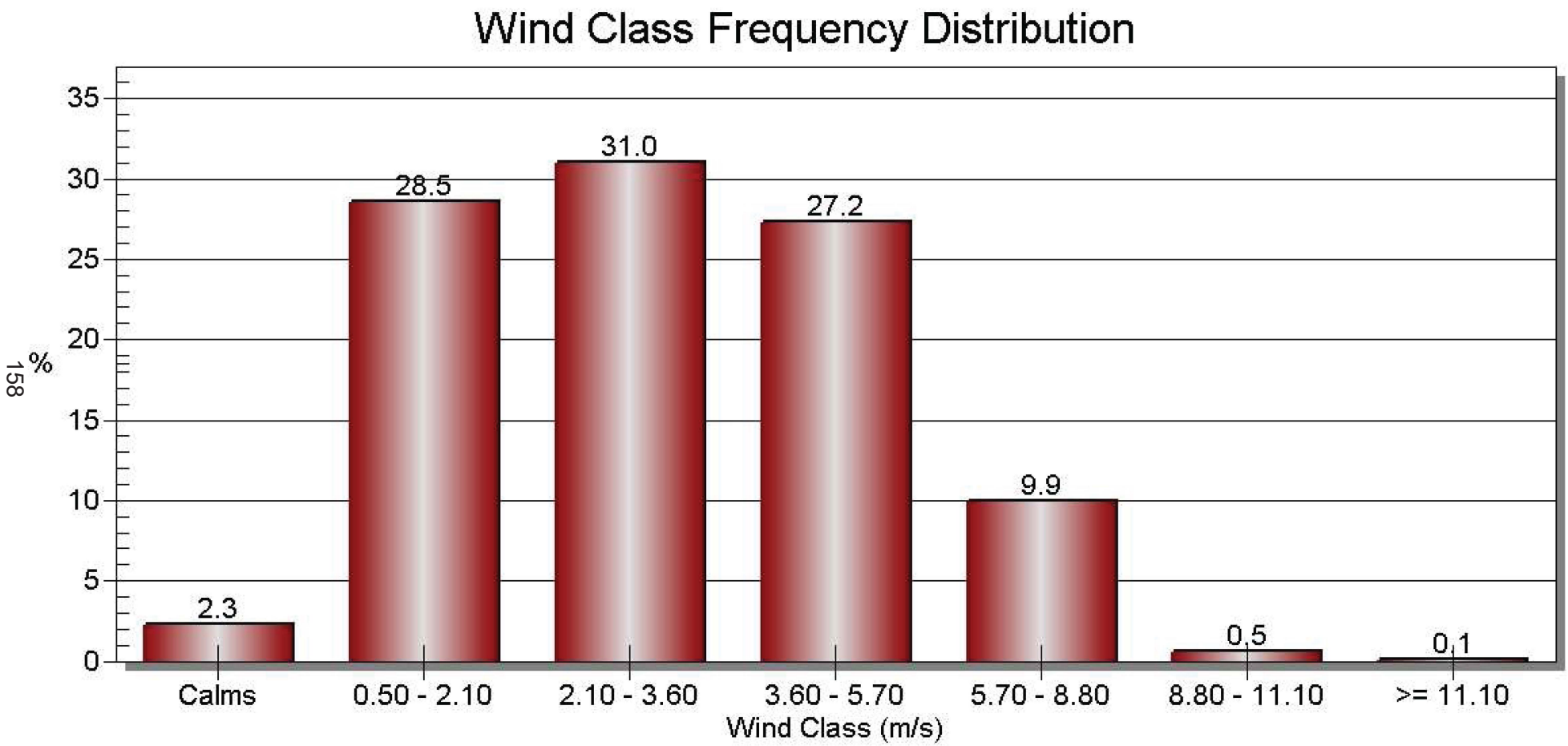
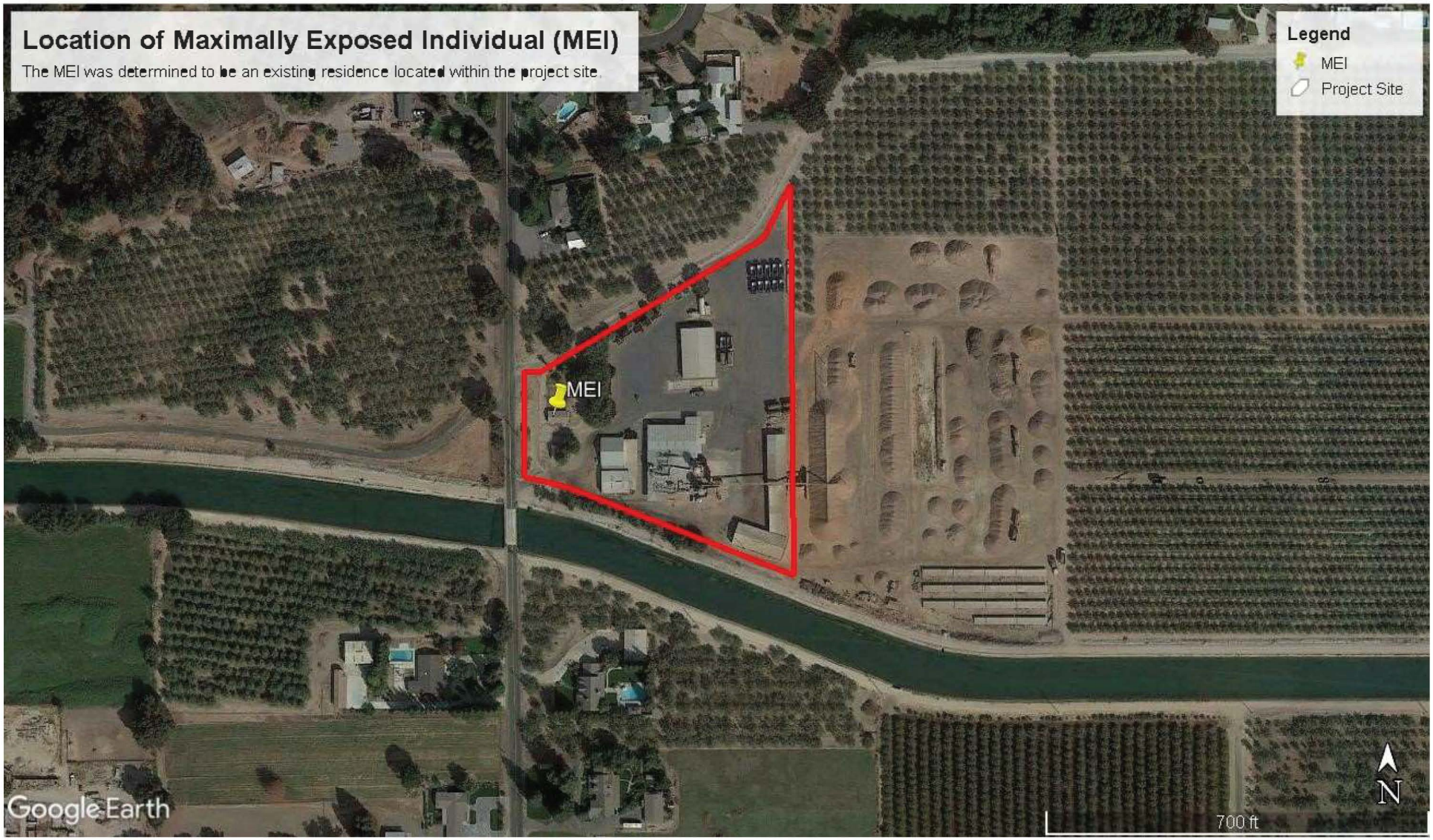
WRPLOT View - Lakes Environmental Software


Wind Class Frequency Distribution
35
30
25
20
15
10
5
0
%
158
2.3
28.5
31.0
27.2
9.9
0.5
0.1
Calms
0.50 - 2.10
2.10 - 3.60
3.60 - 5.70
5.70 - 8.80
8.80 - 11.10
>= 11.10
Wind Class (m/s)


Location of Maximally Exposed Individual (MEI)
The MEI was determined to be an existing residence located within the project site.
Legend
MEI
Project Site
MEI
Google Earth
700 ft
N

Location of Offsite Maximally Exposed Individual (MEI)
The offsite MEI was determined to be an existing residence located approximately 200 feet northwest of the project site, at 670 N Hopper Rd.
Offsite MEI
Google Earth
400 ft
N

Daily Truck Trip Estimates (Peak Season)

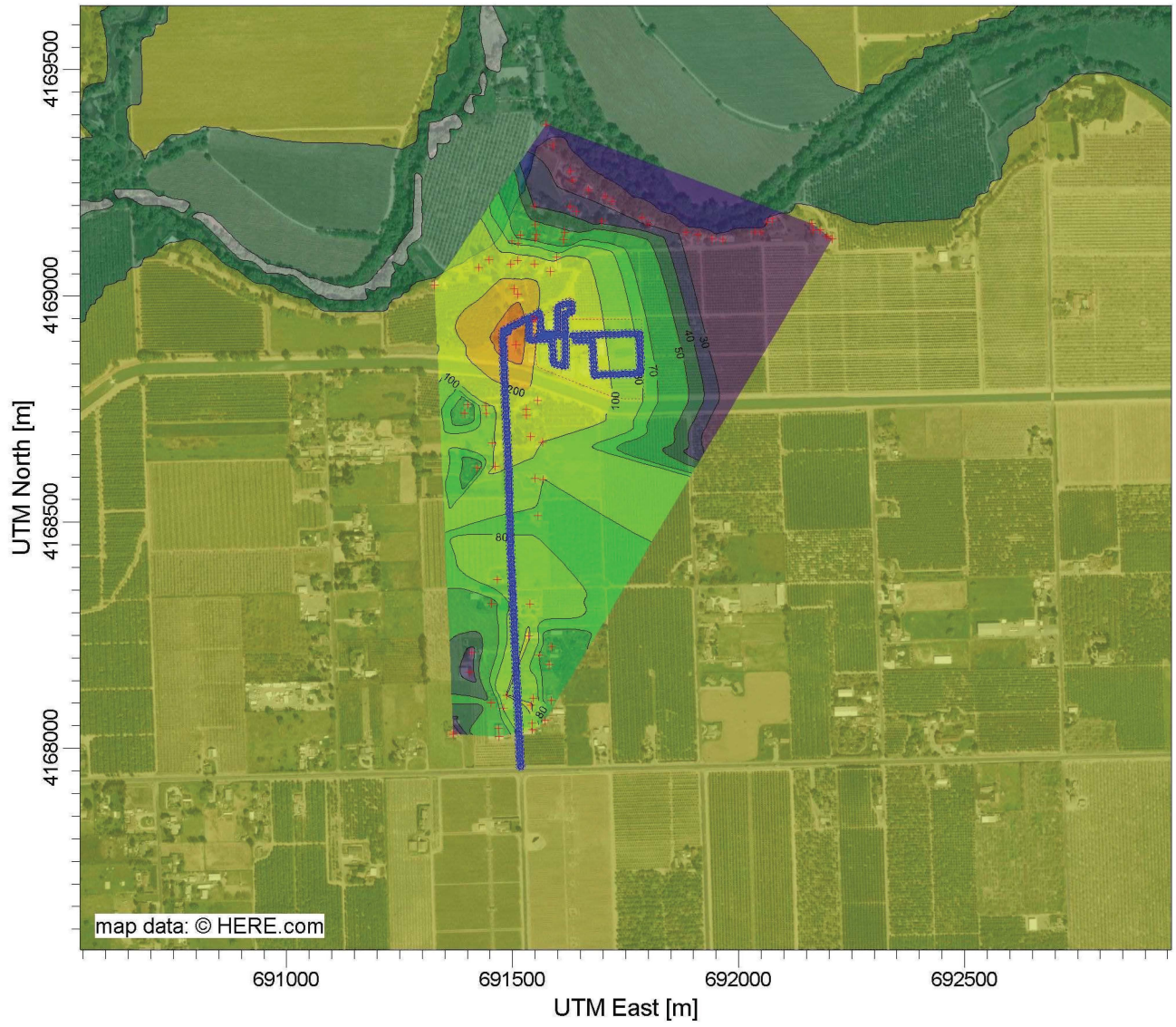
Time Period to Estimate Daily Trips

Start	End
Aug	Jan
5 months	
153 days	

	Inbound	Outbound	Total			After Rounding
1. 370 - inbound field run nuts. Mid-August – Mid October.	Trips	Trips	Trips	Days	Trips/Day	(Trips/Day)
*2-axle truck pull set of doubles (Hoppers)	471	471	942	62	15.1935	15
2. 170 - outbound meats. Mid Aug- Mid Oct. *2 axle truck with flat double trailers. *3 axle truck with semi-trailers.	170	170	340	62	5.48387	6
3. 135 - Loads of outbound shell. Mid Aug-Mid Nov. *3 axle truck – belt drive semi-trailers.	135	135	270	94	2.87234	3
4. 200 - Loads of hull outbound sept-jun 1st. *3 axle truck – belt drive semi-trailers.	200	200	400	105	3.80952	4
5. 85 – Loads of trash. Nov – Jan (1-2 day). *3 axle super dump trucks	85	85	170	62	2.74194	3
					T7 Ag (heavy ag truck)	22
					MHDT (3 axle truck used to represent trash pickups)	3
					HHDT (other 4+ axle truck)	6
					Total	**31**

PROJECT TITLE:

Dispersion Trend (Unit Emissions)



PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 5 YEARS FOR SOURCE GROUP: ALL ug/m^3

Max: 375 [ug/m^3] at (691506.70, 4168892.79)

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COMMENTS:	SOURCES: **5**		
	RECEPTORS: **81**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:15,185 0 0.5 km	
	MAX: **375 ug/m^3**	DATE: **7/19/2021**	PROJECT NO.:

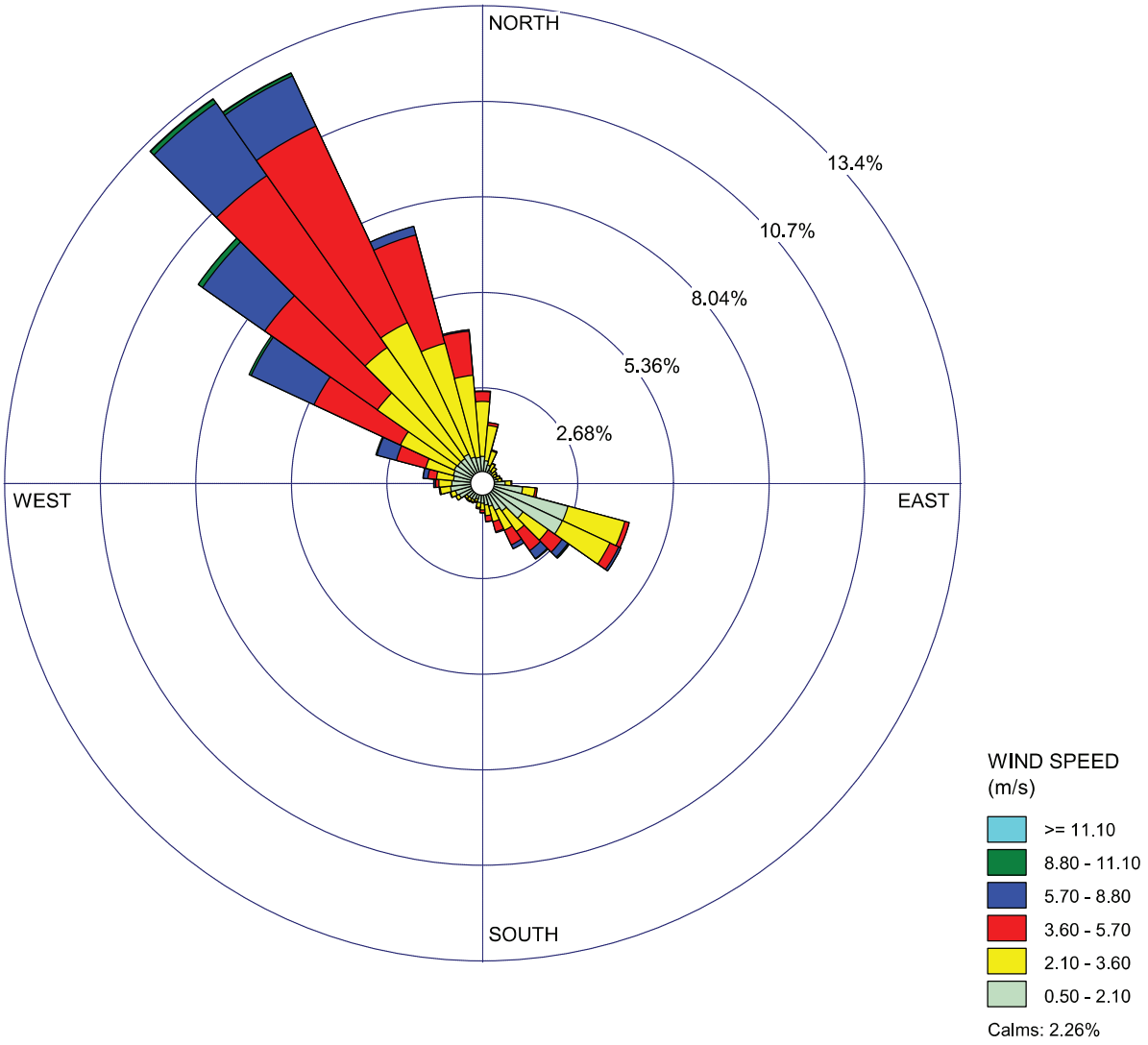
AERMOD View - Lakes Environmental Software G:\AS_HRA\HRA\HRA.isc

WIND ROSE PLOT:

Wind Rose - Station #23258 (Blowing From)

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD: **Start Date: 1/1/2013 - 00:00** **End Date: 12/31/2017 - 23:59**		
	CALM WINDS: **2.26%**	TOTAL COUNT: **43582 hrs.**	
	AVG. WIND SPEED: **3.23 m/s**	DATE: **7/19/2021**	PROJECT NO.:

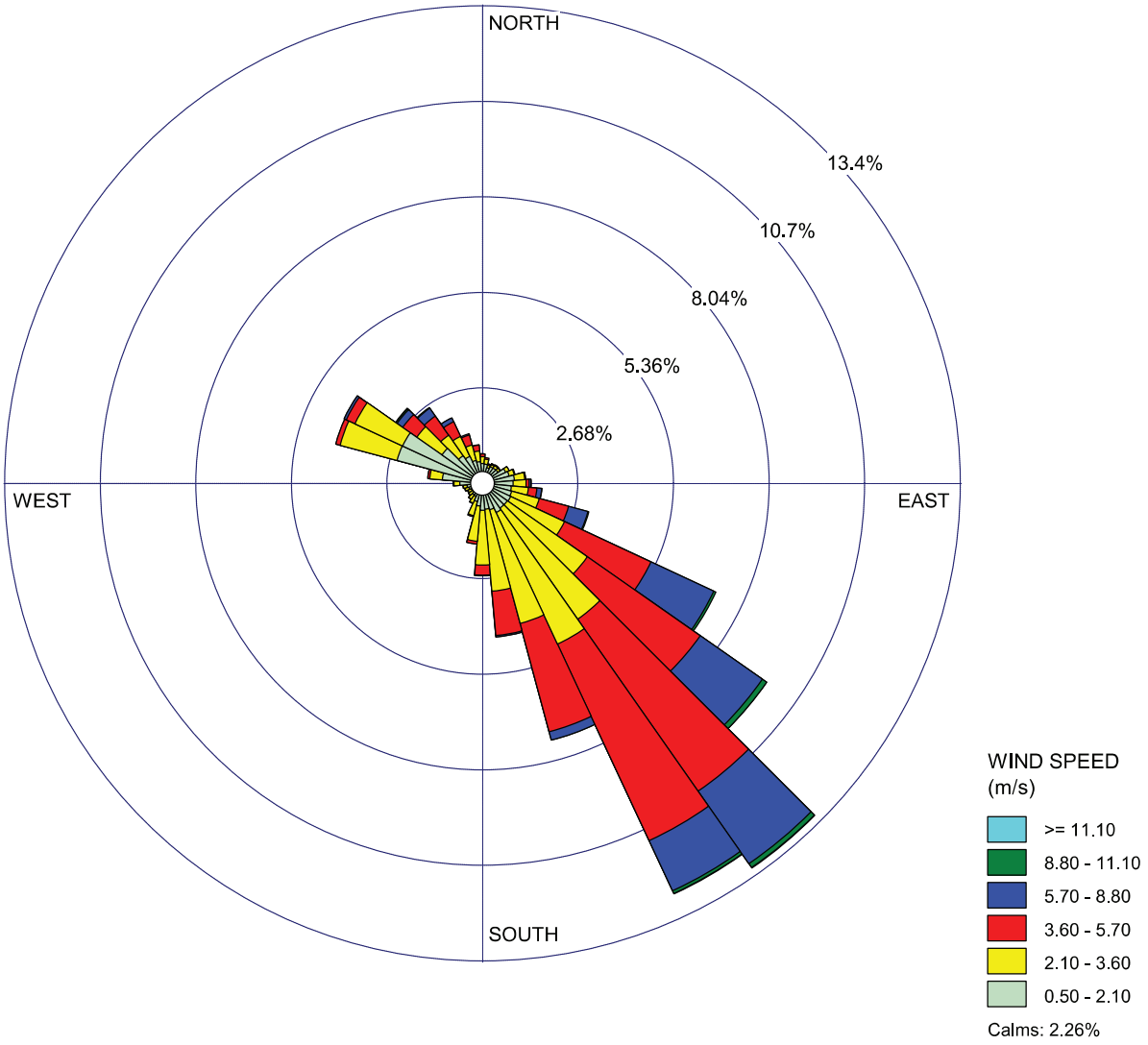
WRPLOT View - Lakes Environmental Software

WIND ROSE PLOT:

Wind Rose - Station #23258 (Blowing To)

DISPLAY:

Wind Speed
Flow Vector (blowing to)



COMMENTS:	DATA PERIOD: **Start Date: 1/1/2013 - 00:00** **End Date: 12/31/2017 - 23:59**		
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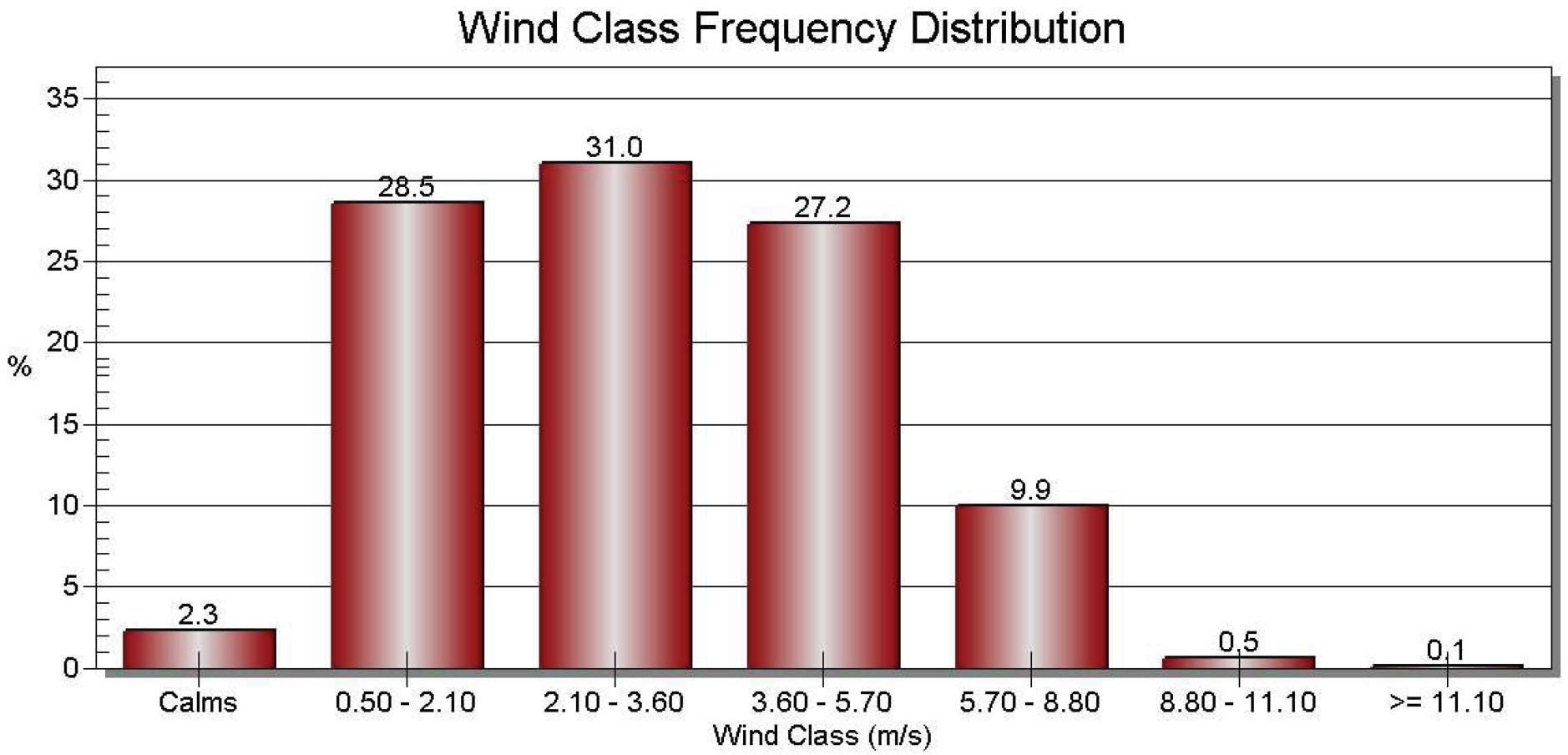
WRPLOT View - Lakes Environmental Software


Wind Class Frequency Distribution
35
30
25
20
15
10
5
0
%
2.3
28.5
31.0
27.2
9.9
0.5
0.1
Calms
0.50 - 2.10
2.10 - 3.60
3.60 - 5.70
5.70 - 8.80
8.80 - 11.10
>= 11.10
Wind Class (m/s)

Location of Maximally Exposed Individual (MEI)
The MEI was determined to be an existing residence located within the project site.
Legend
MEI
Project Site
MEI
Google Earth
700 ft
N

Location of Offsite Maximally Exposed Individual (MEI)
The offsite MEI was determined to be an existing residence located approximately 200 feet northwest of the project site, at 670 N Hopper Rd.
Offsite MEI
Google Earth
400 ft
N

Daily Truck Trip Estimates (Peak Season)

Time Period to Estimate Daily Trips

Start	End
Aug	Jan
5 months	
153 days	

	Inbound Trips	Outbound Trips	Total Trips	Days	Trips/Day	After Rounding (Trips/Day)
1. 370 - inbound field run nuts. Mid-August – Mid October. *2-axle truck pull set of doubles (Hoppers)	471	471	942	62	15.1935	15
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					T7 Ag (heavy ag truck)	22
					MHDT (3 axle truck used to represent trash pickups)	3
					HHDT (other 4+ axle truck)	6
					Total	**31**

Health Risk Assessment

Almond Sheller Project

DPM from Off-road Equipment Use

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Almond Sheller Project - On-site Equipment and On-site Dust Emissions

Stanislaus County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	4.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	46
Climate Zone	3			**Operational Year**	2021
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Almond Sheller Project - On-site Equipment + On-site Dust Emission Estimates

Land Use - 4-acre project site

Construction Phase - Operational estimates only (zeroed out construction parameters - the project does not involve construction)

Off-road Equipment - Zeroed out construction equipment

Off-road Equipment - On-site equipment

Off-road Equipment - On-site equipment

Trips and VMT - On-site operational equipment represented in the construction phase to account for fugitive dust-no construction is proposed as part of the project
Daily on-site trips during the peak season for dust estimates
31 daily truck trips
On-site travel

On-road Fugitive Dust - 10% of on-site travel paths paved (project-specific information)

Construction Off-road Equipment Mitigation - Dust control measures applied

Almond Sheller Project - On-site Equipment and On-site Dust Emissions - Stanislaus County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	8.00	154.00
tblConstructionPhase	NumDays	8.00	211.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblLandUse	LotAcreage	0.00	4.00
tblOffRoadEquipment	HorsePower	203.00	179.00
tblOffRoadEquipment	HorsePower	203.00	179.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		On-site Equipment (Peak Season)
tblOffRoadEquipment	PhaseName		On-site Equipment (Peak Season)
tblOffRoadEquipment	PhaseName		On-site Equipment (Off Season)
tblOffRoadEquipment	PhaseName		On-site Equipment (Off Season)
tblOnRoadDust	HaulingPercentPave	100.00	10.00
tblOnRoadDust	HaulingPercentPave	100.00	10.00
tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.33
tblTripsAndVMT	HaulingTripLength	20.00	0.33
tblTripsAndVMT	HaulingTripNumber	0.00	31.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0376	0.3863	0.2509	5.7000e-004	3.6000e-003	0.0188	0.0224	3.6000e-004	0.0173	0.0177	0.0000	50.4421	50.4421	0.0163	1.0000e-005	50.8522
2022	0.0449	0.4431	0.3393	8.0000e-004	4.9000e-004	0.0213	0.0218	5.0000e-005	0.0196	0.0196	0.0000	69.8552	69.8552	0.0226	0.0000	70.4203
Maximum	**0.0449**	**0.4431**	**0.3393**	**8.0000e-004**	**3.6000e-003**	**0.0213**	**0.0224**	**3.6000e-004**	**0.0196**	**0.0196**	**0.0000**	**69.8552**	**69.8552**	**0.0226**	**1.0000e-005**	**70.4203**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0376	0.3863	0.2509	5.7000e-004	3.6000e-003	0.0188	0.0224	3.6000e-004	0.0173	0.0177	0.0000	50.4421	50.4421	0.0163	1.0000e-005	50.8522
2022	0.0449	0.4431	0.3393	8.0000e-004	4.9000e-004	0.0213	0.0218	5.0000e-005	0.0196	0.0196	0.0000	69.8551	69.8551	0.0226	0.0000	70.4202
Maximum	**0.0449**	**0.4431**	**0.3393**	**8.0000e-004**	**3.6000e-003**	**0.0213**	**0.0224**	**3.6000e-004**	**0.0196**	**0.0196**	**0.0000**	**69.8551**	**69.8551**	**0.0226**	**1.0000e-005**	**70.4202**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	8-2-2021	11-1-2021	0.2548	0.2548
2	11-2-2021	2-1-2022	0.2195	0.2195
3	2-2-2022	5-1-2022	0.1463	0.1463
4	5-2-2022	8-1-2022	0.1513	0.1513
5	8-2-2022	9-30-2022	0.0987	0.0987
		Highest	0.2548	0.2548

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	On-site Equipment (Peak Season)	Grading	8/1/2021	1/1/2022	7	154	
2	On-site Equipment (Off Season)	Grading	1/2/2022	10/24/2022	5	211	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
On-site Equipment (Peak Season)	Forklifts	2	7.00	89	0.20
On-site Equipment (Peak Season)	Rubber Tired Loaders	1	7.00	179	0.36
On-site Equipment (Off Season)	Forklifts	2	7.00	89	0.20
On-site Equipment (Off Season)	Rubber Tired Loaders	1	7.00	179	0.36

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
On-site Equipment (Peak Season)	3	0.00	0.00	31.00	16.80	6.60	0.33	LD_Mix	HDT_Mix	HHDT
On-site Equipment (Off Season)	3	0.00	0.00	4.00	16.80	6.60	0.33	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 On-site Equipment (Peak Season) - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0376	0.3859	0.2507	5.7000e-004		0.0188	0.0188		0.0173	0.0173	0.0000	50.3853	50.3853	0.0163	0.0000	50.7927
Total	**0.0376**	**0.3859**	**0.2507**	**5.7000e-004**	**0.0000**	**0.0188**	**0.0188**	**0.0000**	**0.0173**	**0.0173**	**0.0000**	**50.3853**	**50.3853**	**0.0163**	**0.0000**	**50.7927**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	3.4000e-004	2.3000e-004	0.0000	3.6000e-003	0.0000	3.6000e-003	3.6000e-004	0.0000	3.6000e-004	0.0000	0.0568	0.0568	0.0000	1.0000e-005	0.0595
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0000e-005**	**3.4000e-004**	**2.3000e-004**	**0.0000**	**3.6000e-003**	**0.0000**	**3.6000e-003**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**0.0000**	**0.0568**	**0.0568**	**0.0000**	**1.0000e-005**	**0.0595**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0376	0.3859	0.2507	5.7000e-004		0.0188	0.0188		0.0173	0.0173	0.0000	50.3853	50.3853	0.0163	0.0000	50.7927
Total	**0.0376**	**0.3859**	**0.2507**	**5.7000e-004**	**0.0000**	**0.0188**	**0.0188**	**0.0000**	**0.0173**	**0.0173**	**0.0000**	**50.3853**	**50.3853**	**0.0163**	**0.0000**	**50.7927**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	3.4000e-004	2.3000e-004	0.0000	3.6000e-003	0.0000	3.6000e-003	3.6000e-004	0.0000	3.6000e-004	0.0000	0.0568	0.0568	0.0000	1.0000e-005	0.0595
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0000e-005**	**3.4000e-004**	**2.3000e-004**	**0.0000**	**3.6000e-003**	**0.0000**	**3.6000e-003**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**0.0000**	**0.0568**	**0.0568**	**0.0000**	**1.0000e-005**	**0.0595**

3.2 On-site Equipment (Peak Season) - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1000e-004	2.0900e-003	1.6000e-003	0.0000		1.0000e-004	1.0000e-004		9.0000e-005	9.0000e-005	0.0000	0.3295	0.3295	1.1000e-004	0.0000	0.3321
Total	**2.1000e-004**	**2.0900e-003**	**1.6000e-003**	**0.0000**	**0.0000**	**1.0000e-004**	**1.0000e-004**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**0.3295**	**0.3295**	**1.1000e-004**	**0.0000**	**0.3321**

Almond Sheller Project - On-site Equipment and On-site Dust Emissions - Stanislaus County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	3.9000e-004
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.7000e-004**	**3.7000e-004**	**0.0000**	**0.0000**	**3.9000e-004**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1000e-004	2.0900e-003	1.6000e-003	0.0000		1.0000e-004	1.0000e-004		9.0000e-005	9.0000e-005	0.0000	0.3295	0.3295	1.1000e-004	0.0000	0.3321
Total	**2.1000e-004**	**2.0900e-003**	**1.6000e-003**	**0.0000**	**0.0000**	**1.0000e-004**	**1.0000e-004**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**0.3295**	**0.3295**	**1.1000e-004**	**0.0000**	**0.3321**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	3.9000e-004
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.7000e-004**	**3.7000e-004**	**0.0000**	**0.0000**	**3.9000e-004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 On-site Equipment (Off Season) - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0447	0.4410	0.3377	7.9000e-004		0.0212	0.0212		0.0195	0.0195	0.0000	69.5180	69.5180	0.0225	0.0000	70.0801
Total	**0.0447**	**0.4410**	**0.3377**	**7.9000e-004**	**0.0000**	**0.0212**	**0.0212**	**0.0000**	**0.0195**	**0.0195**	**0.0000**	**69.5180**	**69.5180**	**0.0225**	**0.0000**	**70.0801**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	4.0000e-005	3.0000e-005	0.0000	4.7000e-004	0.0000	4.7000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	7.3600e-003	7.3600e-003	0.0000	0.0000	7.7000e-003
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**4.0000e-005**	**3.0000e-005**	**0.0000**	**4.7000e-004**	**0.0000**	**4.7000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**7.3600e-003**	**7.3600e-003**	**0.0000**	**0.0000**	**7.7000e-003**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0447	0.4410	0.3377	7.9000e-004		0.0212	0.0212		0.0195	0.0195	0.0000	69.5179	69.5179	0.0225	0.0000	70.0800
Total	**0.0447**	**0.4410**	**0.3377**	**7.9000e-004**	**0.0000**	**0.0212**	**0.0212**	**0.0000**	**0.0195**	**0.0195**	**0.0000**	**69.5179**	**69.5179**	**0.0225**	**0.0000**	**70.0800**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	4.0000e-005	3.0000e-005	0.0000	4.7000e-004	0.0000	4.7000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	7.3600e-003	7.3600e-003	0.0000	0.0000	7.7000e-003
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**4.0000e-005**	**3.0000e-005**	**0.0000**	**4.7000e-004**	**0.0000**	**4.7000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**7.3600e-003**	**7.3600e-003**	**0.0000**	**0.0000**	**7.7000e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Almond Sheller Project - On-site Equipment and On-site Dust Emissions

Stanislaus County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	4.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	46
Climate Zone	3			**Operational Year**	2021
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Almond Sheller Project - On-site Equipment + On-site Dust Emission Estimates

Land Use - 4-acre project site

Construction Phase - Operational estimates only (zeroed out construction parameters - the project does not involve construction)

Off-road Equipment - Zeroed out construction equipment

Off-road Equipment - On-site equipment

Off-road Equipment - On-site equipment

Trips and VMT - On-site operational equipment represented in the construction phase to account for fugitive dust-no construction is proposed as part of the project
Daily on-site trips during the peak season for dust estimates
31 daily truck trips
On-site travel

On-road Fugitive Dust - 10% of on-site travel paths paved (project-specific information)

Construction Off-road Equipment Mitigation - Dust control measures applied

Almond Sheller Project - On-site Equipment and On-site Dust Emissions - Stanislaus County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	8.00	154.00
tblConstructionPhase	NumDays	8.00	211.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblLandUse	LotAcreage	0.00	4.00
tblOffRoadEquipment	HorsePower	203.00	179.00
tblOffRoadEquipment	HorsePower	203.00	179.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		On-site Equipment (Peak Season)
tblOffRoadEquipment	PhaseName		On-site Equipment (Peak Season)
tblOffRoadEquipment	PhaseName		On-site Equipment (Off Season)
tblOffRoadEquipment	PhaseName		On-site Equipment (Off Season)
tblOnRoadDust	HaulingPercentPave	100.00	10.00
tblOnRoadDust	HaulingPercentPave	100.00	10.00
tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.33
tblTripsAndVMT	HaulingTripLength	20.00	0.33
tblTripsAndVMT	HaulingTripNumber	0.00	31.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0376	0.3863	0.2509	5.7000e-004	3.6000e-003	0.0188	0.0224	3.6000e-004	0.0173	0.0177	0.0000	50.4421	50.4421	0.0163	1.0000e-005	50.8522
2022	0.0449	0.4431	0.3393	8.0000e-004	4.9000e-004	0.0213	0.0218	5.0000e-005	0.0196	0.0196	0.0000	69.8552	69.8552	0.0226	0.0000	70.4203
Maximum	**0.0449**	**0.4431**	**0.3393**	**8.0000e-004**	**3.6000e-003**	**0.0213**	**0.0224**	**3.6000e-004**	**0.0196**	**0.0196**	**0.0000**	**69.8552**	**69.8552**	**0.0226**	**1.0000e-005**	**70.4203**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0376	0.3863	0.2509	5.7000e-004	3.6000e-003	0.0188	0.0224	3.6000e-004	0.0173	0.0177	0.0000	50.4421	50.4421	0.0163	1.0000e-005	50.8522
2022	0.0449	0.4431	0.3393	8.0000e-004	4.9000e-004	0.0213	0.0218	5.0000e-005	0.0196	0.0196	0.0000	69.8551	69.8551	0.0226	0.0000	70.4202
Maximum	**0.0449**	**0.4431**	**0.3393**	**8.0000e-004**	**3.6000e-003**	**0.0213**	**0.0224**	**3.6000e-004**	**0.0196**	**0.0196**	**0.0000**	**69.8551**	**69.8551**	**0.0226**	**1.0000e-005**	**70.4202**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	8-2-2021	11-1-2021	0.2548	0.2548
2	11-2-2021	2-1-2022	0.2195	0.2195
3	2-2-2022	5-1-2022	0.1463	0.1463
4	5-2-2022	8-1-2022	0.1513	0.1513
5	8-2-2022	9-30-2022	0.0987	0.0987
		Highest	0.2548	0.2548

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	On-site Equipment (Peak Season)	Grading	8/1/2021	1/1/2022	7	154	
2	On-site Equipment (Off Season)	Grading	1/2/2022	10/24/2022	5	211	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
On-site Equipment (Peak Season)	Forklifts	2	7.00	89	0.20
On-site Equipment (Peak Season)	Rubber Tired Loaders	1	7.00	179	0.36
On-site Equipment (Off Season)	Forklifts	2	7.00	89	0.20
On-site Equipment (Off Season)	Rubber Tired Loaders	1	7.00	179	0.36

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
On-site Equipment (Peak Season)	3	0.00	0.00	31.00	16.80	6.60	0.33	LD_Mix	HDT_Mix	HHDT
On-site Equipment (Off Season)	3	0.00	0.00	4.00	16.80	6.60	0.33	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 On-site Equipment (Peak Season) - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0376	0.3859	0.2507	5.7000e-004		0.0188	0.0188		0.0173	0.0173	0.0000	50.3853	50.3853	0.0163	0.0000	50.7927
Total	**0.0376**	**0.3859**	**0.2507**	**5.7000e-004**	**0.0000**	**0.0188**	**0.0188**	**0.0000**	**0.0173**	**0.0173**	**0.0000**	**50.3853**	**50.3853**	**0.0163**	**0.0000**	**50.7927**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	3.4000e-004	2.3000e-004	0.0000	3.6000e-003	0.0000	3.6000e-003	3.6000e-004	0.0000	3.6000e-004	0.0000	0.0568	0.0568	0.0000	1.0000e-005	0.0595
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0000e-005**	**3.4000e-004**	**2.3000e-004**	**0.0000**	**3.6000e-003**	**0.0000**	**3.6000e-003**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**0.0000**	**0.0568**	**0.0568**	**0.0000**	**1.0000e-005**	**0.0595**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0376	0.3859	0.2507	5.7000e-004		0.0188	0.0188		0.0173	0.0173	0.0000	50.3853	50.3853	0.0163	0.0000	50.7927
Total	**0.0376**	**0.3859**	**0.2507**	**5.7000e-004**	**0.0000**	**0.0188**	**0.0188**	**0.0000**	**0.0173**	**0.0173**	**0.0000**	**50.3853**	**50.3853**	**0.0163**	**0.0000**	**50.7927**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	3.4000e-004	2.3000e-004	0.0000	3.6000e-003	0.0000	3.6000e-003	3.6000e-004	0.0000	3.6000e-004	0.0000	0.0568	0.0568	0.0000	1.0000e-005	0.0595
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0000e-005**	**3.4000e-004**	**2.3000e-004**	**0.0000**	**3.6000e-003**	**0.0000**	**3.6000e-003**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**0.0000**	**0.0568**	**0.0568**	**0.0000**	**1.0000e-005**	**0.0595**

3.2 On-site Equipment (Peak Season) - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1000e-004	2.0900e-003	1.6000e-003	0.0000		1.0000e-004	1.0000e-004		9.0000e-005	9.0000e-005	0.0000	0.3295	0.3295	1.1000e-004	0.0000	0.3321
Total	**2.1000e-004**	**2.0900e-003**	**1.6000e-003**	**0.0000**	**0.0000**	**1.0000e-004**	**1.0000e-004**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**0.3295**	**0.3295**	**1.1000e-004**	**0.0000**	**0.3321**

Almond Sheller Project - On-site Equipment and On-site Dust Emissions - Stanislaus County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	3.9000e-004
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.7000e-004**	**3.7000e-004**	**0.0000**	**0.0000**	**3.9000e-004**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1000e-004	2.0900e-003	1.6000e-003	0.0000		1.0000e-004	1.0000e-004		9.0000e-005	9.0000e-005	0.0000	0.3295	0.3295	1.1000e-004	0.0000	0.3321
Total	**2.1000e-004**	**2.0900e-003**	**1.6000e-003**	**0.0000**	**0.0000**	**1.0000e-004**	**1.0000e-004**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**0.3295**	**0.3295**	**1.1000e-004**	**0.0000**	**0.3321**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	3.9000e-004
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.7000e-004**	**3.7000e-004**	**0.0000**	**0.0000**	**3.9000e-004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 On-site Equipment (Off Season) - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0447	0.4410	0.3377	7.9000e-004		0.0212	0.0212		0.0195	0.0195	0.0000	69.5180	69.5180	0.0225	0.0000	70.0801
Total	**0.0447**	**0.4410**	**0.3377**	**7.9000e-004**	**0.0000**	**0.0212**	**0.0212**	**0.0000**	**0.0195**	**0.0195**	**0.0000**	**69.5180**	**69.5180**	**0.0225**	**0.0000**	**70.0801**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	4.0000e-005	3.0000e-005	0.0000	4.7000e-004	0.0000	4.7000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	7.3600e-003	7.3600e-003	0.0000	0.0000	7.7000e-003
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**4.0000e-005**	**3.0000e-005**	**0.0000**	**4.7000e-004**	**0.0000**	**4.7000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**7.3600e-003**	**7.3600e-003**	**0.0000**	**0.0000**	**7.7000e-003**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0447	0.4410	0.3377	7.9000e-004		0.0212	0.0212		0.0195	0.0195	0.0000	69.5179	69.5179	0.0225	0.0000	70.0800
Total	**0.0447**	**0.4410**	**0.3377**	**7.9000e-004**	**0.0000**	**0.0212**	**0.0212**	**0.0000**	**0.0195**	**0.0195**	**0.0000**	**69.5179**	**69.5179**	**0.0225**	**0.0000**	**70.0800**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	4.0000e-005	3.0000e-005	0.0000	4.7000e-004	0.0000	4.7000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	7.3600e-003	7.3600e-003	0.0000	0.0000	7.7000e-003
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**4.0000e-005**	**3.0000e-005**	**0.0000**	**4.7000e-004**	**0.0000**	**4.7000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**7.3600e-003**	**7.3600e-003**	**0.0000**	**0.0000**	**7.7000e-003**

Health Risk Assessment

2021 Emission Estimates

Health Risk Assessment

Peak Season 2021 Emissions

Almond Sheller Project

Estimation of On-site Area Emissions During the Peak Season

Size of area source (accounted for in AERMOD):		37,474.9	sq-meters
Season	**On-site Activity**	**On-site DPM (tons)**	
Peak Season	On-site Equipment	0.01880	tons/year
Total Peak Season (On-site Equipment)		1.880E-02	tons/year
Average Emission		1.707E+04	grams
		5.413E-04	grams/sec
		1.444E-08	grams/m2-sec

Almond Sheller Project

Emission Assumptions For Vehicle Exhaust/DPM

Emission Factors

Truck and Exhaust Emissions
EMFAC2017 for running emissions
Calculations for Stanislaus County

Traffic Allocation

1) Traffic distribution based on site layout identified in the site plan
2) Project-specific trip generation based on information provided by the project applicant
3) Onsite travel emissions generated from diesel trucks
4) Onsite idling emissions generated by trucks

Emission Source Configuration

1) Project onsite truck traffic represented by two line volume sources
2) Project onsite truck idling represented as a line volume source
3) Offsite vehicles represented by a line source for travel within approximately 1,000 feet of the project site

Onsite Vehicle Travel Segments

Segment	Source ID	Segment Travel Distance (m)
On-site Truck Travel - Segment 1	SLINE2	603.9
On-site Truck Travel - Segment 2	SLINE3	461.0
Onsite Truck Idling		
On-site Truck Idling - Location 1	SLINE4	60.0

Offsite Vehicle Travel Segments

Segment		Segment Travel Distance (m)
Road Segment 1 – Offsite Truck Travel	SLINE1	981.3

Other Input Parameters

Facility Operations (hr/day): 24

Almond Sheller Project

Vehicle Fleet Mix

Total Daily Truck Trips (Peak Season) (trips/day)		Trucks
	Daily Trips	31
892	Fleet Mix	100.0%

Vehicle Fleet

	% Diesel Assumed	**Total Number of Daily Trips**	**Number of Daily Diesel Trips**
T7 Ag (heavy ag truck)	100.0%	11	11
MHDT (3 axle truck used to represent trash pickups)	100.0%	3	3
HHDT (other 4+ axle truck)	100.0%	17	17
Total	—	31	31

Almond Sheller Project

Diesel Vehicle Emissions (Peak Season)

Facility Operations

24 hrs/day, 153 days/year (seasonal)

Roadway Links Modeled

Link	Truck Type	Average Speed (mph)	Emission Factor (g/mi)	Trips per Daily (in and out)	Link Length (m)	Link Length (mi)	Ave Emissions Over Link (g/day)	Ave Emissions (lbs/day)	Average Emissions (g/sec)	Emissions for all Vehicles (g/sec)
SLINE2	**LHDT1**	5 mph	0.098	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	LHDT2	5 mph	0.078	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	MHDT	5 mph	0.194	3.0	603.9	0.38	2.182E-01	4.81E-04	2.526E-06	
	HHDT	5 mph	0.115	17.0	603.9	0.38	7.364E-01	1.62E-03	8.523E-06	
	T7 Ag	5 mph	2.276	11.0	603.9	0.38	9.391E+00	2.07E-02	1.087E-04	**1.20E-04**
SLINE3	**LHDT1**	5 mph	0.098	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	5 mph	0.078	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	MHDT	5 mph	0.194	3.0	461	0.29	1.67E-01	3.67E-04	1.93E-06	
	HHDT	5 mph	0.115	17.0	461	0.29	5.62E-01	1.24E-03	6.51E-06	
	T7 Ag	5 mph	2.276	11.0	461	0.29	7.17E+00	1.58E-02	8.30E-05	**9.14E-05**

Diesel Vehicle Emissions (Peak Season)

Diesel truck Idling Emissions

Onsite Vehicle Travel Segments	Truck Type	DPM Emission Factor (grams/trip)	Number Idling Vehicle Trips/day	Emissions (g/day)	Emissions (lb/day)	Average Emissions (g/sec)	Total Emissions for all Vehicles (g/sec)
SLINE4	**LHDT1**	0.0011	0.0	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	0.0015	0.0	0.00E+00	0.00E+00	0.00E+00	
	MHDT	0.0025	3.0	7.64E-03	1.68E-05	8.84E-08	
	HHDT	0.0102	17.0	1.74E-01	3.83E-04	2.01E-06	
	T7 Ag	0.0102	11.0	1.12E-01	2.48E-04	1.30E-06	**3.40E-06**

Almond Sheller Project

Project Operations 24 hours/day

Off-site DSL Truck Roadway Emissions (Peak Season)

Segment ID	Description	% total Trips
SLINE1	Road Segment 1 – Offsite Truck Travel	100.0%
	Total	100.0%

Segment ID: SLINE1
Travel Distance: 981.3 meters
Operations 24 hours/day

Vehicle Class	Daily Trips (trips/day)	Emission Factor (g/mi)	Travel Distance (mi)	Emissions (g/day)	Emissions (g/sec)
LHDT1-DSL	0	0.034	0.61	0.00	0.00E+00
LHDT2-DSL	0	0.029	0.61	0.00	0.00E+00
MHDT-DSL	3	0.070	0.61	0.13	1.47E-06
HHDT-DSL	17	0.036	0.61	0.37	4.33E-06
T7 Ag	11	0.756	0.61	5.07	5.87E-05
Total	31	—	—	—	**6.45E-05**

DPM 2021

EMFAC2017 Running Diesel Exhaust Emissions
in units of grams/mile

		Emission Factor (g/mi)			
		5 mph	**10 mph**	**25 mph**	**35 mph**
LHDT1	DSL	0.10	0.07	0.03	0.03
LHDT2	DSL	0.08	0.06	0.03	0.02
MHDT	DSL	0.19	0.16	0.07	0.06
HHDT	DSL	0.12	0.08	0.04	0.04
T7 Ag	DSL	2.28	1.91	0.76	0.59

Idling Emissions for Trucks (Emission Factors from CalEEMod*)
in units of grams/trip

Vehicle Class	**Vehicle Speed (mph)**	**DPM (grams/trip)**
LHDT1	Idle	0.001136
LHDT2	Idle	0.001477
MHDT	Idle	0.002547
HHDT	Idle	0.010216
T7 Ag	Idle	0.010216

*CalEEMod Version 2020.4.0

Almond Sheller Project

Peak Season Emissions (DPM)—Unmitigated Concentrations

		Maximum DPM (ug/m3)	UTM X	UTM Y
		4.19561E-02	691511.55	4169004.64
Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec):	6.45E-05	4.0765E-02	691506.70	4168892.79
Annual Average Total DPM Emission Rate - On-site-Road Segment 1 (grams/sec):	1.20E-04			
Annual Average Total DPM Emission Rate - On-site-Road Segment 2 (grams/sec):	6.33E-04			
Annual Average Total DPM Emission Rate - On-site Truck Idle (grams/sec):	3.40E-06			

X	Y	Unit Emissions VALUES AVERAGED On-site Area	Unit Emissions VALUES AVERAGED Offsite Truck Travel	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 1	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 2	Unit Emissions VALUES AVERAGED On-site Truck Idle	Area Annual DPM Exhaust w/Actual Emissions (ug/m3)	Offsite Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 1 Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 2 Annual DPM Exhaust w/Actual Emissions (ug/m3)	On-site Truck Idle Annual DPM Exhaust w/Actual Emissions (ug/m3)	**Total DPM (ug/m3)**
691440.11	4168757.21	5.99593	53.66444	12.48249	6.74768	12.05051	0.00E+00	3.46E-03	1.49E-03	4.27E-03	4.10E-05	9.2641E-03
691441.12	4168740.17	5.55138	54.32980	11.52916	6.40725	11.18675	0.00E+00	3.50E-03	1.38E-03	4.05E-03	3.80E-05	8.9745E-03
691393.51	4168741.18	4.36404	28.25195	8.51691	5.16869	8.43857	0.00E+00	1.82E-03	1.02E-03	3.27E-03	2.87E-05	6.1398E-03
691554.37	4168769.24	18.56590	38.34351	39.26007	14.58564	39.53836	0.00E+00	2.47E-03	4.70E-03	9.23E-03	1.34E-04	1.6535E-02
691400.53	4168760.72	4.94007	30.34146	9.64259	5.64489	9.47646	0.00E+00	1.96E-03	1.15E-03	3.57E-03	3.22E-05	6.7141E-03
691530.82	4168750.20	12.05369	60.31925	26.11319	11.12960	25.88586	0.00E+00	3.89E-03	3.13E-03	7.04E-03	8.80E-05	1.4145E-02
691530.31	4168737.17	11.12209	62.29774	23.42469	10.44974	23.50427	0.00E+00	4.02E-03	2.80E-03	6.61E-03	7.99E-05	1.3512E-02
691538.83	4168689.06	9.47976	56.44274	17.98067	8.97340	18.55927	0.00E+00	3.64E-03	2.15E-03	5.68E-03	6.31E-05	1.1532E-02
691565.89	4168677.03	11.37818	37.76047	19.89184	10.12985	20.48255	0.00E+00	2.43E-03	2.38E-03	6.41E-03	6.96E-05	1.1295E-02
691454.65	4168675.53	4.71346	69.89826	9.29499	5.57452	9.16801	0.00E+00	4.51E-03	1.11E-03	3.53E-03	3.12E-05	9.1768E-03
691461.06	4168623.27	4.21721	78.28591	7.79324	4.91443	7.88763	0.00E+00	5.05E-03	9.33E-04	3.11E-03	2.68E-05	9.1156E-03
691421.97	4168620.26	3.38519	38.24784	6.22942	4.19457	6.27747	0.00E+00	2.47E-03	7.46E-04	2.65E-03	2.13E-05	5.8866E-03
691549.25	4168596.21	6.98627	52.11165	11.40742	6.74849	11.82001	0.00E+00	3.36E-03	1.37E-03	4.27E-03	4.02E-05	9.0350E-03
691568.30	4168594.21	7.87557	39.80211	12.20102	7.43694	12.63628	0.00E+00	2.57E-03	1.46E-03	4.71E-03	4.30E-05	8.7749E-03
691556.77	4168514.03	5.51398	48.86024	8.09761	5.42105	8.40612	0.00E+00	3.15E-03	9.70E-04	3.43E-03	2.86E-05	7.5776E-03
691511.55	4169004.64	53.52958	7.30561	113.31047	43.69931	79.18092	0.00E+00	4.71E-04	1.36E-02	2.76E-02	2.69E-04	4.1956E-02
691503.45	4169016.57	47.38851	6.72656	91.34407	39.01053	64.39784	0.00E+00	4.34E-04	1.09E-02	2.47E-02	2.19E-04	3.6272E-02
691425.07	4169063.43	28.18000	5.32936	42.58665	23.82643	34.91513	0.00E+00	3.44E-04	5.10E-03	1.51E-02	1.19E-04	2.0636E-02
691327.52	4169024.66	22.92516	8.31911	39.21223	17.94872	36.73941	0.00E+00	5.36E-04	4.70E-03	1.14E-02	1.25E-04	1.6712E-02
691447.65	4169079.61	25.62439	4.58193	35.69975	21.95628	28.70481	0.00E+00	2.95E-04	4.27E-03	1.39E-02	9.76E-05	1.8559E-02
691495.78	4169070.67	28.12958	4.48762	38.63453	24.37207	29.97609	0.00E+00	2.89E-04	4.63E-03	1.54E-02	1.02E-04	2.0437E-02
691510.69	4169078.34	25.83290	4.15852	33.80486	22.81231	26.55134	0.00E+00	2.68E-04	4.05E-03	1.44E-02	9.03E-05	1.8839E-02
691548.18	4169071.09	26.52546	3.93337	34.78006	24.13675	26.48793	0.00E+00	2.54E-04	4.16E-03	1.53E-02	9.00E-05	1.9779E-02
691583.54	4169054.48	29.76225	3.94720	40.33890	27.92704	29.08731	0.00E+00	2.54E-04	4.83E-03	1.77E-02	9.89E-05	2.2853E-02
691596.74	4169086.86	20.15892	3.24662	23.90460	19.60491	19.59709	0.00E+00	2.09E-04	2.86E-03	1.24E-02	6.66E-05	1.5542E-02
691498.39	4169122.01	17.51637	3.34401	20.51570	15.80307	17.43456	0.00E+00	2.16E-04	2.46E-03	1.00E-02	5.93E-05	1.2730E-02
691511.79	4169116.58	18.07290	3.37367	21.28115	16.40199	17.91762	0.00E+00	2.17E-04	2.55E-03	1.04E-02	6.09E-05	1.3204E-02
691612.82	4169124.18	13.86139	2.67806	15.29487	13.89908	13.50602	0.00E+00	1.73E-04	1.83E-03	8.79E-03	4.59E-05	1.0844E-02
691615.71	4169140.84	12.10003	2.49671	13.12795	12.18443	11.83291	0.00E+00	1.61E-04	1.57E-03	7.71E-03	4.02E-05	9.4822E-03
691639.97	4169187.55	8.38806	2.04573	8.79023	8.59724	8.23173	0.00E+00	1.32E-04	1.05E-03	5.44E-03	2.80E-05	6.6519E-03
691626.94	4169196.60	8.16863	2.02327	8.56921	8.28247	8.06318	0.00E+00	1.30E-04	1.03E-03	5.24E-03	2.74E-05	6.4242E-03
691546.55	4169198.77	9.34277	2.28734	9.93512	8.93617	9.19543	0.00E+00	1.47E-04	1.19E-03	5.65E-03	3.13E-05	7.0222E-03
691517.95	4169134.68	15.38653	3.06841	17.52382	14.15630	15.13886	0.00E+00	1.98E-04	2.10E-03	8.96E-03	5.15E-05	1.1304E-02
691549.81	4169125.63	15.72607	3.01125	17.91534	14.76188	15.49869	0.00E+00	1.94E-04	2.15E-03	9.34E-03	5.27E-05	1.1732E-02
691552.35	4169135.05	14.49456	2.87906	16.27397	13.68256	14.28030	0.00E+00	1.86E-04	1.95E-03	8.66E-03	4.85E-05	1.0840E-02
691550.17	4169157.13	12.30109	2.64775	13.47446	11.67370	12.11002	0.00E+00	1.71E-04	1.61E-03	7.39E-03	4.12E-05	9.2112E-03
691628.49	4169277.05	5.38353	1.61237	5.53016	5.43623	5.35595	0.00E+00	1.04E-04	6.62E-04	3.44E-03	1.82E-05	4.2238E-03
691631.99	4169255.00	5.93403	1.69794	6.11975	6.01252	5.89338	0.00E+00	1.09E-04	7.33E-04	3.80E-03	2.00E-05	4.6664E-03
691668.08	4169234.45	6.15062	1.71465	6.27554	6.40238	6.02558	0.00E+00	1.11E-04	7.51E-04	4.05E-03	2.05E-05	4.9332E-03
691704.66	4169220.42	6.13972	1.70944	6.14438	6.55964	5.91268	0.00E+00	1.10E-04	7.36E-04	4.15E-03	2.01E-05	5.0163E-03
691719.20	4169208.89	6.31353	1.72890	6.27410	6.80981	6.04702	0.00E+00	1.11E-04	7.51E-04	4.31E-03	2.06E-05	5.1918E-03
691698.15	4169165.29	8.40609	2.01542	8.48203	9.05131	7.98573	0.00E+00	1.30E-04	1.02E-03	5.73E-03	2.71E-05	6.8995E-03
691800.39	4169158.77	6.79708	1.75960	6.57053	7.57478	6.34934	0.00E+00	1.13E-04	7.87E-04	4.79E-03	2.16E-05	5.7143E-03
691785.85	4169172.81	6.54563	1.72957	6.40584	7.24684	6.17694	0.00E+00	1.11E-04	7.67E-04	4.59E-03	2.10E-05	5.4846E-03
691882.58	4169138.73	6.16951	1.65165	5.75672	6.83671	5.61602	0.00E+00	1.06E-04	6.89E-04	4.33E-03	1.91E-05	5.1404E-03
691909.14	4169134.22	5.92199	1.60880	5.45218	6.53183	5.35131	0.00E+00	1.04E-04	6.53E-04	4.13E-03	1.82E-05	4.9074E-03
691588.80	4169332.77	4.44220	1.47725	4.53174	4.39708	4.41980	0.00E+00	9.52E-05	5.43E-04	2.78E-03	1.50E-05	3.4349E-03
691574.65	4169379.94	3.72893	1.33541	3.77853	3.67583	3.70257	0.00E+00	8.61E-05	4.52E-04	2.33E-03	1.26E-05	2.8768E-03
691940.90	4169126.13	5.64989	1.56673	5.12800	6.21758	5.06517	0.00E+00	1.01E-04	6.14E-04	3.93E-03	1.72E-05	4.6661E-03
691964.45	4169125.61	5.36418	1.51864	4.80643	5.87325	4.78129	0.00E+00	9.79E-05	5.76E-04	3.72E-03	1.63E-05	4.4057E-03
692035.62	4169140.52	4.34938	1.34388	3.81236	4.66917	3.85196	0.00E+00	8.66E-05	4.56E-04	2.95E-03	1.31E-05	3.5104E-03
692048.97	4169140.26	4.23203	1.32272	3.69172	4.53246	3.73621	0.00E+00	8.53E-05	4.42E-04	2.87E-03	1.27E-05	3.4077E-03
692062.83	4169163.29	3.77406	1.24495	3.35835	4.02174	3.38886	0.00E+00	8.02E-05	4.02E-04	2.54E-03	1.15E-05	3.0385E-03
692075.66	4169171.40	3.59831	1.20938	3.19944	3.81969	3.23608	0.00E+00	7.80E-05	3.83E-04	2.42E-03	1.10E-05	2.8888E-03
692162.26	4169160.15	3.18144	1.11964	2.72873	3.33563	2.78254	0.00E+00	7.22E-05	3.27E-04	2.11E-03	9.46E-06	2.5188E-03
692164.36	4169145.49	3.29963	1.14464	2.80934	3.46427	2.85397	0.00E+00	7.38E-05	3.36E-04	2.19E-03	9.70E-06	2.6117E-03
692179.53	4169145.49	3.20591	1.12543	2.72376	3.35811	2.76553	0.00E+00	7.25E-05	3.26E-04	2.12E-03	9.40E-06	2.5328E-03
692194.88	4169132.19	3.22329	1.13072	2.71740	3.37364	2.74761	0.00E+00	7.29E-05	3.25E-04	2.13E-03	9.34E-06	2.5421E-03
692206.67	4169126.40	3.19567	1.12604	2.68375	3.34060	2.70893	0.00E+00	7.26E-05	3.21E-04	2.11E-03	9.21E-06	2.5167E-03
691466.77	4168373.67	2.54350	75.22017	3.91858	2.75120	4.02156	0.00E+00	4.85E-03	4.69E-04	1.74E-03	1.37E-05	7.0723E-03
691453.41	4168320.26	2.19632	53.81275	3.32358	2.39339	3.40879	0.00E+00	3.47E-03	3.98E-04	1.51E-03	1.16E-05	5.3926E-03
691537.75	4168319.55	3.06304	79.34369	4.07603	3.15303	4.21981	0.00E+00	5.11E-03	4.88E-04	1.99E-03	1.43E-05	7.6118E-03
691409.97	4168212.93	1.60088	28.44112	2.38316	1.79069	2.44041	0.00E+00	1.83E-03	2.85E-04	1.13E-03	8.30E-06	3.2599E-03
691405.40	4168168.24	1.49056	26.19041	2.18353	1.66362	2.23566	0.00E+00	1.69E-03	2.61E-04	1.05E-03	7.60E-06	3.0099E-03
691535.39	4168247.96	2.62604	91.37749	3.38169	2.72719	3.49838	0.00E+00	5.89E-03	4.05E-04	1.73E-03	1.19E-05	8.0325E-03
691558.74	4168206.32	2.60205	57.61665	3.16697	2.69792	3.28249	0.00E+00	3.71E-03	3.79E-04	1.71E-03	1.12E-05	5.8113E-03
691586.67	4168224.10	2.92295	38.80591	3.41357	3.00836	3.55343	0.00E+00	2.50E-03	4.09E-04	1.90E-03	1.21E-05	4.8256E-03
691580.58	4168186.01	2.65229	42.39272	3.09569	2.74364	3.21795	0.00E+00	2.73E-03	3.71E-04	1.74E-03	1.09E-05	4.8501E-03
691545.54	4168110.86	2.10090	81.21065	2.53073	2.20194	2.61662	0.00E+00	5.23E-03	3.03E-04	1.39E-03	8.89E-06	6.9399E-03
691540.46	4168095.63	2.02024	94.61411	2.43982	2.12187	2.52121	0.00E+00	6.10E-03	2.92E-04	1.34E-03	8.57E-06	7.7420E-03
691486.13	4168117.46	1.80200	91.99664	2.35489	1.91936	2.42804	0.00E+00	5.93E-03	2.82E-04	1.21E-03	8.25E-06	7.4347E-03
691586.16	4168105.78	2.29296	40.51888	2.60610	2.38542	2.70932	0.00E+00	2.61E-03	3.12E-04	1.51E-03	9.21E-06	4.4424E-03
691480.55	4168089.54	1.70201	74.28650	2.21439	1.81829	2.28283	0.00E+00	4.79E-03	2.65E-04	1.15E-03	7.76E-06	6.2119E-03
691368.84	4168031.65	1.14379	12.43239	1.63276	1.29091	1.66944	0.00E+00	8.01E-04	1.96E-04	8.17E-04	5.67E-06	1.8193E-03
691468.87	4168043.84	1.54580	51.56518	2.00317	1.66034	2.06463	0.00E+00	3.32E-03	2.40E-04	1.05E-03	7.02E-06	4.6213E-03
691469.88	4168026.06	1.51346	49.92308	1.94646	1.62571	2.00631	0.00E+00	3.22E-03	2.33E-04	1.03E-03	6.82E-06	4.4865E-03
691543.51	4168055.52	1.90259	89.99579	2.26439	2.00192	2.33927	0.00E+00	5.80E-03	2.71E-04	1.27E-03	7.95E-06	7.3468E-03
691543.00	4168041.30	1.85639	92.37702	2.20323	1.95508	2.27560	0.00E+00	5.95E-03	2.64E-04	1.24E-03	7.74E-06	7.4632E-03
691571.44	4168062.62	2.05075	50.01927	2.35825	2.14542	2.44390	0.00E+00	3.22E-03	2.82E-04	1.36E-03	8.31E-06	4.8723E-03
691452.62	4168100.71	1.59163	42.76824	2.15020	1.71950	2.21380	0.00E+00	2.76E-03	2.57E-04	1.09E-03	7.53E-06	4.1098E-03
691506.70	4168892.79	50.10144	80.21075	144.69616	28.49268	71.06640	0.00E+00	5.17E-03	1.73E-02	1.80E-02	2.42E-04	4.0765E-02

CONCUNIT ug/m^3
DEPUNIT g/m^2

Health Risk Assessment

Off Season 2021 Emissions

Almond Sheller Project

Estimation of On-site Area Emissions During the Off Season

Size of area source (accounted for in AERMOD):		37,474.9	sq-meters

Season	On-site Activity	On-site DPM (tons)	
Off-Season	On-site Equipment	0.0030286	tons/year
Total Off-Season (On-site Equipment)		3.029E-03	tons/year
Average Emission		2.750E+03	grams
		8.720E-05	grams/sec
		2.327E-09	grams/m2-sec

* Multiplied CalEEMod output by 1/7 to account for reduced use during off season (1 day a month to 1 day a week).

Almond Sheller Project

Emission Assumptions For Vehicle Exhaust

Emission Factors

Truck and Exhaust Emissions
EMFAC2017 for running emissions
Calculations for Stanislaus County

Traffic Allocation

1) Traffic distribution based on site layout identified in the site plan
2) Project-specific trip generation based on information provided by the project applicant
3) Onsite travel emissions generated from diesel trucks
4) Onsite idling emissions generated by trucks

Emission Source Configuration

1) Project onsite truck traffic represented by two line volume sources
2) Project onsite truck idling represented as a line volume source
3) Offsite vehicles represented by a line source for travel within approximately 1,000 feet of the project site

Onsite Vehicle Travel Segments

Segment	Source ID	Segment Travel Distance (m)
On-site Truck Travel - Segment 1	SLINE2	603.9
On-site Truck Travel - Segment 2	SLINE3	461.0
Onsite Truck Idling		
On-site Truck Idling - Location 1	SLINE4	60.0

Offsite Vehicle Travel Segments

Segment		Segment Travel Distance (m)
Road Segment 1 – Offsite Truck Travel	SLINE1	981.3

Other Input Parameters

Facility Operations (hr/day):	24

Almond Sheller Project

Vehicle Fleet Mix

Total Daily Truck Trips (Off Season)
(trips/day)

Vehicle Fleet

	% Diesel Assumed	Total Number of Average Daily Trips	Number of Daily Diesel Trips
T7 Ag (heavy ag truck)	100.0%	1	1
MHDT (3 axle truck used to represent trash pickups)	100.0%	1	1
HHDT (other 4+ axle truck)	100.0%	2	2
Total	—	4	4

Almond Sheller Project

Diesel Vehicle Emissions (Off Season)

Roadway Links Modeled

Link	Truck Type	Average Speed (mph)	Emission Factor (g/mi)	Trips per Daily (in and out)	Link Length (m)	Link Length (mi)	Ave Emissions Over Link (g/day)	Ave Emissions (lbs/day)	Average Emissions (g/sec)	Emissions for all Vehicles (g/sec)
SLINE2	**LHDT1**	5 mph	0.098	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	LHDT2	5 mph	0.078	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	MHDT	5 mph	0.194	1.0	603.9	0.38	7.274E-02	1.60E-04	8.419E-07	
	HHDT	5 mph	0.115	2.0	603.9	0.38	8.663E-02	1.91E-04	1.003E-06	
	T7 Ag	5 mph	2.276	1.0	603.9	0.38	8.537E-01	1.88E-03	9.881E-06	**1.17E-05**
SLINE3	**LHDT1**	5 mph	0.098	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	5 mph	0.078	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	MHDT	5 mph	0.194	1.0	461	0.29	5.55E-02	1.22E-04	6.43E-07	
	HHDT	5 mph	0.115	2.0	461	0.29	6.61E-02	1.46E-04	7.65E-07	
	T7 Ag	5 mph	2.276	1.0	461	0.29	6.52E-01	1.44E-03	7.54E-06	**8.95E-06**

Diesel Vehicle Emissions (Off Season)

Diesel truck Idling Emissions

Onsite Vehicle Travel Segments	Truck Type	DPM Emission Factor (grams/trip)	Number Idling Vehicle Trips/day	Emissions (g/day)	Emissions (lb/day)	Average Emissions (g/sec)	Total Emissions for all Vehicles (g/sec)
SLINE4	**LHDT1**	0.0011	0.0	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	0.0015	0.0	0.00E+00	0.00E+00	0.00E+00	
	MHDT	0.0025	1.0	2.55E-03	5.61E-06	2.95E-08	
	HHDT	0.0102	2.0	2.04E-02	4.50E-05	2.36E-07	
	T7 Ag	0.0102	1.0	1.02E-02	2.25E-05	1.18E-07	**3.84E-07**

Almond Sheller Project

Off-site DSL Truck Roadway Emissions (Off Season)

Segment ID	Description	% total Trips
SLINE1	Road Segment 1 – Offsite Truck Travel	100.0%
	Total	100.0%

Segment ID: SLINE1
Travel Distance: 981.3 meters
Operations 24 hours/day

Vehicle Class	Daily Trips (trips/day)	Emission Factor (g/mi)	Travel Distance (mi)	Emissions (g/day)	Emissions (g/sec)
LHDT1-DSL	0	0.034	0.61	0.00	0.00E+00
LHDT2-DSL	0	0.029	0.61	0.00	0.00E+00
MHDT-DSL	1	0.070	0.61	0.04	4.91E-07
HHDT-DSL	2	0.036	0.61	0.04	5.10E-07
T7 Ag	1	0.756	0.61	0.46	5.33E-06
Total	4	—	—	—	**6.33E-06**

DPM **2021**

EMFAC2017 Running Diesel Exhaust Emissions
in units of grams/mile

		Emission Factor (g/mi)			
		5 mph	**10 mph**	**25 mph**	**35 mph**
LHDT1	DSL	0.0984	0.0715	0.0340	0.0253
LHDT2	DSL	0.0785	0.0586	0.0290	0.0219
MHDT	DSL	0.1939	0.1610	0.0696	0.0603
HHDT	DSL	0.1155	0.0783	0.0361	0.0376
T7 Ag	DSL	2.2756	1.9138	0.7557	0.5863

Idling Emissions for Trucks (Emission Factors from CalEEMod*)
in units of grams/trip

Vehicle Class	**Vehicle Speed (mph)**	**DPM (grams/trip)**
LHDT1	Idle	0.001136
LHDT2	Idle	0.001477
MHDT	Idle	0.002547
HHDT	Idle	0.010216
T7 Ag	Idle	0.010216

*CalEEMod Version 2020.4.0

Almond Sheller Project

Off Season Emissions (DPM)—Unmitigated Concentrations

		Maximum DPM (ug/m3)	UTM X	UTM Y
		4.9715E-03	691506.70	4168892.79
Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec):	6.33E-06	5.6070E-03	691511.55	4169004.64
Annual Average Total DPM Emission Rate - On-site-Road Segment 1 (grams/sec):	1.17E-05			
Annual Average Total DPM Emission Rate - On-site-Road Segment 2 (grams/sec):	9.62E-05			
Annual Average Total DPM Emission Rate - On-site Truck Idle (grams/sec):	3.84E-07			

X	Y	Unit Emissions VALUES AVERAGED Offsite Truck Travel	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 1	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 2	Unit Emissions VALUES AVERAGED On-site Truck Idle	Offsite Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 1 Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 2 Annual DPM Exhaust w/Actual Emissions (ug/m3)	On-site Truck Idle Annual DPM Exhaust w/Actual Emissions (ug/m3)	**Total DPM (ug/m3)**
691440.11	4168757.21	53.66444	12.48249	6.74768	12.05051	3.40E-04	1.46E-04	6.49E-04	4.63E-06	1.1397E-03
691441.12	4168740.17	54.32980	11.52916	6.40725	11.18675	3.44E-04	1.35E-04	6.16E-04	4.30E-06	1.0996E-03
691393.51	4168741.18	28.25195	8.51691	5.16869	8.43857	1.79E-04	9.99E-05	4.97E-04	3.24E-06	7.7900E-04
691554.37	4168769.24	38.34351	39.26007	14.58564	39.53836	2.43E-04	4.60E-04	1.40E-03	1.52E-05	2.1208E-03
691400.53	4168760.72	30.34146	9.64259	5.64489	9.47646	1.92E-04	1.13E-04	5.43E-04	3.64E-06	8.5162E-04
691530.82	4168750.20	60.31925	26.11319	11.12960	25.88586	3.82E-04	3.06E-04	1.07E-03	9.95E-06	1.7683E-03
691530.31	4168737.17	62.29774	23.42469	10.44974	23.50427	3.95E-04	2.75E-04	1.00E-03	9.03E-06	1.6830E-03
691538.83	4168689.06	56.44274	17.98067	8.97340	18.55927	3.57E-04	2.11E-04	8.63E-04	7.13E-06	1.4382E-03
691565.89	4168677.03	37.76047	19.89184	10.12985	20.48255	2.39E-04	2.33E-04	9.74E-04	7.87E-06	1.4542E-03
691454.65	4168675.53	69.89826	9.29499	5.57452	9.16801	4.43E-04	1.09E-04	5.36E-04	3.52E-06	1.0912E-03
691461.06	4168623.27	78.28591	7.79324	4.91443	7.88763	4.96E-04	9.14E-05	4.73E-04	3.03E-06	1.0627E-03
691421.97	4168620.26	38.24784	6.22942	4.19457	6.27747	2.42E-04	7.30E-05	4.03E-04	2.41E-06	7.2100E-04
691549.25	4168596.21	52.11165	11.40742	6.74849	11.82001	3.30E-04	1.34E-04	6.49E-04	4.54E-06	1.1172E-03
691568.30	4168594.21	39.80211	12.20102	7.43694	12.63628	2.52E-04	1.43E-04	7.15E-04	4.85E-06	1.1151E-03
691556.77	4168514.03	48.86024	8.09761	5.42105	8.40612	3.09E-04	9.49E-05	5.21E-04	3.23E-06	9.2886E-04
691511.55	4169004.64	7.30561	113.31047	43.69931	79.18092	4.63E-05	1.33E-03	4.20E-03	3.04E-05	5.6070E-03
691503.45	4169016.57	6.72656	91.34407	39.01053	64.39784	4.26E-05	1.07E-03	3.75E-03	2.47E-05	4.8893E-03
691425.07	4169063.43	5.32936	42.58665	23.82643	34.91513	3.38E-05	4.99E-04	2.29E-03	1.34E-05	2.8374E-03
691327.52	4169024.66	8.31911	39.21223	17.94872	36.73941	5.27E-05	4.60E-04	1.73E-03	1.41E-05	2.2524E-03
691447.65	4169079.61	4.58193	35.69975	21.95628	28.70481	2.90E-05	4.19E-04	2.11E-03	1.10E-05	2.5698E-03
691495.78	4169070.67	4.48762	38.63453	24.37207	29.97609	2.84E-05	4.53E-04	2.34E-03	1.15E-05	2.8363E-03
691510.69	4169078.34	4.15852	33.80486	22.81231	26.55134	2.63E-05	3.96E-04	2.19E-03	1.02E-05	2.6263E-03
691548.18	4169071.09	3.93337	34.78006	24.13675	26.48793	2.49E-05	4.08E-04	2.32E-03	1.02E-05	2.7637E-03
691583.54	4169054.48	3.94720	40.33890	27.92704	29.08731	2.50E-05	4.73E-04	2.69E-03	1.12E-05	3.1944E-03
691596.74	4169086.86	3.24662	23.90460	19.60491	19.59709	2.06E-05	2.80E-04	1.89E-03	7.53E-06	2.1934E-03
691498.39	4169122.01	3.34401	20.51570	15.80307	17.43456	2.12E-05	2.41E-04	1.52E-03	6.70E-06	1.7879E-03
691511.79	4169116.58	3.37367	21.28115	16.40199	17.91762	2.14E-05	2.50E-04	1.58E-03	6.88E-06	1.8548E-03
691612.82	4169124.18	2.67806	15.29487	13.89908	13.50602	1.70E-05	1.79E-04	1.34E-03	5.19E-06	1.5379E-03
691615.71	4169140.84	2.49671	13.12795	12.18443	11.83291	1.58E-05	1.54E-04	1.17E-03	4.55E-06	1.3458E-03
691639.97	4169187.55	2.04573	8.79023	8.59724	8.23173	1.30E-05	1.03E-04	8.27E-04	3.16E-06	9.4582E-04
691626.94	4169196.60	2.02327	8.56921	8.28247	8.06318	1.28E-05	1.00E-04	7.96E-04	3.10E-06	9.1276E-04
691546.55	4169198.77	2.28734	9.93512	8.93617	9.19543	1.45E-05	1.16E-04	8.59E-04	3.53E-06	9.9373E-04
691517.95	4169134.68	3.06841	17.52382	14.15630	15.13886	1.94E-05	2.05E-04	1.36E-03	5.82E-06	1.5919E-03
691549.81	4169125.63	3.01125	17.91534	14.76188	15.49869	1.91E-05	2.10E-04	1.42E-03	5.95E-06	1.6545E-03
691552.35	4169135.05	2.87906	16.27397	13.68256	14.28030	1.82E-05	1.91E-04	1.32E-03	5.49E-06	1.5301E-03
691550.17	4169157.13	2.64775	13.47446	11.67370	12.11002	1.68E-05	1.58E-04	1.12E-03	4.65E-06	1.3019E-03
691628.49	4169277.05	1.61237	5.53016	5.43623	5.35595	1.02E-05	6.48E-05	5.23E-04	2.06E-06	5.9981E-04
691631.99	4169255.00	1.69794	6.11975	6.01252	5.89338	1.08E-05	7.18E-05	5.78E-04	2.26E-06	6.6288E-04
691668.08	4169234.45	1.71465	6.27554	6.40238	6.02558	1.09E-05	7.36E-05	6.16E-04	2.32E-06	7.0235E-04
691704.66	4169220.42	1.70944	6.14438	6.55964	5.91268	1.08E-05	7.20E-05	6.31E-04	2.27E-06	7.1586E-04
691719.20	4169208.89	1.72890	6.27410	6.80981	6.04702	1.09E-05	7.36E-05	6.55E-04	2.32E-06	7.4161E-04
691698.15	4169165.29	2.01542	8.48203	9.05131	7.98573	1.28E-05	9.95E-05	8.70E-04	3.07E-06	9.8558E-04
691800.39	4169158.77	1.75960	6.57053	7.57478	6.34934	1.11E-05	7.70E-05	7.28E-04	2.44E-06	8.1895E-04
691785.85	4169172.81	1.72957	6.40584	7.24684	6.17694	1.10E-05	7.51E-05	6.97E-04	2.37E-06	7.8523E-04
691882.58	4169138.73	1.65165	5.75672	6.83671	5.61602	1.05E-05	6.75E-05	6.57E-04	2.16E-06	7.3747E-04
691909.14	4169134.22	1.60880	5.45218	6.53183	5.35131	1.02E-05	6.39E-05	6.28E-04	2.06E-06	7.0421E-04
691588.80	4169332.77	1.47725	4.53174	4.39708	4.41980	9.36E-06	5.31E-05	4.23E-04	1.70E-06	4.8697E-04
691574.65	4169379.94	1.33541	3.77853	3.67583	3.70257	8.46E-06	4.43E-05	3.53E-04	1.42E-06	4.0762E-04
691940.90	4169126.13	1.56673	5.12800	6.21758	5.06517	9.92E-06	6.01E-05	5.98E-04	1.95E-06	6.6982E-04
691964.45	4169125.61	1.51864	4.80643	5.87325	4.78129	9.62E-06	5.64E-05	5.65E-04	1.84E-06	6.3253E-04
692035.62	4169140.52	1.34388	3.81236	4.66917	3.85196	8.51E-06	4.47E-05	4.49E-04	1.48E-06	5.0364E-04
692048.97	4169140.26	1.32272	3.69172	4.53246	3.73621	8.38E-06	4.33E-05	4.36E-04	1.44E-06	4.8890E-04
692062.83	4169163.29	1.24495	3.35835	4.02174	3.38886	7.88E-06	3.94E-05	3.87E-04	1.30E-06	4.3526E-04
692075.66	4169171.40	1.20938	3.19944	3.81969	3.23608	7.66E-06	3.75E-05	3.67E-04	1.24E-06	4.1368E-04
692162.26	4169160.15	1.11964	2.72873	3.33563	2.78254	7.09E-06	3.20E-05	3.21E-04	1.07E-06	3.6088E-04
692164.36	4169145.49	1.14464	2.80934	3.46427	2.85397	7.25E-06	3.29E-05	3.33E-04	1.10E-06	3.7438E-04
692179.53	4169145.49	1.12543	2.72376	3.35811	2.76553	7.13E-06	3.19E-05	3.23E-04	1.06E-06	3.6301E-04
692194.88	4169132.19	1.13072	2.71740	3.37364	2.74761	7.16E-06	3.19E-05	3.24E-04	1.06E-06	3.6446E-04
692206.67	4169126.40	1.12604	2.68375	3.34060	2.70893	7.13E-06	3.15E-05	3.21E-04	1.04E-06	3.6084E-04
691466.77	4168373.67	75.22017	3.91858	2.75120	4.02156	4.76E-04	4.59E-05	2.65E-04	1.55E-06	7.8840E-04
691453.41	4168320.26	53.81275	3.32358	2.39339	3.40879	3.41E-04	3.90E-05	2.30E-04	1.31E-06	6.1121E-04
691537.75	4168319.55	79.34369	4.07603	3.15303	4.21981	5.02E-04	4.78E-05	3.03E-04	1.62E-06	8.5508E-04
691409.97	4168212.93	28.44112	2.38316	1.79069	2.44041	1.80E-04	2.79E-05	1.72E-04	9.38E-07	3.8118E-04
691405.40	4168168.24	26.19041	2.18353	1.66362	2.23566	1.66E-04	2.56E-05	1.60E-04	8.59E-07	3.5229E-04
691535.39	4168247.96	91.37749	3.38169	2.72719	3.49838	5.79E-04	3.97E-05	2.62E-04	1.34E-06	8.8193E-04
691558.74	4168206.32	57.61665	3.16697	2.69792	3.28249	3.65E-04	3.71E-05	2.59E-04	1.26E-06	6.6270E-04
691586.67	4168224.10	38.80591	3.41357	3.00836	3.55343	2.46E-04	4.00E-05	2.89E-04	1.37E-06	5.7641E-04
691580.58	4168186.01	42.39272	3.09569	2.74364	3.21795	2.68E-04	3.63E-05	2.64E-04	1.24E-06	5.6982E-04
691545.54	4168110.86	81.21065	2.53073	2.20194	2.61662	5.14E-04	2.97E-05	2.12E-04	1.01E-06	7.5672E-04
691540.46	4168095.63	94.61411	2.43982	2.12187	2.52121	5.99E-04	2.86E-05	2.04E-04	9.69E-07	8.3280E-04
691486.13	4168117.46	91.99664	2.35489	1.91936	2.42804	5.83E-04	2.76E-05	1.85E-04	9.33E-07	7.9572E-04
691586.16	4168105.78	40.51888	2.60610	2.38542	2.70932	2.57E-04	3.06E-05	2.29E-04	1.04E-06	5.1757E-04
691480.55	4168089.54	74.28650	2.21439	1.81829	2.28283	4.70E-04	2.60E-05	1.75E-04	8.77E-07	6.7214E-04
691368.84	4168031.65	12.43239	1.63276	1.29091	1.66944	7.87E-05	1.91E-05	1.24E-04	6.41E-07	2.2264E-04
691468.87	4168043.84	51.56518	2.00317	1.66034	2.06463	3.27E-04	2.35E-05	1.60E-04	7.93E-07	5.1050E-04
691469.88	4168026.06	49.92308	1.94646	1.62571	2.00631	3.16E-04	2.28E-05	1.56E-04	7.71E-07	4.9608E-04
691543.51	4168055.52	89.99579	2.26439	2.00192	2.33927	5.70E-04	2.66E-05	1.92E-04	8.99E-07	7.8989E-04
691543.00	4168041.30	92.37702	2.20323	1.95508	2.27560	5.85E-04	2.58E-05	1.88E-04	8.74E-07	7.9973E-04
691571.44	4168062.62	50.01927	2.35825	2.14542	2.44390	3.17E-04	2.77E-05	2.06E-04	9.39E-07	5.5165E-04
691452.62	4168100.71	42.76824	2.15020	1.71950	2.21380	2.71E-04	2.52E-05	1.65E-04	8.51E-07	4.6225E-04
691506.70	4168892.79	80.21075	144.69616	28.49268	71.06640	5.08E-04	1.70E-03	2.74E-03	2.73E-05	4.9715E-03

CONCUNIT ug/m^3
DEPUNIT g/m^2

Health Risk Assessment

2022 Emission Estimates

Health Risk Assessment

Peak Season 2022 Emissions

Almond Sheller Project

Estimation of On-site Area Emissions During the Peak Season

Size of area source (accounted for in AERMOD):		37,474.9	sq-meters
Season	**On-site Activity**	**On-site DPM (tons)**	
Peak Season	On-site Equipment	0.01880	tons/year
Total Peak Season (On-site Equipment)		1.880E-02	tons/year
Average Emission		1.707E+04	grams
		5.413E-04	grams/sec
		1.444E-08	grams/m2-sec

Almond Sheller Project

Diesel Vehicle Emissions (Peak Season)

Facility Operations

24 hrs/day, 153 days/year (seasonal)

Roadway Links Modeled

Link	Truck Type	Average Speed (mph)	Emission Factor (g/mi)	Trips per Daily (in and out)	Link Length (m)	Link Length (mi)	Ave Emissions Over Link (g/day)	Ave Emissions (lbs/day)	Average Emissions (g/sec)	Emissions for all Vehicles (g/sec)
SLINE2	**LHDT1**	5 mph	0.094	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	LHDT2	5 mph	0.076	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	MHDT	5 mph	0.065	3.0	603.9	0.38	7.361E-02	1.62E-04	8.520E-07	
	HHDT	5 mph	0.055	17.0	603.9	0.38	3.519E-01	7.75E-04	4.073E-06	
	T7 Ag	5 mph	2.132	11.0	603.9	0.38	8.798E+00	1.94E-02	1.018E-04	**1.07E-04**
SLINE3	**LHDT1**	5 mph	0.094	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	5 mph	0.076	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	MHDT	5 mph	0.065	3.0	461	0.29	5.62E-02	1.24E-04	6.50E-07	
	HHDT	5 mph	0.055	17.0	461	0.29	2.69E-01	5.92E-04	3.11E-06	
	T7 Ag	5 mph	2.132	11.0	461	0.29	6.72E+00	1.48E-02	7.77E-05	**8.15E-05**

Diesel Vehicle Emissions (Peak Season)

Diesel truck Idling Emissions

Onsite Vehicle Travel Segments	Truck Type	DPM Emission Factor (grams/trip)	Number Idling Vehicle Trips/day	Emissions (g/day)	Emissions (lb/day)	Average Emissions (g/sec)	Total Emissions for all Vehicles (g/sec)
SLINE4	**LHDT1**	0.0011	0.0	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	0.0015	0.0	0.00E+00	0.00E+00	0.00E+00	
	MHDT	0.0005	3.0	1.37E-03	3.01E-06	1.58E-08	
	HHDT	0.0025	17.0	4.27E-02	9.40E-05	4.94E-07	
	T7 Ag	0.0025	11.0	2.76E-02	6.08E-05	3.20E-07	**8.29E-07**

Almond Sheller Project

Project Operations 24 hours/day

Off-site DSL Truck Roadway Emissions (Peak Season)

Segment ID	Description	% total Trips
SLINE1	Road Segment 1 – Offsite Truck Travel	100.0%
	Total	100.0%

Segment ID: SLINE1
Travel Distance: 981.3 meters
Operations 24 hours/day

Vehicle Class	Daily Trips (trips/day)	Emission Factor (g/mi)	Travel Distance (mi)	Emissions (g/day)	Emissions (g/sec)
LHDT1-DSL	0	0.033	0.61	0.00	0.00E+00
LHDT2-DSL	0	0.029	0.61	0.00	0.00E+00
MHDT-DSL	3	0.030	0.61	0.06	6.37E-07
HHDT-DSL	17	0.017	0.61	0.18	2.03E-06
T7 Ag	11	0.714	0.61	4.78	5.54E-05
Total	31	—	—	—	**5.80E-05**

DPM **2022**

EMFAC2017 Running Diesel Exhaust Emissions
in units of grams/mile

		Emission Factor (g/mi)			
		5 mph	**10 mph**	**25 mph**	**35 mph**
LHDT1	DSL	0.09	0.07	0.03	0.02
LHDT2	DSL	0.08	0.06	0.03	0.02
MHDT	DSL	0.07	0.06	0.03	0.03
HHDT	DSL	0.06	0.04	0.02	0.02
T7 Ag	DSL	2.13	1.79	0.71	0.56

Idling Emissions for Trucks (Emission Factors from CalEEMod*)
in units of grams/trip

Vehicle Class	**Vehicle Speed (mph)**	**DPM (grams/trip)**
LHDT1	Idle	0.001134
LHDT2	Idle	0.001491
MHDT	Idle	0.000456
HHDT	Idle	0.002510
T7 Ag	Idle	0.002510

*CalEEMod Version 2020.4.0

Almond Sheller Project

Peak Season Emissions (DPM)—Unmitigated Concentrations

		Maximum DPM (ug/m3)	UTM X	UTM Y
		3.98012E-02	691511.55	4169004.64
Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec):	5.80E-05	3.7906E-02	691506.70	4168892.79
Annual Average Total DPM Emission Rate - On-site-Road Segment 1 (grams/sec):	1.07E-04			
Annual Average Total DPM Emission Rate - On-site-Road Segment 2 (grams/sec):	6.23E-04			
Annual Average Total DPM Emission Rate - On-site Truck Idle (grams/sec):	8.29E-07			

X	Y	Unit Emissions VALUES AVERAGED Offsite Truck Travel	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 1	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 2	Unit Emissions VALUES AVERAGED On-site Truck Idle	Offsite Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 1 Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 2 Annual DPM Exhaust w/Actual Emissions (ug/m3)	On-site Truck Idle Annual DPM Exhaust w/Actual Emissions (ug/m3)	**Total DPM (ug/m3)**
691440.11	4168757.21	53.66444	12.48249	6.74768	12.05051	3.11E-03	1.33E-03	4.20E-03	9.99E-06	8.6596E-03
691441.12	4168740.17	54.32980	11.52916	6.40725	11.18675	3.15E-03	1.23E-03	3.99E-03	9.28E-06	8.3838E-03
691393.51	4168741.18	28.25195	8.51691	5.16869	8.43857	1.64E-03	9.09E-04	3.22E-03	7.00E-06	5.7750E-03
691554.37	4168769.24	38.34351	39.26007	14.58564	39.53836	2.23E-03	4.19E-03	9.08E-03	3.28E-05	1.5533E-02
691400.53	4168760.72	30.34146	9.64259	5.64489	9.47646	1.76E-03	1.03E-03	3.52E-03	7.86E-06	6.3138E-03
691530.82	4168750.20	60.31925	26.11319	11.12960	25.88586	3.50E-03	2.79E-03	6.93E-03	2.15E-05	1.3241E-02
691530.31	4168737.17	62.29774	23.42469	10.44974	23.50427	3.62E-03	2.50E-03	6.51E-03	1.95E-05	1.2644E-02
691538.83	4168689.06	56.44274	17.98067	8.97340	18.55927	3.28E-03	1.92E-03	5.59E-03	1.54E-05	1.0799E-02
691565.89	4168677.03	37.76047	19.89184	10.12985	20.48255	2.19E-03	2.12E-03	6.31E-03	1.70E-05	1.0641E-02
691454.65	4168675.53	69.89826	9.29499	5.57452	9.16801	4.06E-03	9.92E-04	3.47E-03	7.60E-06	8.5286E-03
691461.06	4168623.27	78.28591	7.79324	4.91443	7.88763	4.54E-03	8.32E-04	3.06E-03	6.54E-06	8.4429E-03
691421.97	4168620.26	38.24784	6.22942	4.19457	6.27747	2.22E-03	6.65E-04	2.61E-03	5.21E-06	5.5025E-03
691549.25	4168596.21	52.11165	11.40742	6.74849	11.82001	3.02E-03	1.22E-03	4.20E-03	9.80E-06	8.4551E-03
691568.30	4168594.21	39.80211	12.20102	7.43694	12.63628	2.31E-03	1.30E-03	4.63E-03	1.05E-05	8.2548E-03
691556.77	4168514.03	48.86024	8.09761	5.42105	8.40612	2.84E-03	8.64E-04	3.38E-03	6.97E-06	7.0835E-03
691511.55	4169004.64	7.30561	113.31047	43.69931	79.18092	4.24E-04	1.21E-02	2.72E-02	6.57E-05	3.9801E-02
691503.45	4169016.57	6.72656	91.34407	39.01053	64.39784	3.90E-04	9.75E-03	2.43E-02	5.34E-05	3.4490E-02
691425.07	4169063.43	5.32936	42.58665	23.82643	34.91513	3.09E-04	4.55E-03	1.48E-02	2.90E-05	1.9723E-02
691327.52	4169024.66	8.31911	39.21223	17.94872	36.73941	4.83E-04	4.19E-03	1.12E-02	3.05E-05	1.5878E-02
691447.65	4169079.61	4.58193	35.69975	21.95628	28.70481	2.66E-04	3.81E-03	1.37E-02	2.38E-05	1.7775E-02
691495.78	4169070.67	4.48762	38.63453	24.37207	29.97609	2.60E-04	4.12E-03	1.52E-02	2.49E-05	1.9588E-02
691510.69	4169078.34	4.15852	33.80486	22.81231	26.55134	2.41E-04	3.61E-03	1.42E-02	2.20E-05	1.8079E-02
691548.18	4169071.09	3.93337	34.78006	24.13675	26.48793	2.28E-04	3.71E-03	1.50E-02	2.20E-05	1.8995E-02
691583.54	4169054.48	3.94720	40.33890	27.92704	29.08731	2.29E-04	4.31E-03	1.74E-02	2.41E-05	2.1952E-02
691596.74	4169086.86	3.24662	23.90460	19.60491	19.59709	1.88E-04	2.55E-03	1.22E-02	1.63E-05	1.4966E-02
691498.39	4169122.01	3.34401	20.51570	15.80307	17.43456	1.94E-04	2.19E-03	9.84E-03	1.45E-05	1.2241E-02
691511.79	4169116.58	3.37367	21.28115	16.40199	17.91762	1.96E-04	2.27E-03	1.02E-02	1.49E-05	1.2697E-02
691612.82	4169124.18	2.67806	15.29487	13.89908	13.50602	1.55E-04	1.63E-03	8.66E-03	1.12E-05	1.0456E-02
691615.71	4169140.84	2.49671	13.12795	12.18443	11.83291	1.45E-04	1.40E-03	7.59E-03	9.81E-06	9.1445E-03
691639.97	4169187.55	2.04573	8.79023	8.59724	8.23173	1.19E-04	9.38E-04	5.35E-03	6.83E-06	6.4182E-03
691626.94	4169196.60	2.02327	8.56921	8.28247	8.06318	1.17E-04	9.15E-04	5.16E-03	6.69E-06	6.1971E-03
691546.55	4169198.77	2.28734	9.93512	8.93617	9.19543	1.33E-04	1.06E-03	5.57E-03	7.63E-06	6.7663E-03
691517.95	4169134.68	3.06841	17.52382	14.15630	15.13886	1.78E-04	1.87E-03	8.82E-03	1.26E-05	1.0878E-02
691549.81	4169125.63	3.01125	17.91534	14.76188	15.49869	1.75E-04	1.91E-03	9.19E-03	1.29E-05	1.1294E-02
691552.35	4169135.05	2.87906	16.27397	13.68256	14.28030	1.67E-04	1.74E-03	8.52E-03	1.18E-05	1.0438E-02
691550.17	4169157.13	2.64775	13.47446	11.67370	12.11002	1.54E-04	1.44E-03	7.27E-03	1.00E-05	8.8724E-03
691628.49	4169277.05	1.61237	5.53016	5.43623	5.35595	9.36E-05	5.90E-04	3.39E-03	4.44E-06	4.0740E-03
691631.99	4169255.00	1.69794	6.11975	6.01252	5.89338	9.86E-05	6.53E-04	3.74E-03	4.89E-06	4.5013E-03
691668.08	4169234.45	1.71465	6.27554	6.40238	6.02558	9.95E-05	6.70E-04	3.99E-03	5.00E-06	4.7618E-03
691704.66	4169220.42	1.70944	6.14438	6.55964	5.91268	9.92E-05	6.56E-04	4.09E-03	4.90E-06	4.8453E-03
691719.20	4169208.89	1.72890	6.27410	6.80981	6.04702	1.00E-04	6.70E-04	4.24E-03	5.01E-06	5.0162E-03
691698.15	4169165.29	2.01542	8.48203	9.05131	7.98573	1.17E-04	9.05E-04	5.64E-03	6.62E-06	6.6661E-03
691800.39	4169158.77	1.75960	6.57053	7.57478	6.34934	1.02E-04	7.01E-04	4.72E-03	5.27E-06	5.5263E-03
691785.85	4169172.81	1.72957	6.40584	7.24684	6.17694	1.00E-04	6.84E-04	4.51E-03	5.12E-06	5.3026E-03
691882.58	4169138.73	1.65165	5.75672	6.83671	5.61602	9.59E-05	6.15E-04	4.26E-03	4.66E-06	4.9729E-03
691909.14	4169134.22	1.60880	5.45218	6.53183	5.35131	9.34E-05	5.82E-04	4.07E-03	4.44E-06	4.7478E-03
691588.80	4169332.77	1.47725	4.53174	4.39708	4.41980	8.57E-05	4.84E-04	2.74E-03	3.67E-06	3.3116E-03
691574.65	4169379.94	1.33541	3.77853	3.67583	3.70257	7.75E-05	4.03E-04	2.29E-03	3.07E-06	2.7732E-03
691940.90	4169126.13	1.56673	5.12800	6.21758	5.06517	9.09E-05	5.47E-04	3.87E-03	4.20E-06	4.5148E-03
691964.45	4169125.61	1.51864	4.80643	5.87325	4.78129	8.81E-05	5.13E-04	3.66E-03	3.96E-06	4.2630E-03
692035.62	4169140.52	1.34388	3.81236	4.66917	3.85196	7.80E-05	4.07E-04	2.91E-03	3.19E-06	3.3961E-03
692048.97	4169140.26	1.32272	3.69172	4.53246	3.73621	7.68E-05	3.94E-04	2.82E-03	3.10E-06	3.2967E-03
692062.83	4169163.29	1.24495	3.35835	4.02174	3.38886	7.23E-05	3.59E-04	2.50E-03	2.81E-06	2.9383E-03
692075.66	4169171.40	1.20938	3.19944	3.81969	3.23608	7.02E-05	3.42E-04	2.38E-03	2.68E-06	2.7933E-03
692162.26	4169160.15	1.11964	2.72873	3.33563	2.78254	6.50E-05	2.91E-04	2.08E-03	2.31E-06	2.4360E-03
692164.36	4169145.49	1.14464	2.80934	3.46427	2.85397	6.64E-05	3.00E-04	2.16E-03	2.37E-06	2.5262E-03
692179.53	4169145.49	1.12543	2.72376	3.35811	2.76553	6.53E-05	2.91E-04	2.09E-03	2.29E-06	2.4498E-03
692194.88	4169132.19	1.13072	2.71740	3.37364	2.74761	6.56E-05	2.90E-04	2.10E-03	2.28E-06	2.4591E-03
692206.67	4169126.40	1.12604	2.68375	3.34060	2.70893	6.54E-05	2.86E-04	2.08E-03	2.25E-06	2.4346E-03
691466.77	4168373.67	75.22017	3.91858	2.75120	4.02156	4.37E-03	4.18E-04	1.71E-03	3.33E-06	6.5009E-03
691453.41	4168320.26	53.81275	3.32358	2.39339	3.40879	3.12E-03	3.55E-04	1.49E-03	2.83E-06	4.9715E-03
691537.75	4168319.55	79.34369	4.07603	3.15303	4.21981	4.61E-03	4.35E-04	1.96E-03	3.50E-06	7.0075E-03
691409.97	4168212.93	28.44112	2.38316	1.79069	2.44041	1.65E-03	2.54E-04	1.12E-03	2.02E-06	3.0224E-03
691405.40	4168168.24	26.19041	2.18353	1.66362	2.23566	1.52E-03	2.33E-04	1.04E-03	1.85E-06	2.7912E-03
691535.39	4168247.96	91.37749	3.38169	2.72719	3.49838	5.30E-03	3.61E-04	1.70E-03	2.90E-06	7.3660E-03
691558.74	4168206.32	57.61665	3.16697	2.69792	3.28249	3.34E-03	3.38E-04	1.68E-03	2.72E-06	5.3652E-03
691586.67	4168224.10	38.80591	3.41357	3.00836	3.55343	2.25E-03	3.64E-04	1.87E-03	2.95E-06	4.4933E-03
691580.58	4168186.01	42.39272	3.09569	2.74364	3.21795	2.46E-03	3.30E-04	1.71E-03	2.67E-06	4.5024E-03
691545.54	4168110.86	81.21065	2.53073	2.20194	2.61662	4.71E-03	2.70E-04	1.37E-03	2.17E-06	6.3572E-03
691540.46	4168095.63	94.61411	2.43982	2.12187	2.52121	5.49E-03	2.60E-04	1.32E-03	2.09E-06	7.0755E-03
691486.13	4168117.46	91.99664	2.35489	1.91936	2.42804	5.34E-03	2.51E-04	1.20E-03	2.01E-06	6.7883E-03
691586.16	4168105.78	40.51888	2.60610	2.38542	2.70932	2.35E-03	2.78E-04	1.49E-03	2.25E-06	4.1178E-03
691480.55	4168089.54	74.28650	2.21439	1.81829	2.28283	4.31E-03	2.36E-04	1.13E-03	1.89E-06	5.6824E-03
691368.84	4168031.65	12.43239	1.63276	1.29091	1.66944	7.22E-04	1.74E-04	8.04E-04	1.38E-06	1.7012E-03
691468.87	4168043.84	51.56518	2.00317	1.66034	2.06463	2.99E-03	2.14E-04	1.03E-03	1.71E-06	4.2425E-03
691469.88	4168026.06	49.92308	1.94646	1.62571	2.00631	2.90E-03	2.08E-04	1.01E-03	1.66E-06	4.1195E-03
691543.51	4168055.52	89.99579	2.26439	2.00192	2.33927	5.22E-03	2.42E-04	1.25E-03	1.94E-06	6.7139E-03
691543.00	4168041.30	92.37702	2.20323	1.95508	2.27560	5.36E-03	2.35E-04	1.22E-03	1.89E-06	6.8163E-03
691571.44	4168062.62	50.01927	2.35825	2.14542	2.44390	2.90E-03	2.52E-04	1.34E-03	2.03E-06	4.4931E-03
691452.62	4168100.71	42.76824	2.15020	1.71950	2.21380	2.48E-03	2.30E-04	1.07E-03	1.84E-06	3.7846E-03
691506.70	4168892.79	80.21075	144.69616	28.49268	71.06640	4.66E-03	1.54E-02	1.77E-02	5.89E-05	3.7906E-02

CONCUNIT ug/m^3
DEPUNIT g/m^2

Health Risk Assessment

Off Season 2022 Emissions

Almond Sheller Project

Estimation of On-site Area Emissions During the Off Season

Size of area source (accounted for in AERMOD):		37,474.9	sq-meters

Season	**On-site Activity**	**On-site DPM (tons)**	
Off-Season	On-site Equipment*	0.0030286	tons/year
Total Off-Season (On-site Equipment)		3.029E-03	tons/year

Average Emission	2.750E+03	grams
	8.720E-05	grams/sec
	2.327E-09	grams/m2-sec

* Multiplied CalEEMod output by 1/7 to account for reduced use during off season (1 day a month to 1 day a week).

Almond Sheller Project

Diesel Vehicle Emissions (Off Season)

Roadway Links Modeled

Link	Truck Type	Average Speed (mph)	Emission Factor (g/mi)	Trips per Daily (in and out)	Link Length (m)	Link Length (mi)	Ave Emissions Over Link (g/day)	Ave Emissions (lbs/day)	Average Emissions (g/sec)	Emissions for all Vehicles (g/sec)
SLINE2	**LHDT1**	5 mph	0.094	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	LHDT2	5 mph	0.076	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	MHDT	5 mph	0.065	1.0	603.9	0.38	2.454E-02	5.40E-05	2.840E-07	
	HHDT	5 mph	0.055	2.0	603.9	0.38	4.140E-02	9.12E-05	4.791E-07	
	T7 Ag	5 mph	2.132	1.0	603.9	0.38	7.998E-01	1.76E-03	9.257E-06	**1.00E-05**
SLINE3	**LHDT1**	5 mph	0.094	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	5 mph	0.076	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	MHDT	5 mph	0.065	1.0	461	0.29	1.87E-02	4.13E-05	2.17E-07	
	HHDT	5 mph	0.055	2.0	461	0.29	3.16E-02	6.96E-05	3.66E-07	
	T7 Ag	5 mph	2.132	1.0	461	0.29	6.11E-01	1.34E-03	7.07E-06	**7.65E-06**

Diesel Vehicle Emissions (Off Season)

Diesel truck Idling Emissions

Onsite Vehicle Travel Segments	Truck Type	DPM Emission Factor (grams/trip)	Number Idling Vehicle Trips/day	Emissions (g/day)	Emissions (lb/day)	Average Emissions (g/sec)	Total Emissions for all Vehicles (g/sec)
SLINE4	**LHDT1**	0.0011	0.0	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	0.0015	0.0	0.00E+00	0.00E+00	0.00E+00	
	MHDT	0.0005	1.0	4.56E-04	1.00E-06	5.28E-09	
	HHDT	0.0025	2.0	5.02E-03	1.11E-05	5.81E-08	
	T7 Ag	0.0025	1.0	2.51E-03	5.53E-06	2.91E-08	**9.24E-08**

Almond Sheller Project

Off-site DSL Truck Roadway Emissions (Off Season)

Segment ID	Description	% total Trips
SLINE1	Road Segment 1 – Offsite Truck Travel	100.0%
	Total	100.0%

Segment ID: SLINE1
Travel Distance: 981.3 meters
Operations 24 hours/day

Vehicle Class	Daily Trips (trips/day)	Emission Factor (g/mi)	Travel Distance (mi)	Emissions (g/day)	Emissions (g/sec)
LHDT1-DSL	0	0.033	0.61	0.00	0.00E+00
LHDT2-DSL	0	0.029	0.61	0.00	0.00E+00
MHDT-DSL	1	0.030	0.61	0.02	2.12E-07
HHDT-DSL	2	0.017	0.61	0.02	2.39E-07
T7 Ag	1	0.714	0.61	0.43	5.03E-06
Total	4	—	—	—	**5.49E-06**

DPM **2022**

EMFAC2017 Running Diesel Exhaust Emissions
in units of grams/mile

		Emission Factor (g/mi)			
		5 mph	**10 mph**	**25 mph**	**35 mph**
LHDT1	DSL	0.0943	0.0690	0.0330	0.0246
LHDT2	DSL	0.0758	0.0571	0.0285	0.0216
MHDT	DSL	0.0654	0.0584	0.0301	0.0284
HHDT	DSL	0.0552	0.0390	0.0169	0.0186
T7 Ag	DSL	2.1320	1.7945	0.7135	0.5552

Idling Emissions for Trucks (Emission Factors from CalEEMod*)
in units of grams/trip

Vehicle Class	**Vehicle Speed (mph)**	**DPM (grams/trip)**
LHDT1	Idle	0.001134
LHDT2	Idle	0.001491
MHDT	Idle	0.000456
HHDT	Idle	0.002510
T7 Ag	Idle	0.002510

*CalEEMod Version 2020.4.0

Almond Sheller Project

Off Season Emissions (DPM)—Unmitigated Concentrations

		Maximum DPM (ug/m3)	UTM X	UTM Y
		4.5989E-03	691506.70	4168892.79
Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec):	5.49E-06	5.3276E-03	691511.55	4169004.64
Annual Average Total DPM Emission Rate - On-site-Road Segment 1 (grams/sec):	1.00E-05			
Annual Average Total DPM Emission Rate - On-site-Road Segment 2 (grams/sec):	9.48E-05			
Annual Average Total DPM Emission Rate - On-site Truck Idle (grams/sec):	9.24E-08			

X	Y	Unit Emissions VALUES AVERAGED Offsite Truck Travel	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 1	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 2	Unit Emissions VALUES AVERAGED On-site Truck Idle	Offsite Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 1 Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 2 Annual DPM Exhaust w/Actual Emissions (ug/m3)	On-site Truck Idle Annual DPM Exhaust w/Actual Emissions (ug/m3)	**Total DPM (ug/m3)**
691440.11	4168757.21	53.66444	12.48249	6.74768	12.05051	2.94E-04	1.25E-04	6.40E-04	1.11E-06	1.0606E-03
691441.12	4168740.17	54.32980	11.52916	6.40725	11.18675	2.98E-04	1.16E-04	6.08E-04	1.03E-06	1.0223E-03
691393.51	4168741.18	28.25195	8.51691	5.16869	8.43857	1.55E-04	8.53E-05	4.90E-04	7.80E-07	7.3133E-04
691554.37	4168769.24	38.34351	39.26007	14.58564	39.53836	2.10E-04	3.93E-04	1.38E-03	3.65E-06	1.9908E-03
691400.53	4168760.72	30.34146	9.64259	5.64489	9.47646	1.66E-04	9.66E-05	5.35E-04	8.76E-07	7.9933E-04
691530.82	4168750.20	60.31925	26.11319	11.12960	25.88586	3.31E-04	2.62E-04	1.06E-03	2.39E-06	1.6505E-03
691530.31	4168737.17	62.29774	23.42469	10.44974	23.50427	3.42E-04	2.35E-04	9.91E-04	2.17E-06	1.5697E-03
691538.83	4168689.06	56.44274	17.98067	8.97340	18.55927	3.10E-04	1.80E-04	8.51E-04	1.72E-06	1.3426E-03
691565.89	4168677.03	37.76047	19.89184	10.12985	20.48255	2.07E-04	1.99E-04	9.61E-04	1.89E-06	1.3691E-03
691454.65	4168675.53	69.89826	9.29499	5.57452	9.16801	3.83E-04	9.31E-05	5.29E-04	8.47E-07	1.0061E-03
691461.06	4168623.27	78.28591	7.79324	4.91443	7.88763	4.29E-04	7.81E-05	4.66E-04	7.29E-07	9.7435E-04
691421.97	4168620.26	38.24784	6.22942	4.19457	6.27747	2.10E-04	6.24E-05	3.98E-04	5.80E-07	6.7064E-04
691549.25	4168596.21	52.11165	11.40742	6.74849	11.82001	2.86E-04	1.14E-04	6.40E-04	1.09E-06	1.0413E-03
691568.30	4168594.21	39.80211	12.20102	7.43694	12.63628	2.18E-04	1.22E-04	7.05E-04	1.17E-06	1.0471E-03
691556.77	4168514.03	48.86024	8.09761	5.42105	8.40612	2.68E-04	8.11E-05	5.14E-04	7.77E-07	8.6410E-04
691511.55	4169004.64	7.30561	113.31047	43.69931	79.18092	4.01E-05	1.14E-03	4.14E-03	7.32E-06	5.3276E-03
691503.45	4169016.57	6.72656	91.34407	39.01053	64.39784	3.69E-05	9.15E-04	3.70E-03	5.95E-06	4.6582E-03
691425.07	4169063.43	5.32936	42.58665	23.82643	34.91513	2.92E-05	4.27E-04	2.26E-03	3.23E-06	2.7191E-03
691327.52	4169024.66	8.31911	39.21223	17.94872	36.73941	4.56E-05	3.93E-04	1.70E-03	3.40E-06	2.1444E-03
691447.65	4169079.61	4.58193	35.69975	21.95628	28.70481	2.51E-05	3.58E-04	2.08E-03	2.65E-06	2.4680E-03
691495.78	4169070.67	4.48762	38.63453	24.37207	29.97609	2.46E-05	3.87E-04	2.31E-03	2.77E-06	2.7262E-03
691510.69	4169078.34	4.15852	33.80486	22.81231	26.55134	2.28E-05	3.39E-04	2.16E-03	2.45E-06	2.5277E-03
691548.18	4169071.09	3.93337	34.78006	24.13675	26.48793	2.16E-05	3.49E-04	2.29E-03	2.45E-06	2.6619E-03
691583.54	4169054.48	3.94720	40.33890	27.92704	29.08731	2.17E-05	4.04E-04	2.65E-03	2.69E-06	3.0774E-03
691596.74	4169086.86	3.24662	23.90460	19.60491	19.59709	1.78E-05	2.40E-04	1.86E-03	1.81E-06	2.1187E-03
691498.39	4169122.01	3.34401	20.51570	15.80307	17.43456	1.83E-05	2.06E-04	1.50E-03	1.61E-06	1.7244E-03
691511.79	4169116.58	3.37367	21.28115	16.40199	17.91762	1.85E-05	2.13E-04	1.56E-03	1.66E-06	1.7891E-03
691612.82	4169124.18	2.67806	15.29487	13.89908	13.50602	1.47E-05	1.53E-04	1.32E-03	1.25E-06	1.4875E-03
691615.71	4169140.84	2.49671	13.12795	12.18443	11.83291	1.37E-05	1.32E-04	1.16E-03	1.09E-06	1.3020E-03
691639.97	4169187.55	2.04573	8.79023	8.59724	8.23173	1.12E-05	8.81E-05	8.15E-04	7.61E-07	9.1550E-04
691626.94	4169196.60	2.02327	8.56921	8.28247	8.06318	1.11E-05	8.59E-05	7.86E-04	7.45E-07	8.8329E-04
691546.55	4169198.77	2.28734	9.93512	8.93617	9.19543	1.25E-05	9.96E-05	8.48E-04	8.50E-07	9.6054E-04
691517.95	4169134.68	3.06841	17.52382	14.15630	15.13886	1.68E-05	1.76E-04	1.34E-03	1.40E-06	1.5365E-03
691549.81	4169125.63	3.01125	17.91534	14.76188	15.49869	1.65E-05	1.80E-04	1.40E-03	1.43E-06	1.5976E-03
691552.35	4169135.05	2.87906	16.27397	13.68256	14.28030	1.58E-05	1.63E-04	1.30E-03	1.32E-06	1.4780E-03
691550.17	4169157.13	2.64775	13.47446	11.67370	12.11002	1.45E-05	1.35E-04	1.11E-03	1.12E-06	1.2579E-03
691628.49	4169277.05	1.61237	5.53016	5.43623	5.35595	8.84E-06	5.54E-05	5.16E-04	4.95E-07	5.8037E-04
691631.99	4169255.00	1.69794	6.11975	6.01252	5.89338	9.31E-06	6.13E-05	5.70E-04	5.45E-07	6.4146E-04
691668.08	4169234.45	1.71465	6.27554	6.40238	6.02558	9.40E-06	6.29E-05	6.07E-04	5.57E-07	6.8010E-04
691704.66	4169220.42	1.70944	6.14438	6.55964	5.91268	9.38E-06	6.16E-05	6.22E-04	5.47E-07	6.9367E-04
691719.20	4169208.89	1.72890	6.27410	6.80981	6.04702	9.48E-06	6.29E-05	6.46E-04	5.59E-07	7.1881E-04
691698.15	4169165.29	2.01542	8.48203	9.05131	7.98573	1.11E-05	8.50E-05	8.59E-04	7.38E-07	9.5529E-04
691800.39	4169158.77	1.75960	6.57053	7.57478	6.34934	9.65E-06	6.58E-05	7.18E-04	5.87E-07	7.9454E-04
691785.85	4169172.81	1.72957	6.40584	7.24684	6.17694	9.49E-06	6.42E-05	6.87E-04	5.71E-07	7.6160E-04
691882.58	4169138.73	1.65165	5.75672	6.83671	5.61602	9.06E-06	5.77E-05	6.48E-04	5.19E-07	7.1572E-04
691909.14	4169134.22	1.60880	5.45218	6.53183	5.35131	8.82E-06	5.46E-05	6.20E-04	4.95E-07	6.8349E-04
691588.80	4169332.77	1.47725	4.53174	4.39708	4.41980	8.10E-06	4.54E-05	4.17E-04	4.09E-07	4.7098E-04
691574.65	4169379.94	1.33541	3.77853	3.67583	3.70257	7.32E-06	3.79E-05	3.49E-04	3.42E-07	3.9418E-04
691940.90	4169126.13	1.56673	5.12800	6.21758	5.06517	8.59E-06	5.14E-05	5.90E-04	4.68E-07	6.5018E-04
691964.45	4169125.61	1.51864	4.80643	5.87325	4.78129	8.33E-06	4.82E-05	5.57E-04	4.42E-07	6.1401E-04
692035.62	4169140.52	1.34388	3.81236	4.66917	3.85196	7.37E-06	3.82E-05	4.43E-04	3.56E-07	4.8879E-04
692048.97	4169140.26	1.32272	3.69172	4.53246	3.73621	7.26E-06	3.70E-05	4.30E-04	3.45E-07	4.7449E-04
692062.83	4169163.29	1.24495	3.35835	4.02174	3.38886	6.83E-06	3.37E-05	3.81E-04	3.13E-07	4.2225E-04
692075.66	4169171.40	1.20938	3.19944	3.81969	3.23608	6.63E-06	3.21E-05	3.62E-04	2.99E-07	4.0129E-04
692162.26	4169160.15	1.11964	2.72873	3.33563	2.78254	6.14E-06	2.73E-05	3.16E-04	2.57E-07	3.5012E-04
692164.36	4169145.49	1.14464	2.80934	3.46427	2.85397	6.28E-06	2.81E-05	3.29E-04	2.64E-07	3.6328E-04
692179.53	4169145.49	1.12543	2.72376	3.35811	2.76553	6.17E-06	2.73E-05	3.19E-04	2.56E-07	3.5224E-04
692194.88	4169132.19	1.13072	2.71740	3.37364	2.74761	6.20E-06	2.72E-05	3.20E-04	2.54E-07	3.5367E-04
692206.67	4169126.40	1.12604	2.68375	3.34060	2.70893	6.18E-06	2.69E-05	3.17E-04	2.50E-07	3.5017E-04
691466.77	4168373.67	75.22017	3.91858	2.75120	4.02156	4.13E-04	3.93E-05	2.61E-04	3.72E-07	7.1317E-04
691453.41	4168320.26	53.81275	3.32358	2.39339	3.40879	2.95E-04	3.33E-05	2.27E-04	3.15E-07	5.5579E-04
691537.75	4168319.55	79.34369	4.07603	3.15303	4.21981	4.35E-04	4.08E-05	2.99E-04	3.90E-07	7.7550E-04
691409.97	4168212.93	28.44112	2.38316	1.79069	2.44041	1.56E-04	2.39E-05	1.70E-04	2.26E-07	3.4995E-04
691405.40	4168168.24	26.19041	2.18353	1.66362	2.23566	1.44E-04	2.19E-05	1.58E-04	2.07E-07	3.2353E-04
691535.39	4168247.96	91.37749	3.38169	2.72719	3.49838	5.01E-04	3.39E-05	2.59E-04	3.23E-07	7.9409E-04
691558.74	4168206.32	57.61665	3.16697	2.69792	3.28249	3.16E-04	3.17E-05	2.56E-04	3.03E-07	6.0396E-04
691586.67	4168224.10	38.80591	3.41357	3.00836	3.55343	2.13E-04	3.42E-05	2.85E-04	3.28E-07	5.3273E-04
691580.58	4168186.01	42.39272	3.09569	2.74364	3.21795	2.33E-04	3.10E-05	2.60E-04	2.97E-07	5.2407E-04
691545.54	4168110.86	81.21065	2.53073	2.20194	2.61662	4.45E-04	2.54E-05	2.09E-04	2.42E-07	6.7990E-04
691540.46	4168095.63	94.61411	2.43982	2.12187	2.52121	5.19E-04	2.44E-05	2.01E-04	2.33E-07	7.4490E-04
691486.13	4168117.46	91.99664	2.35489	1.91936	2.42804	5.05E-04	2.36E-05	1.82E-04	2.24E-07	7.1048E-04
691586.16	4168105.78	40.51888	2.60610	2.38542	2.70932	2.22E-04	2.61E-05	2.26E-04	2.50E-07	4.7487E-04
691480.55	4168089.54	74.28650	2.21439	1.81829	2.28283	4.07E-04	2.22E-05	1.72E-04	2.11E-07	6.0233E-04
691368.84	4168031.65	12.43239	1.63276	1.29091	1.66944	6.82E-05	1.64E-05	1.22E-04	1.54E-07	2.0715E-04
691468.87	4168043.84	51.56518	2.00317	1.66034	2.06463	2.83E-04	2.01E-05	1.57E-04	1.91E-07	4.6058E-04
691469.88	4168026.06	49.92308	1.94646	1.62571	2.00631	2.74E-04	1.95E-05	1.54E-04	1.85E-07	4.4772E-04
691543.51	4168055.52	89.99579	2.26439	2.00192	2.33927	4.94E-04	2.27E-05	1.90E-04	2.16E-07	7.0642E-04
691543.00	4168041.30	92.37702	2.20323	1.95508	2.27560	5.07E-04	2.21E-05	1.85E-04	2.10E-07	7.1442E-04
691571.44	4168062.62	50.01927	2.35825	2.14542	2.44390	2.74E-04	2.36E-05	2.03E-04	2.26E-07	5.0170E-04
691452.62	4168100.71	42.76824	2.15020	1.71950	2.21380	2.35E-04	2.15E-05	1.63E-04	2.05E-07	4.1943E-04
691506.70	4168892.79	80.21075	144.69616	28.49268	71.06640	4.40E-04	1.45E-03	2.70E-03	6.57E-06	4.5989E-03

CONCUNIT ug/m^3
DEPUNIT g/m^2

Health Risk Assessment

2025 Emission Estimates

Health Risk Assessment

Peak Season 2025 Emissions

Almond Sheller Project

Estimation of On-site Area Emissions During the Peak Season

Size of area source (accounted for in AERMOD):		37,474.9	sq-meters
Season	**On-site Activity**	**On-site DPM (tons)**	
Peak Season	On-site Equipment	0.01880	tons/year
Total Peak Season (On-site Equipment)		1.880E-02	tons/year
Average Emission		1.707E+04	grams
		5.413E-04	grams/sec
		1.444E-08	grams/m2-sec

Almond Sheller Project

Diesel Vehicle Emissions (Peak Season)

Facility Operations

24 hrs/day, 153 days/year (seasonal)

Roadway Links Modeled

Link	Truck Type	Average Speed (mph)	Emission Factor (g/mi)	Trips per Daily (in and out)	Link Length (m)	Link Length (mi)	Ave Emissions Over Link (g/day)	Ave Emissions (lbs/day)	Average Emissions (g/sec)	Emissions for all Vehicles (g/sec)
SLINE2	**LHDT1**	5 mph	0.081	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	LHDT2	5 mph	0.068	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	MHDT	5 mph	0.007	3.0	603.9	0.38	7.783E-03	1.71E-05	9.008E-08	
	HHDT	5 mph	0.015	17.0	603.9	0.38	9.474E-02	2.09E-04	1.097E-06	
	T7 Ag	5 mph	0.015	11.0	603.9	0.38	6.246E-02	1.38E-04	7.230E-07	**1.91E-06**
SLINE3	**LHDT1**	5 mph	0.081	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	5 mph	0.068	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	MHDT	5 mph	0.007	3.0	461	0.29	5.94E-03	1.31E-05	6.88E-08	
	HHDT	5 mph	0.015	17.0	461	0.29	7.23E-02	1.59E-04	8.37E-07	
	T7 Ag	5 mph	0.015	11.0	461	0.29	4.77E-02	1.05E-04	5.52E-07	**1.46E-06**

Diesel Vehicle Emissions (Peak Season)

Diesel truck Idling Emissions

Onsite Vehicle Travel Segments	Truck Type	DPM Emission Factor (grams/trip)	Number Idling Vehicle Trips/day	Emissions (g/day)	Emissions (lb/day)	Average Emissions (g/sec)	Total Emissions for all Vehicles (g/sec)
SLINE4	**LHDT1**	0.0011	0.0	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	0.0014	0.0	0.00E+00	0.00E+00	0.00E+00	
	MHDT	0.0003	3.0	9.96E-04	2.19E-06	1.15E-08	
	HHDT	0.0023	17.0	3.84E-02	8.46E-05	4.44E-07	
	T7 Ag	0.0023	11.0	2.48E-02	5.47E-05	2.88E-07	**7.44E-07**

Almond Sheller Project

Project Operations 24 hours/day

Off-site DSL Truck Roadway Emissions (Peak Season)

Segment ID	Description	% total Trips
SLINE1	Road Segment 1 – Offsite Truck Travel	100.0%
	Total	100.0%

Segment ID: SLINE1
Travel Distance: 981.3 meters
Operations 24 hours/day

Vehicle Class	Daily Trips (trips/day)	Emission Factor (g/mi)	Travel Distance (mi)	Emissions (g/day)	Emissions (g/sec)
LHDT1-DSL	0	0.029	0.61	0.00	0.00E+00
LHDT2-DSL	0	0.027	0.61	0.00	0.00E+00
MHDT-DSL	3	0.003	0.61	0.01	6.73E-08
HHDT-DSL	17	0.007	0.61	0.07	8.17E-07
T7 Ag	11	0.009	0.61	0.06	6.64E-07
Total	31	—	—	—	**1.55E-06**

DPM 2025

EMFAC2017 Running Diesel Exhaust Emissions
in units of grams/mile

		Emission Factor (g/mi)			
		5 mph	**10 mph**	**25 mph**	**35 mph**
LHDT1	DSL	0.0810	0.0601	0.0295	0.0222
LHDT2	DSL	0.0677	0.0522	0.0270	0.0206
MHDT	DSL	0.0069	0.0061	0.0032	0.0041
HHDT	DSL	0.0149	0.0124	0.0068	0.0090
T7 Ag	DSL	0.0151	0.0133	0.0086	0.0113

Idling Emissions for Trucks (Emission Factors from CalEEMod*)
in units of grams/trip

Vehicle Class	**Vehicle Speed (mph)**	**DPM (grams/trip)**
LHDT1	Idle	0.001082
LHDT2	Idle	0.001440
MHDT	Idle	0.000332
HHDT	Idle	0.002259
T7 Ag	Idle	0.002259

*CalEEMod Version 2020.4.0

Almond Sheller Project

Peak Season Emissions (DPM)—Unmitigated Concentrations

		Maximum DPM (ug/m3)	UTM X	UTM Y
		2.4005E-02	691511.55	4169004.64
Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec):	1.55E-06	1.5918E-02	691506.70	4168892.79
Annual Average Total DPM Emission Rate - On-site-Road Segment 1 (grams/sec):	1.91E-06			
Annual Average Total DPM Emission Rate - On-site-Road Segment 2 (grams/sec):	5.43E-04			
Annual Average Total DPM Emission Rate - On-site Truck Idle (grams/sec):	7.44E-07			

X	Y	Unit Emissions VALUES AVERAGED Offsite Truck Travel	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 1	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 2	Unit Emissions VALUES AVERAGED On-site Truck Idle	Offsite Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 1 Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 2 Annual DPM Exhaust w/Actual Emissions (ug/m3)	On-site Truck Idle Annual DPM Exhaust w/Actual Emissions (ug/m3)	**Total DPM (ug/m3)**
691440.11	4168757.21	53.66444	12.48249	6.74768	12.05051	8.31E-05	2.38E-05	3.66E-03	8.96E-06	3.7782E-03
691441.12	4168740.17	54.32980	11.52916	6.40725	11.18675	8.41E-05	2.20E-05	3.48E-03	8.32E-06	3.5920E-03
691393.51	4168741.18	28.25195	8.51691	5.16869	8.43857	4.37E-05	1.63E-05	2.81E-03	6.28E-06	2.8716E-03
691554.37	4168769.24	38.34351	39.26007	14.58564	39.53836	5.94E-05	7.50E-05	7.92E-03	2.94E-05	8.0802E-03
691400.53	4168760.72	30.34146	9.64259	5.64489	9.47646	4.70E-05	1.84E-05	3.06E-03	7.05E-06	3.1362E-03
691530.82	4168750.20	60.31925	26.11319	11.12960	25.88586	9.34E-05	4.99E-05	6.04E-03	1.92E-05	6.2032E-03
691530.31	4168737.17	62.29774	23.42469	10.44974	23.50427	9.65E-05	4.47E-05	5.67E-03	1.75E-05	5.8303E-03
691538.83	4168689.06	56.44274	17.98067	8.97340	18.55927	8.74E-05	3.43E-05	4.87E-03	1.38E-05	5.0059E-03
691565.89	4168677.03	37.76047	19.89184	10.12985	20.48255	5.85E-05	3.80E-05	5.50E-03	1.52E-05	5.6097E-03
691454.65	4168675.53	69.89826	9.29499	5.57452	9.16801	1.08E-04	1.77E-05	3.03E-03	6.82E-06	3.1584E-03
691461.06	4168623.27	78.28591	7.79324	4.91443	7.88763	1.21E-04	1.49E-05	2.67E-03	5.87E-06	2.8093E-03
691421.97	4168620.26	38.24784	6.22942	4.19457	6.27747	5.92E-05	1.19E-05	2.28E-03	4.67E-06	2.3524E-03
691549.25	4168596.21	52.11165	11.40742	6.74849	11.82001	8.07E-05	2.18E-05	3.66E-03	8.79E-06	3.7740E-03
691568.30	4168594.21	39.80211	12.20102	7.43694	12.63628	6.16E-05	2.33E-05	4.04E-03	9.40E-06	4.1308E-03
691556.77	4168514.03	48.86024	8.09761	5.42105	8.40612	7.57E-05	1.55E-05	2.94E-03	6.25E-06	3.0397E-03
691511.55	4169004.64	7.30561	113.31047	43.69931	79.18092	1.13E-05	2.16E-04	2.37E-02	5.89E-05	2.4005E-02
691503.45	4169016.57	6.72656	91.34407	39.01053	64.39784	1.04E-05	1.74E-04	2.12E-02	4.79E-05	2.1406E-02
691425.07	4169063.43	5.32936	42.58665	23.82643	34.91513	8.25E-06	8.13E-05	1.29E-02	2.60E-05	1.3047E-02
691327.52	4169024.66	8.31911	39.21223	17.94872	36.73941	1.29E-05	7.49E-05	9.74E-03	2.73E-05	9.8569E-03
691447.65	4169079.61	4.58193	35.69975	21.95628	28.70481	7.09E-06	6.82E-05	1.19E-02	2.13E-05	1.2014E-02
691495.78	4169070.67	4.48762	38.63453	24.37207	29.97609	6.95E-06	7.38E-05	1.32E-02	2.23E-05	1.3331E-02
691510.69	4169078.34	4.15852	33.80486	22.81231	26.55134	6.44E-06	6.46E-05	1.24E-02	1.97E-05	1.2472E-02
691548.18	4169071.09	3.93337	34.78006	24.13675	26.48793	6.09E-06	6.64E-05	1.31E-02	1.97E-05	1.3193E-02
691583.54	4169054.48	3.94720	40.33890	27.92704	29.08731	6.11E-06	7.70E-05	1.52E-02	2.16E-05	1.5262E-02
691596.74	4169086.86	3.24662	23.90460	19.60491	19.59709	5.03E-06	4.56E-05	1.06E-02	1.46E-05	1.0706E-02
691498.39	4169122.01	3.34401	20.51570	15.80307	17.43456	5.18E-06	3.92E-05	8.58E-03	1.30E-05	8.6345E-03
691511.79	4169116.58	3.37367	21.28115	16.40199	17.91762	5.22E-06	4.06E-05	8.90E-03	1.33E-05	8.9615E-03
691612.82	4169124.18	2.67806	15.29487	13.89908	13.50602	4.15E-06	2.92E-05	7.54E-03	1.00E-05	7.5872E-03
691615.71	4169140.84	2.49671	13.12795	12.18443	11.83291	3.87E-06	2.51E-05	6.61E-03	8.80E-06	6.6509E-03
691639.97	4169187.55	2.04573	8.79023	8.59724	8.23173	3.17E-06	1.68E-05	4.67E-03	6.12E-06	4.6923E-03
691626.94	4169196.60	2.02327	8.56921	8.28247	8.06318	3.13E-06	1.64E-05	4.50E-03	6.00E-06	4.5209E-03
691546.55	4169198.77	2.28734	9.93512	8.93617	9.19543	3.54E-06	1.90E-05	4.85E-03	6.84E-06	4.8795E-03
691517.95	4169134.68	3.06841	17.52382	14.15630	15.13886	4.75E-06	3.35E-05	7.68E-03	1.13E-05	7.7329E-03
691549.81	4169125.63	3.01125	17.91534	14.76188	15.49869	4.66E-06	3.42E-05	8.01E-03	1.15E-05	8.0625E-03
691552.35	4169135.05	2.87906	16.27397	13.68256	14.28030	4.46E-06	3.11E-05	7.43E-03	1.06E-05	7.4725E-03
691550.17	4169157.13	2.64775	13.47446	11.67370	12.11002	4.10E-06	2.57E-05	6.34E-03	9.01E-06	6.3748E-03
691628.49	4169277.05	1.61237	5.53016	5.43623	5.35595	2.50E-06	1.06E-05	2.95E-03	3.98E-06	2.9676E-03
691631.99	4169255.00	1.69794	6.11975	6.01252	5.89338	2.63E-06	1.17E-05	3.26E-03	4.38E-06	3.2820E-03
691668.08	4169234.45	1.71465	6.27554	6.40238	6.02558	2.65E-06	1.20E-05	3.47E-03	4.48E-06	3.4941E-03
691704.66	4169220.42	1.70944	6.14438	6.55964	5.91268	2.65E-06	1.17E-05	3.56E-03	4.40E-06	3.5791E-03
691719.20	4169208.89	1.72890	6.27410	6.80981	6.04702	2.68E-06	1.20E-05	3.70E-03	4.50E-06	3.7152E-03
691698.15	4169165.29	2.01542	8.48203	9.05131	7.98573	3.12E-06	1.62E-05	4.91E-03	5.94E-06	4.9379E-03
691800.39	4169158.77	1.75960	6.57053	7.57478	6.34934	2.72E-06	1.25E-05	4.11E-03	4.72E-06	4.1313E-03
691785.85	4169172.81	1.72957	6.40584	7.24684	6.17694	2.68E-06	1.22E-05	3.93E-03	4.59E-06	3.9528E-03
691882.58	4169138.73	1.65165	5.75672	6.83671	5.61602	2.56E-06	1.10E-05	3.71E-03	4.18E-06	3.7284E-03
691909.14	4169134.22	1.60880	5.45218	6.53183	5.35131	2.49E-06	1.04E-05	3.55E-03	3.98E-06	3.5621E-03
691588.80	4169332.77	1.47725	4.53174	4.39708	4.41980	2.29E-06	8.65E-06	2.39E-03	3.29E-06	2.4008E-03
691574.65	4169379.94	1.33541	3.77853	3.67583	3.70257	2.07E-06	7.22E-06	2.00E-03	2.75E-06	2.0071E-03
691940.90	4169126.13	1.56673	5.12800	6.21758	5.06517	2.43E-06	9.79E-06	3.37E-03	3.77E-06	3.3906E-03
691964.45	4169125.61	1.51864	4.80643	5.87325	4.78129	2.35E-06	9.18E-06	3.19E-03	3.56E-06	3.2028E-03
692035.62	4169140.52	1.34388	3.81236	4.66917	3.85196	2.08E-06	7.28E-06	2.53E-03	2.86E-06	2.5464E-03
692048.97	4169140.26	1.32272	3.69172	4.53246	3.73621	2.05E-06	7.05E-06	2.46E-03	2.78E-06	2.4719E-03
692062.83	4169163.29	1.24495	3.35835	4.02174	3.38886	1.93E-06	6.41E-06	2.18E-03	2.52E-06	2.1937E-03
692075.66	4169171.40	1.20938	3.19944	3.81969	3.23608	1.87E-06	6.11E-06	2.07E-03	2.41E-06	2.0836E-03
692162.26	4169160.15	1.11964	2.72873	3.33563	2.78254	1.73E-06	5.21E-06	1.81E-03	2.07E-06	1.8194E-03
692164.36	4169145.49	1.14464	2.80934	3.46427	2.85397	1.77E-06	5.36E-06	1.88E-03	2.12E-06	1.8895E-03
692179.53	4169145.49	1.12543	2.72376	3.35811	2.76553	1.74E-06	5.20E-06	1.82E-03	2.06E-06	1.8316E-03
692194.88	4169132.19	1.13072	2.71740	3.37364	2.74761	1.75E-06	5.19E-06	1.83E-03	2.04E-06	1.8400E-03
692206.67	4169126.40	1.12604	2.68375	3.34060	2.70893	1.74E-06	5.12E-06	1.81E-03	2.01E-06	1.8220E-03
691466.77	4168373.67	75.22017	3.91858	2.75120	4.02156	1.16E-04	7.48E-06	1.49E-03	2.99E-06	1.6202E-03
691453.41	4168320.26	53.81275	3.32358	2.39339	3.40879	8.33E-05	6.35E-06	1.30E-03	2.53E-06	1.3912E-03
691537.75	4168319.55	79.34369	4.07603	3.15303	4.21981	1.23E-04	7.78E-06	1.71E-03	3.14E-06	1.8451E-03
691409.97	4168212.93	28.44112	2.38316	1.79069	2.44041	4.40E-05	4.55E-06	9.72E-04	1.81E-06	1.0223E-03
691405.40	4168168.24	26.19041	2.18353	1.66362	2.23566	4.06E-05	4.17E-06	9.03E-04	1.66E-06	9.4932E-04
691535.39	4168247.96	91.37749	3.38169	2.72719	3.49838	1.41E-04	6.46E-06	1.48E-03	2.60E-06	1.6307E-03
691558.74	4168206.32	57.61665	3.16697	2.69792	3.28249	8.92E-05	6.05E-06	1.46E-03	2.44E-06	1.5620E-03
691586.67	4168224.10	38.80591	3.41357	3.00836	3.55343	6.01E-05	6.52E-06	1.63E-03	2.64E-06	1.7021E-03
691580.58	4168186.01	42.39272	3.09569	2.74364	3.21795	6.56E-05	5.91E-06	1.49E-03	2.39E-06	1.5631E-03
691545.54	4168110.86	81.21065	2.53073	2.20194	2.61662	1.26E-04	4.83E-06	1.20E-03	1.95E-06	1.3276E-03
691540.46	4168095.63	94.61411	2.43982	2.12187	2.52121	1.46E-04	4.66E-06	1.15E-03	1.87E-06	1.3047E-03
691486.13	4168117.46	91.99664	2.35489	1.91936	2.42804	1.42E-04	4.50E-06	1.04E-03	1.81E-06	1.1905E-03
691586.16	4168105.78	40.51888	2.60610	2.38542	2.70932	6.27E-05	4.98E-06	1.29E-03	2.01E-06	1.3644E-03
691480.55	4168089.54	74.28650	2.21439	1.81829	2.28283	1.15E-04	4.23E-06	9.87E-04	1.70E-06	1.1078E-03
691368.84	4168031.65	12.43239	1.63276	1.29091	1.66944	1.92E-05	3.12E-06	7.01E-04	1.24E-06	7.2426E-04
691468.87	4168043.84	51.56518	2.00317	1.66034	2.06463	7.98E-05	3.83E-06	9.01E-04	1.54E-06	9.8636E-04
691469.88	4168026.06	49.92308	1.94646	1.62571	2.00631	7.73E-05	3.72E-06	8.82E-04	1.49E-06	9.6487E-04
691543.51	4168055.52	89.99579	2.26439	2.00192	2.33927	1.39E-04	4.32E-06	1.09E-03	1.74E-06	1.2320E-03
691543.00	4168041.30	92.37702	2.20323	1.95508	2.27560	1.43E-04	4.21E-06	1.06E-03	1.69E-06	1.2101E-03
691571.44	4168062.62	50.01927	2.35825	2.14542	2.44390	7.74E-05	4.50E-06	1.16E-03	1.82E-06	1.2482E-03
691452.62	4168100.71	42.76824	2.15020	1.71950	2.21380	6.62E-05	4.11E-06	9.33E-04	1.65E-06	1.0052E-03
691506.70	4168892.79	80.21075	144.69616	28.49268	71.06640	1.24E-04	2.76E-04	1.55E-02	5.28E-05	1.5918E-02

CONCUNIT ug/m^3
DEPUNIT g/m^2

Health Risk Assessment

Off Season 2025 Emissions

Almond Sheller Project

Estimation of On-site Area Emissions During the Off Season

Size of area source (accounted for in AERMOD):		37,474.9	sq-meters
Season	**On-site Activity**	**On-site DPM (tons)**	
Off-Season	On-site Equipment*	0.0030286	tons/year
Total Off-Season (On-site Equipment)		3.029E-03	tons/year
Average Emission		2.750E+03	grams
		8.720E-05	grams/sec
		2.327E-09	grams/m2-sec

* Multiplied CalEEMod output by 1/7 to account for reduced use during off season (1 day a month to 1 day a week).

Almond Sheller Project

Diesel Vehicle Emissions (Off Season)

Roadway Links Modeled

Link	Truck Type	Average Speed (mph)	Emission Factor (g/mi)	Trips per Daily (in and out)	Link Length (m)	Link Length (mi)	Ave Emissions Over Link (g/day)	Ave Emissions (lbs/day)	Average Emissions (g/sec)	Emissions for all Vehicles (g/sec)
SLINE2	**LHDT1**	5 mph	0.081	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	LHDT2	5 mph	0.068	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	MHDT	5 mph	0.007	1.0	603.9	0.38	2.594E-03	5.71E-06	3.003E-08	
	HHDT	5 mph	0.015	2.0	603.9	0.38	1.115E-02	2.46E-05	1.290E-07	
	T7 Ag	5 mph	0.015	1.0	603.9	0.38	5.679E-03	1.25E-05	6.572E-08	**2.25E-07**
SLINE3	**LHDT1**	5 mph	0.081	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	5 mph	0.068	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	MHDT	5 mph	0.007	1.0	461	0.29	1.98E-03	4.36E-06	2.29E-08	
	HHDT	5 mph	0.015	2.0	461	0.29	8.51E-03	1.87E-05	9.85E-08	
	T7 Ag	5 mph	0.015	1.0	461	0.29	4.33E-03	9.55E-06	5.02E-08	**1.72E-07**

Diesel Vehicle Emissions (Off Season)

Diesel truck Idling Emissions

Onsite Vehicle Travel Segments	Truck Type	DPM Emission Factor (grams/trip)	Number Idling Vehicle Trips/day	Emissions (g/day)	Emissions (lb/day)	Average Emissions (g/sec)	Total Emissions for all Vehicles (g/sec)
SLINE4	**LHDT1**	0.0011	0.0	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	0.0014	0.0	0.00E+00	0.00E+00	0.00E+00	
	MHDT	0.0003	1.0	3.32E-04	7.31E-07	3.84E-09	
	HHDT	0.0023	2.0	4.52E-03	9.95E-06	5.23E-08	
	T7 Ag	0.0023	1.0	2.26E-03	4.98E-06	2.61E-08	**8.23E-08**

Almond Sheller Project

Off-site DSL Truck Roadway Emissions (Off Season)

Segment ID	Description	% total Trips
SLINE1	Road Segment 1 – Offsite Truck Travel	100.0%
	Total	100.0%

Segment ID: SLINE1
Travel Distance: 981.3 meters
Operations 24 hours/day

Vehicle Class	Daily Trips (trips/day)	Emission Factor (g/mi)	Travel Distance (mi)	Emissions (g/day)	Emissions (g/sec)
LHDT1-DSL	0	0.029	0.61	0.00	0.00E+00
LHDT2-DSL	0	0.027	0.61	0.00	0.00E+00
MHDT-DSL	1	0.003	0.61	0.00	2.24E-08
HHDT-DSL	2	0.007	0.61	0.01	9.61E-08
T7 Ag	1	0.009	0.61	0.01	6.04E-08
Total	4	—	—	—	**1.79E-07**

DPM **2025**

EMFAC2017 Running Diesel Exhaust Emissions
in units of grams/mile

		Emission Factor (g/mi)			
		5 mph	**10 mph**	**25 mph**	**35 mph**
LHDT1	DSL	0.0810	0.0601	0.0295	0.0222
LHDT2	DSL	0.0677	0.0522	0.0270	0.0206
MHDT	DSL	0.0069	0.0061	0.0032	0.0041
HHDT	DSL	0.0149	0.0124	0.0068	0.0090
T7 Ag	DSL	0.0151	0.0133	0.0086	0.0113

Idling Emissions for Trucks (Emission Factors from CalEEMod*)
in units of grams/trip

Vehicle Class	**Vehicle Speed (mph)**	**DPM (grams/trip)**
LHDT1	Idle	0.001082
LHDT2	Idle	0.001440
MHDT	Idle	0.000332
HHDT	Idle	0.002259
T7 Ag	Idle	0.002259

*CalEEMod Version 2020.4.0

Almond Sheller Project

Off Season Emissions (DPM)—Unmitigated Concentrations

		Maximum DPM (ug/m3)	UTM X	UTM Y
		3.8514E-03	691511.55	4169004.64
Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec):	1.79E-07	2.5422E-03	691506.70	4168892.79
Annual Average Total DPM Emission Rate - On-site-Road Segment 1 (grams/sec):	2.25E-07			
Annual Average Total DPM Emission Rate - On-site-Road Segment 2 (grams/sec):	8.74E-05			
Annual Average Total DPM Emission Rate - On-site Truck Idle (grams/sec):	8.23E-08			

X	Y	Unit Emissions VALUES AVERAGED Offsite Truck Travel	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 1	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 2	Unit Emissions VALUES AVERAGED On-site Truck Idle	Offsite Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 1 Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 2 Annual DPM Exhaust w/Actual Emissions (ug/m3)	On-site Truck Idle Annual DPM Exhaust w/Actual Emissions (ug/m3)	**Total DPM (ug/m3)**
691440.11	4168757.21	53.66444	12.48249	6.74768	12.05051	9.60E-06	2.81E-06	5.90E-04	9.92E-07	6.0296E-04
691441.12	4168740.17	54.32980	11.52916	6.40725	11.18675	9.72E-06	2.59E-06	5.60E-04	9.20E-07	5.7304E-04
691393.51	4168741.18	28.25195	8.51691	5.16869	8.43857	5.05E-06	1.91E-06	4.52E-04	6.94E-07	4.5926E-04
691554.37	4168769.24	38.34351	39.26007	14.58564	39.53836	6.86E-06	8.82E-06	1.27E-03	3.25E-06	1.2933E-03
691400.53	4168760.72	30.34146	9.64259	5.64489	9.47646	5.43E-06	2.17E-06	4.93E-04	7.80E-07	5.0158E-04
691530.82	4168750.20	60.31925	26.11319	11.12960	25.88586	1.08E-05	5.87E-06	9.72E-04	2.13E-06	9.9120E-04
691530.31	4168737.17	62.29774	23.42469	10.44974	23.50427	1.11E-05	5.26E-06	9.13E-04	1.93E-06	9.3136E-04
691538.83	4168689.06	56.44274	17.98067	8.97340	18.55927	1.01E-05	4.04E-06	7.84E-04	1.53E-06	7.9969E-04
691565.89	4168677.03	37.76047	19.89184	10.12985	20.48255	6.76E-06	4.47E-06	8.85E-04	1.69E-06	8.9797E-04
691454.65	4168675.53	69.89826	9.29499	5.57452	9.16801	1.25E-05	2.09E-06	4.87E-04	7.54E-07	5.0241E-04
691461.06	4168623.27	78.28591	7.79324	4.91443	7.88763	1.40E-05	1.75E-06	4.29E-04	6.49E-07	4.4579E-04
691421.97	4168620.26	38.24784	6.22942	4.19457	6.27747	6.84E-06	1.40E-06	3.66E-04	5.17E-07	3.7525E-04
691549.25	4168596.21	52.11165	11.40742	6.74849	11.82001	9.32E-06	2.56E-06	5.90E-04	9.73E-07	6.0249E-04
691568.30	4168594.21	39.80211	12.20102	7.43694	12.63628	7.12E-06	2.74E-06	6.50E-04	1.04E-06	6.6068E-04
691556.77	4168514.03	48.86024	8.09761	5.42105	8.40612	8.74E-06	1.82E-06	4.74E-04	6.92E-07	4.8490E-04
691511.55	4169004.64	7.30561	113.31047	43.69931	79.18092	1.31E-06	2.55E-05	3.82E-03	6.52E-06	3.8514E-03
691503.45	4169016.57	6.72656	91.34407	39.01053	64.39784	1.20E-06	2.05E-05	3.41E-03	5.30E-06	3.4354E-03
691425.07	4169063.43	5.32936	42.58665	23.82643	34.91513	9.54E-07	9.57E-06	2.08E-03	2.87E-06	2.0952E-03
691327.52	4169024.66	8.31911	39.21223	17.94872	36.73941	1.49E-06	8.81E-06	1.57E-03	3.02E-06	1.5815E-03
691447.65	4169079.61	4.58193	35.69975	21.95628	28.70481	8.20E-07	8.02E-06	1.92E-03	2.36E-06	1.9296E-03
691495.78	4169070.67	4.48762	38.63453	24.37207	29.97609	8.03E-07	8.68E-06	2.13E-03	2.47E-06	2.1414E-03
691510.69	4169078.34	4.15852	33.80486	22.81231	26.55134	7.44E-07	7.60E-06	1.99E-03	2.18E-06	2.0037E-03
691548.18	4169071.09	3.93337	34.78006	24.13675	26.48793	7.04E-07	7.82E-06	2.11E-03	2.18E-06	2.1196E-03
691583.54	4169054.48	3.94720	40.33890	27.92704	29.08731	7.06E-07	9.07E-06	2.44E-03	2.39E-06	2.4522E-03
691596.74	4169086.86	3.24662	23.90460	19.60491	19.59709	5.81E-07	5.37E-06	1.71E-03	1.61E-06	1.7205E-03
691498.39	4169122.01	3.34401	20.51570	15.80307	17.43456	5.98E-07	4.61E-06	1.38E-03	1.43E-06	1.3874E-03
691511.79	4169116.58	3.37367	21.28115	16.40199	17.91762	6.04E-07	4.78E-06	1.43E-03	1.47E-06	1.4399E-03
691612.82	4169124.18	2.67806	15.29487	13.89908	13.50602	4.79E-07	3.44E-06	1.21E-03	1.11E-06	1.2194E-03
691615.71	4169140.84	2.49671	13.12795	12.18443	11.83291	4.47E-07	2.95E-06	1.06E-03	9.74E-07	1.0689E-03
691639.97	4169187.55	2.04573	8.79023	8.59724	8.23173	3.66E-07	1.98E-06	7.51E-04	6.77E-07	7.5417E-04
691626.94	4169196.60	2.02327	8.56921	8.28247	8.06318	3.62E-07	1.93E-06	7.24E-04	6.63E-07	7.2660E-04
691546.55	4169198.77	2.28734	9.93512	8.93617	9.19543	4.09E-07	2.23E-06	7.81E-04	7.57E-07	7.8417E-04
691517.95	4169134.68	3.06841	17.52382	14.15630	15.13886	5.49E-07	3.94E-06	1.24E-03	1.25E-06	1.2426E-03
691549.81	4169125.63	3.01125	17.91534	14.76188	15.49869	5.39E-07	4.03E-06	1.29E-03	1.28E-06	1.2956E-03
691552.35	4169135.05	2.87906	16.27397	13.68256	14.28030	5.15E-07	3.66E-06	1.20E-03	1.17E-06	1.2008E-03
691550.17	4169157.13	2.64775	13.47446	11.67370	12.11002	4.74E-07	3.03E-06	1.02E-03	9.96E-07	1.0244E-03
691628.49	4169277.05	1.61237	5.53016	5.43623	5.35595	2.88E-07	1.24E-06	4.75E-04	4.41E-07	4.7694E-04
691631.99	4169255.00	1.69794	6.11975	6.01252	5.89338	3.04E-07	1.38E-06	5.25E-04	4.85E-07	5.2749E-04
691668.08	4169234.45	1.71465	6.27554	6.40238	6.02558	3.07E-07	1.41E-06	5.59E-04	4.96E-07	5.6160E-04
691704.66	4169220.42	1.70944	6.14438	6.55964	5.91268	3.06E-07	1.38E-06	5.73E-04	4.86E-07	5.7530E-04
691719.20	4169208.89	1.72890	6.27410	6.80981	6.04702	3.09E-07	1.41E-06	5.95E-04	4.98E-07	5.9720E-04
691698.15	4169165.29	2.01542	8.48203	9.05131	7.98573	3.61E-07	1.91E-06	7.91E-04	6.57E-07	7.9375E-04
691800.39	4169158.77	1.75960	6.57053	7.57478	6.34934	3.15E-07	1.48E-06	6.62E-04	5.22E-07	6.6414E-04
691785.85	4169172.81	1.72957	6.40584	7.24684	6.17694	3.09E-07	1.44E-06	6.33E-04	5.08E-07	6.3543E-04
691882.58	4169138.73	1.65165	5.75672	6.83671	5.61602	2.96E-07	1.29E-06	5.97E-04	4.62E-07	5.9939E-04
691909.14	4169134.22	1.60880	5.45218	6.53183	5.35131	2.88E-07	1.23E-06	5.71E-04	4.40E-07	5.7265E-04
691588.80	4169332.77	1.47725	4.53174	4.39708	4.41980	2.64E-07	1.02E-06	3.84E-04	3.64E-07	3.8583E-04
691574.65	4169379.94	1.33541	3.77853	3.67583	3.70257	2.39E-07	8.49E-07	3.21E-04	3.05E-07	3.2256E-04
691940.90	4169126.13	1.56673	5.12800	6.21758	5.06517	2.80E-07	1.15E-06	5.43E-04	4.17E-07	5.4509E-04
691964.45	4169125.61	1.51864	4.80643	5.87325	4.78129	2.72E-07	1.08E-06	5.13E-04	3.93E-07	5.1490E-04
692035.62	4169140.52	1.34388	3.81236	4.66917	3.85196	2.40E-07	8.57E-07	4.08E-04	3.17E-07	4.0937E-04
692048.97	4169140.26	1.32272	3.69172	4.53246	3.73621	2.37E-07	8.30E-07	3.96E-04	3.07E-07	3.9738E-04
692062.83	4169163.29	1.24495	3.35835	4.02174	3.38886	2.23E-07	7.55E-07	3.51E-04	2.79E-07	3.5264E-04
692075.66	4169171.40	1.20938	3.19944	3.81969	3.23608	2.16E-07	7.19E-07	3.34E-04	2.66E-07	3.3493E-04
692162.26	4169160.15	1.11964	2.72873	3.33563	2.78254	2.00E-07	6.13E-07	2.91E-04	2.29E-07	2.9248E-04
692164.36	4169145.49	1.14464	2.80934	3.46427	2.85397	2.05E-07	6.31E-07	3.03E-04	2.35E-07	3.0375E-04
692179.53	4169145.49	1.12543	2.72376	3.35811	2.76553	2.01E-07	6.12E-07	2.93E-04	2.28E-07	2.9444E-04
692194.88	4169132.19	1.13072	2.71740	3.37364	2.74761	2.02E-07	6.11E-07	2.95E-04	2.26E-07	2.9580E-04
692206.67	4169126.40	1.12604	2.68375	3.34060	2.70893	2.01E-07	6.03E-07	2.92E-04	2.23E-07	2.9290E-04
691466.77	4168373.67	75.22017	3.91858	2.75120	4.02156	1.35E-05	8.81E-07	2.40E-04	3.31E-07	2.5505E-04
691453.41	4168320.26	53.81275	3.32358	2.39339	3.40879	9.63E-06	7.47E-07	2.09E-04	2.80E-07	2.1977E-04
691537.75	4168319.55	79.34369	4.07603	3.15303	4.21981	1.42E-05	9.16E-07	2.75E-04	3.47E-07	2.9095E-04
691409.97	4168212.93	28.44112	2.38316	1.79069	2.44041	5.09E-06	5.36E-07	1.56E-04	2.01E-07	1.6228E-04
691405.40	4168168.24	26.19041	2.18353	1.66362	2.23566	4.69E-06	4.91E-07	1.45E-04	1.84E-07	1.5071E-04
691535.39	4168247.96	91.37749	3.38169	2.72719	3.49838	1.63E-05	7.60E-07	2.38E-04	2.88E-07	2.5568E-04
691558.74	4168206.32	57.61665	3.16697	2.69792	3.28249	1.03E-05	7.12E-07	2.36E-04	2.70E-07	2.4701E-04
691586.67	4168224.10	38.80591	3.41357	3.00836	3.55343	6.94E-06	7.67E-07	2.63E-04	2.92E-07	2.7085E-04
691580.58	4168186.01	42.39272	3.09569	2.74364	3.21795	7.59E-06	6.96E-07	2.40E-04	2.65E-07	2.4826E-04
691545.54	4168110.86	81.21065	2.53073	2.20194	2.61662	1.45E-05	5.69E-07	1.92E-04	2.15E-07	2.0770E-04
691540.46	4168095.63	94.61411	2.43982	2.12187	2.52121	1.69E-05	5.48E-07	1.85E-04	2.07E-07	2.0308E-04
691486.13	4168117.46	91.99664	2.35489	1.91936	2.42804	1.65E-05	5.29E-07	1.68E-04	2.00E-07	1.8489E-04
691586.16	4168105.78	40.51888	2.60610	2.38542	2.70932	7.25E-06	5.86E-07	2.08E-04	2.23E-07	2.1648E-04
691480.55	4168089.54	74.28650	2.21439	1.81829	2.28283	1.33E-05	4.98E-07	1.59E-04	1.88E-07	1.7284E-04
691368.84	4168031.65	12.43239	1.63276	1.29091	1.66944	2.22E-06	3.67E-07	1.13E-04	1.37E-07	1.1552E-04
691468.87	4168043.84	51.56518	2.00317	1.66034	2.06463	9.23E-06	4.50E-07	1.45E-04	1.70E-07	1.5491E-04
691469.88	4168026.06	49.92308	1.94646	1.62571	2.00631	8.93E-06	4.37E-07	1.42E-04	1.65E-07	1.5158E-04
691543.51	4168055.52	89.99579	2.26439	2.00192	2.33927	1.61E-05	5.09E-07	1.75E-04	1.92E-07	1.9171E-04
691543.00	4168041.30	92.37702	2.20323	1.95508	2.27560	1.65E-05	4.95E-07	1.71E-04	1.87E-07	1.8803E-04
691571.44	4168062.62	50.01927	2.35825	2.14542	2.44390	8.95E-06	5.30E-07	1.87E-04	2.01E-07	1.9713E-04
691452.62	4168100.71	42.76824	2.15020	1.71950	2.21380	7.65E-06	4.83E-07	1.50E-04	1.82E-07	1.5855E-04
691506.70	4168892.79	80.21075	144.69616	28.49268	71.06640	1.44E-05	3.25E-05	2.49E-03	5.85E-06	2.5422E-03

CONCUNIT ug/m^3
DEPUNIT g/m^2

Health Risk Assessment

2030 Emission Estimates

Health Risk Assessment

Peak Season 2030 Emissions

Almond Sheller Project

Estimation of On-site Area Emissions During the Peak Season

Size of area source (accounted for in AERMOD):		37,474.9	sq-meters
Season	**On-site Activity**	**On-site DPM (tons)**	
Peak Season	On-site Equipment	0.01880	tons/year
Total Peak Season (On-site Equipment)		1.880E-02	tons/year
Average Emission		1.707E+04	grams
		5.413E-04	grams/sec
		1.444E-08	grams/m2-sec

Almond Sheller Project

Diesel Vehicle Emissions (Peak Season)

Facility Operations

24 hrs/day, 153 days/year (seasonal)

Roadway Links Modeled

Link	Truck Type	Average Speed (mph)	Emission Factor (g/mi)	Trips per Daily (in and out)	Link Length (m)	Link Length (mi)	Ave Emissions Over Link (g/day)	Ave Emissions (lbs/day)	Average Emissions (g/sec)	Emissions for all Vehicles (g/sec)
SLINE2	**LHDT1**	5 mph	0.057	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	LHDT2	5 mph	0.055	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	MHDT	5 mph	0.006	3.0	603.9	0.38	6.722E-03	1.48E-05	7.780E-08	
	HHDT	5 mph	0.012	17.0	603.9	0.38	7.915E-02	1.74E-04	9.161E-07	
	T7 Ag	5 mph	0.017	11.0	603.9	0.38	7.035E-02	1.55E-04	8.143E-07	**1.81E-06**
SLINE3	**LHDT1**	5 mph	0.057	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	5 mph	0.055	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	MHDT	5 mph	0.006	3.0	461	0.29	5.13E-03	1.13E-05	5.94E-08	
	HHDT	5 mph	0.012	17.0	461	0.29	6.04E-02	1.33E-04	6.99E-07	
	T7 Ag	5 mph	0.017	11.0	461	0.29	5.37E-02	1.18E-04	6.22E-07	**1.38E-06**

Diesel Vehicle Emissions (Peak Season)

Diesel truck Idling Emissions

Onsite Vehicle Travel Segments	Truck Type	DPM Emission Factor (grams/trip)	Number Idling Vehicle Trips/day	Emissions (g/day)	Emissions (lb/day)	Average Emissions (g/sec)	Total Emissions for all Vehicles (g/sec)
SLINE4	**LHDT1**	0.0011	0.0	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	0.0015	0.0	0.00E+00	0.00E+00	0.00E+00	
	MHDT	0.0002	3.0	5.43E-04	1.20E-06	6.28E-09	
	HHDT	0.0021	17.0	3.60E-02	7.92E-05	4.16E-07	
	T7 Ag	0.0021	11.0	2.33E-02	5.12E-05	2.69E-07	**6.92E-07**

Almond Sheller Project

Project Operations 24 hours/day

Off-site DSL Truck Roadway Emissions (Peak Season)

Segment ID	Description	% total Trips
SLINE1	Road Segment 1 – Offsite Truck Travel	100.0%
	Total	100.0%

Segment ID: SLINE1
Travel Distance: 981.3 meters
Operations 24 hours/day

Vehicle Class	Daily Trips (trips/day)	Emission Factor (g/mi)	Travel Distance (mi)	Emissions (g/day)	Emissions (g/sec)
LHDT1-DSL	0	0.023	0.61	0.00	0.00E+00
LHDT2-DSL	0	0.024	0.61	0.00	0.00E+00
MHDT-DSL	3	0.003	0.61	0.01	6.65E-08
HHDT-DSL	17	0.006	0.61	0.06	7.45E-07
T7 Ag	11	0.010	0.61	0.06	7.48E-07
Total	31	—	—	—	**1.56E-06**

DPM **2030**

EMFAC2017 Running Diesel Exhaust Emissions
in units of grams/mile

		Emission Factor (g/mi)			
		5 mph	**10 mph**	**25 mph**	**35 mph**
LHDT1	DSL	0.06	0.04	0.02	0.02
LHDT2	DSL	0.05	0.04	0.02	0.02
MHDT	DSL	0.01	0.01	0.00	0.00
HHDT	DSL	0.01	0.01	0.01	0.01
T7 Ag	DSL	0.02	0.01	0.01	0.01

Idling Emissions for Trucks (Emission Factors from CalEEMod*)
in units of grams/trip

Vehicle Class	**Vehicle Speed (mph)**	**DPM (grams/trip)**
LHDT1	Idle	0.001095
LHDT2	Idle	0.001531
MHDT	Idle	0.000181
HHDT	Idle	0.002115
T7 Ag	Idle	0.002115

*CalEEMod Version 2020.4.0

Almond Sheller Project

Peak Season Emissions (DPM)—Unmitigated Concentrations

		Maximum DPM (ug/m3)	UTM X	UTM Y
		2.3986E-02	691511.55	4169004.64
Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec):	1.56E-06	1.5898E-02	691506.70	4168892.79
Annual Average Total DPM Emission Rate - On-site-Road Segment 1 (grams/sec):	1.81E-06			
Annual Average Total DPM Emission Rate - On-site-Road Segment 2 (grams/sec):	5.43E-04			
Annual Average Total DPM Emission Rate - On-site Truck Idle (grams/sec):	6.92E-07			

X	Y	Unit Emissions VALUES AVERAGED Offsite Truck Travel	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 1	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 2	Unit Emissions VALUES AVERAGED On-site Truck Idle	Offsite Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 1 Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 2 Annual DPM Exhaust w/Actual Emissions (ug/m3)	On-site Truck Idle Annual DPM Exhaust w/Actual Emissions (ug/m3)	**Total DPM (ug/m3)**
691440.11	4168757.21	53.66444	12.48249	6.74768	12.05051	8.37E-05	2.26E-05	3.66E-03	8.34E-06	3.7764E-03
691441.12	4168740.17	54.32980	11.52916	6.40725	11.18675	8.47E-05	2.08E-05	3.48E-03	7.74E-06	3.5904E-03
691393.51	4168741.18	28.25195	8.51691	5.16869	8.43857	4.41E-05	1.54E-05	2.80E-03	5.84E-06	2.8702E-03
691554.37	4168769.24	38.34351	39.26007	14.58564	39.53836	5.98E-05	7.10E-05	7.92E-03	2.73E-05	8.0735E-03
691400.53	4168760.72	30.34146	9.64259	5.64489	9.47646	4.73E-05	1.74E-05	3.06E-03	6.55E-06	3.1347E-03
691530.82	4168750.20	60.31925	26.11319	11.12960	25.88586	9.41E-05	4.72E-05	6.04E-03	1.79E-05	6.1990E-03
691530.31	4168737.17	62.29774	23.42469	10.44974	23.50427	9.72E-05	4.24E-05	5.67E-03	1.63E-05	5.8266E-03
691538.83	4168689.06	56.44274	17.98067	8.97340	18.55927	8.80E-05	3.25E-05	4.87E-03	1.28E-05	5.0031E-03
691565.89	4168677.03	37.76047	19.89184	10.12985	20.48255	5.89E-05	3.60E-05	5.50E-03	1.42E-05	5.6063E-03
691454.65	4168675.53	69.89826	9.29499	5.57452	9.16801	1.09E-04	1.68E-05	3.03E-03	6.34E-06	3.1573E-03
691461.06	4168623.27	78.28591	7.79324	4.91443	7.88763	1.22E-04	1.41E-05	2.67E-03	5.46E-06	2.8086E-03
691421.97	4168620.26	38.24784	6.22942	4.19457	6.27747	5.97E-05	1.13E-05	2.28E-03	4.34E-06	2.3516E-03
691549.25	4168596.21	52.11165	11.40742	6.74849	11.82001	8.13E-05	2.06E-05	3.66E-03	8.18E-06	3.7723E-03
691568.30	4168594.21	39.80211	12.20102	7.43694	12.63628	6.21E-05	2.21E-05	4.04E-03	8.74E-06	4.1288E-03
691556.77	4168514.03	48.86024	8.09761	5.42105	8.40612	7.62E-05	1.46E-05	2.94E-03	5.81E-06	3.0386E-03
691511.55	4169004.64	7.30561	113.31047	43.69931	79.18092	1.14E-05	2.05E-04	2.37E-02	5.48E-05	2.3986E-02
691503.45	4169016.57	6.72656	91.34407	39.01053	64.39784	1.05E-05	1.65E-04	2.12E-02	4.45E-05	2.1390E-02
691425.07	4169063.43	5.32936	42.58665	23.82643	34.91513	8.31E-06	7.70E-05	1.29E-02	2.42E-05	1.3040E-02
691327.52	4169024.66	8.31911	39.21223	17.94872	36.73941	1.30E-05	7.09E-05	9.74E-03	2.54E-05	9.8497E-03
691447.65	4169079.61	4.58193	35.69975	21.95628	28.70481	7.15E-06	6.46E-05	1.19E-02	1.99E-05	1.2007E-02
691495.78	4169070.67	4.48762	38.63453	24.37207	29.97609	7.00E-06	6.99E-05	1.32E-02	2.07E-05	1.3324E-02
691510.69	4169078.34	4.15852	33.80486	22.81231	26.55134	6.49E-06	6.11E-05	1.24E-02	1.84E-05	1.2466E-02
691548.18	4169071.09	3.93337	34.78006	24.13675	26.48793	6.13E-06	6.29E-05	1.31E-02	1.83E-05	1.3186E-02
691583.54	4169054.48	3.94720	40.33890	27.92704	29.08731	6.16E-06	7.29E-05	1.52E-02	2.01E-05	1.5255E-02
691596.74	4169086.86	3.24662	23.90460	19.60491	19.59709	5.06E-06	4.32E-05	1.06E-02	1.36E-05	1.0701E-02
691498.39	4169122.01	3.34401	20.51570	15.80307	17.43456	5.22E-06	3.71E-05	8.58E-03	1.21E-05	8.6304E-03
691511.79	4169116.58	3.37367	21.28115	16.40199	17.91762	5.26E-06	3.85E-05	8.90E-03	1.24E-05	8.9572E-03
691612.82	4169124.18	2.67806	15.29487	13.89908	13.50602	4.18E-06	2.77E-05	7.54E-03	9.34E-06	7.5839E-03
691615.71	4169140.84	2.49671	13.12795	12.18443	11.83291	3.89E-06	2.37E-05	6.61E-03	8.18E-06	6.6481E-03
691639.97	4169187.55	2.04573	8.79023	8.59724	8.23173	3.19E-06	1.59E-05	4.67E-03	5.69E-06	4.6903E-03
691626.94	4169196.60	2.02327	8.56921	8.28247	8.06318	3.16E-06	1.55E-05	4.49E-03	5.58E-06	4.5190E-03
691546.55	4169198.77	2.28734	9.93512	8.93617	9.19543	3.57E-06	1.80E-05	4.85E-03	6.36E-06	4.8774E-03
691517.95	4169134.68	3.06841	17.52382	14.15630	15.13886	4.79E-06	3.17E-05	7.68E-03	1.05E-05	7.7293E-03
691549.81	4169125.63	3.01125	17.91534	14.76188	15.49869	4.70E-06	3.24E-05	8.01E-03	1.07E-05	8.0588E-03
691552.35	4169135.05	2.87906	16.27397	13.68256	14.28030	4.49E-06	2.94E-05	7.43E-03	9.88E-06	7.4690E-03
691550.17	4169157.13	2.64775	13.47446	11.67370	12.11002	4.13E-06	2.44E-05	6.34E-03	8.38E-06	6.3719E-03
691628.49	4169277.05	1.61237	5.53016	5.43623	5.35595	2.51E-06	1.00E-05	2.95E-03	3.70E-06	2.9663E-03
691631.99	4169255.00	1.69794	6.11975	6.01252	5.89338	2.65E-06	1.11E-05	3.26E-03	4.08E-06	3.2807E-03
691668.08	4169234.45	1.71465	6.27554	6.40238	6.02558	2.67E-06	1.13E-05	3.47E-03	4.17E-06	3.4926E-03
691704.66	4169220.42	1.70944	6.14438	6.55964	5.91268	2.67E-06	1.11E-05	3.56E-03	4.09E-06	3.5776E-03
691719.20	4169208.89	1.72890	6.27410	6.80981	6.04702	2.70E-06	1.13E-05	3.70E-03	4.18E-06	3.7138E-03
691698.15	4169165.29	2.01542	8.48203	9.05131	7.98573	3.14E-06	1.53E-05	4.91E-03	5.52E-06	4.9360E-03
691800.39	4169158.77	1.75960	6.57053	7.57478	6.34934	2.74E-06	1.19E-05	4.11E-03	4.39E-06	4.1297E-03
691785.85	4169172.81	1.72957	6.40584	7.24684	6.17694	2.70E-06	1.16E-05	3.93E-03	4.27E-06	3.9513E-03
691882.58	4169138.73	1.65165	5.75672	6.83671	5.61602	2.58E-06	1.04E-05	3.71E-03	3.88E-06	3.7270E-03
691909.14	4169134.22	1.60880	5.45218	6.53183	5.35131	2.51E-06	9.86E-06	3.54E-03	3.70E-06	3.5608E-03
691588.80	4169332.77	1.47725	4.53174	4.39708	4.41980	2.30E-06	8.19E-06	2.39E-03	3.06E-06	2.3998E-03
691574.65	4169379.94	1.33541	3.77853	3.67583	3.70257	2.08E-06	6.83E-06	1.99E-03	2.56E-06	2.0063E-03
691940.90	4169126.13	1.56673	5.12800	6.21758	5.06517	2.44E-06	9.27E-06	3.37E-03	3.50E-06	3.3894E-03
691964.45	4169125.61	1.51864	4.80643	5.87325	4.78129	2.37E-06	8.69E-06	3.19E-03	3.31E-06	3.2017E-03
692035.62	4169140.52	1.34388	3.81236	4.66917	3.85196	2.10E-06	6.89E-06	2.53E-03	2.66E-06	2.5455E-03
692048.97	4169140.26	1.32272	3.69172	4.53246	3.73621	2.06E-06	6.68E-06	2.46E-03	2.58E-06	2.4710E-03
692062.83	4169163.29	1.24495	3.35835	4.02174	3.38886	1.94E-06	6.07E-06	2.18E-03	2.34E-06	2.1929E-03
692075.66	4169171.40	1.20938	3.19944	3.81969	3.23608	1.89E-06	5.79E-06	2.07E-03	2.24E-06	2.0828E-03
692162.26	4169160.15	1.11964	2.72873	3.33563	2.78254	1.75E-06	4.93E-06	1.81E-03	1.92E-06	1.8188E-03
692164.36	4169145.49	1.14464	2.80934	3.46427	2.85397	1.79E-06	5.08E-06	1.88E-03	1.97E-06	1.8888E-03
692179.53	4169145.49	1.12543	2.72376	3.35811	2.76553	1.76E-06	4.93E-06	1.82E-03	1.91E-06	1.8310E-03
692194.88	4169132.19	1.13072	2.71740	3.37364	2.74761	1.76E-06	4.91E-06	1.83E-03	1.90E-06	1.8394E-03
692206.67	4169126.40	1.12604	2.68375	3.34060	2.70893	1.76E-06	4.85E-06	1.81E-03	1.87E-06	1.8214E-03
691466.77	4168373.67	75.22017	3.91858	2.75120	4.02156	1.17E-04	7.09E-06	1.49E-03	2.78E-06	1.6202E-03
691453.41	4168320.26	53.81275	3.32358	2.39339	3.40879	8.39E-05	6.01E-06	1.30E-03	2.36E-06	1.3911E-03
691537.75	4168319.55	79.34369	4.07603	3.15303	4.21981	1.24E-04	7.37E-06	1.71E-03	2.92E-06	1.8451E-03
691409.97	4168212.93	28.44112	2.38316	1.79069	2.44041	4.44E-05	4.31E-06	9.72E-04	1.69E-06	1.0221E-03
691405.40	4168168.24	26.19041	2.18353	1.66362	2.23566	4.08E-05	3.95E-06	9.03E-04	1.55E-06	9.4915E-04
691535.39	4168247.96	91.37749	3.38169	2.72719	3.49838	1.43E-04	6.11E-06	1.48E-03	2.42E-06	1.6310E-03
691558.74	4168206.32	57.61665	3.16697	2.69792	3.28249	8.99E-05	5.73E-06	1.46E-03	2.27E-06	1.5620E-03
691586.67	4168224.10	38.80591	3.41357	3.00836	3.55343	6.05E-05	6.17E-06	1.63E-03	2.46E-06	1.7017E-03
691580.58	4168186.01	42.39272	3.09569	2.74364	3.21795	6.61E-05	5.60E-06	1.49E-03	2.23E-06	1.5629E-03
691545.54	4168110.86	81.21065	2.53073	2.20194	2.61662	1.27E-04	4.58E-06	1.19E-03	1.81E-06	1.3280E-03
691540.46	4168095.63	94.61411	2.43982	2.12187	2.52121	1.48E-04	4.41E-06	1.15E-03	1.74E-06	1.3052E-03
691486.13	4168117.46	91.99664	2.35489	1.91936	2.42804	1.43E-04	4.26E-06	1.04E-03	1.68E-06	1.1910E-03
691586.16	4168105.78	40.51888	2.60610	2.38542	2.70932	6.32E-05	4.71E-06	1.29E-03	1.87E-06	1.3643E-03
691480.55	4168089.54	74.28650	2.21439	1.81829	2.28283	1.16E-04	4.00E-06	9.87E-04	1.58E-06	1.1082E-03
691368.84	4168031.65	12.43239	1.63276	1.29091	1.66944	1.94E-05	2.95E-06	7.01E-04	1.15E-06	7.2405E-04
691468.87	4168043.84	51.56518	2.00317	1.66034	2.06463	8.04E-05	3.62E-06	9.01E-04	1.43E-06	9.8650E-04
691469.88	4168026.06	49.92308	1.94646	1.62571	2.00631	7.79E-05	3.52E-06	8.82E-04	1.39E-06	9.6501E-04
691543.51	4168055.52	89.99579	2.26439	2.00192	2.33927	1.40E-04	4.09E-06	1.09E-03	1.62E-06	1.2325E-03
691543.00	4168041.30	92.37702	2.20323	1.95508	2.27560	1.44E-04	3.98E-06	1.06E-03	1.57E-06	1.2106E-03
691571.44	4168062.62	50.01927	2.35825	2.14542	2.44390	7.80E-05	4.26E-06	1.16E-03	1.69E-06	1.2482E-03
691452.62	4168100.71	42.76824	2.15020	1.71950	2.21380	6.67E-05	3.89E-06	9.33E-04	1.53E-06	1.0053E-03
691506.70	4168892.79	80.21075	144.69616	28.49268	71.06640	1.25E-04	2.62E-04	1.55E-02	4.92E-05	1.5898E-02

CONCUNIT ug/m^3
DEPUNIT g/m^2

Health Risk Assessment

Off Season 2030 Emissions

Almond Sheller Project

Estimation of On-site Area Emissions During the Off Season

Size of area source (accounted for in AERMOD):		37,474.9	sq-meters
Season	**On-site Activity**	**On-site DPM (tons)**	
Off-Season	On-site Equipment*	0.0030286	tons/year
Total Off-Season (On-site Equipment)		3.029E-03	tons/year
Average Emission		2.750E+03	grams
		8.720E-05	grams/sec
		2.327E-09	grams/m2-sec

* Multiplied CalEEMod output by 1/7 to account for reduced use during off season (1 day a month to 1 day a week).

Almond Sheller Project

Diesel Vehicle Emissions (Off Season)

Roadway Links Modeled

Link	Truck Type	Average Speed (mph)	Emission Factor (g/mi)	Trips per Daily (in and out)	Link Length (m)	Link Length (mi)	Ave Emissions Over Link (g/day)	Ave Emissions (lbs/day)	Average Emissions (g/sec)	Emissions for all Vehicles (g/sec)
SLINE2	**LHDT1**	5 mph	0.057	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	LHDT2	5 mph	0.055	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	MHDT	5 mph	0.006	1.0	603.9	0.38	2.241E-03	4.94E-06	2.593E-08	
	HHDT	5 mph	0.012	2.0	603.9	0.38	9.312E-03	2.05E-05	1.078E-07	
	T7 Ag	5 mph	0.017	1.0	603.9	0.38	6.396E-03	1.41E-05	7.403E-08	**2.08E-07**
SLINE3	**LHDT1**	5 mph	0.057	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	5 mph	0.055	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	MHDT	5 mph	0.006	1.0	461	0.29	1.71E-03	3.77E-06	1.98E-08	
	HHDT	5 mph	0.012	2.0	461	0.29	7.11E-03	1.57E-05	8.23E-08	
	T7 Ag	5 mph	0.017	1.0	461	0.29	4.88E-03	1.08E-05	5.65E-08	**1.59E-07**

Diesel Vehicle Emissions (Off Season)

Diesel truck Idling Emissions

Onsite Vehicle Travel Segments	Truck Type	DPM Emission Factor (grams/trip)	Number Idling Vehicle Trips/day	Emissions (g/day)	Emissions (lb/day)	Average Emissions (g/sec)	Total Emissions for all Vehicles (g/sec)
SLINE4	**LHDT1**	0.0011	0.0	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	0.0015	0.0	0.00E+00	0.00E+00	0.00E+00	
	MHDT	0.0002	1.0	1.81E-04	3.99E-07	2.09E-09	
	HHDT	0.0021	2.0	4.23E-03	9.32E-06	4.90E-08	
	T7 Ag	0.0021	1.0	2.12E-03	4.66E-06	2.45E-08	**7.55E-08**

Almond Sheller Project

Off-site DSL Truck Roadway Emissions (Off Season)

Segment ID	Description	% total Trips
SLINE1	Road Segment 1 – Offsite Truck Travel	100.0%
	Total	100.0%

Segment ID: SLINE1
Travel Distance: 981.3 meters
Operations 24 hours/day

Vehicle Class	Daily Trips (trips/day)	Emission Factor (g/mi)	Travel Distance (mi)	Emissions (g/day)	Emissions (g/sec)
LHDT1-DSL	0	0.023	0.61	0.00	0.00E+00
LHDT2-DSL	0	0.024	0.61	0.00	0.00E+00
MHDT-DSL	1	0.003	0.61	0.00	2.22E-08
HHDT-DSL	2	0.006	0.61	0.01	8.77E-08
T7 Ag	1	0.010	0.61	0.01	6.80E-08
Total	4	—	—	—	**1.78E-07**

DPM 2030

EMFAC2017 Running Diesel Exhaust Emissions
in units of grams/mile

		Emission Factor (g/mi)			
		5 mph	**10 mph**	**25 mph**	**35 mph**
LHDT1	DSL	0.0570	0.0438	0.0225	0.0171
LHDT2	DSL	0.0548	0.0442	0.0241	0.0187
MHDT	DSL	0.0060	0.0053	0.0031	0.0041
HHDT	DSL	0.0124	0.0107	0.0062	0.0083
T7 Ag	DSL	0.0170	0.0150	0.0096	0.0127

Idling Emissions for Trucks (Emission Factors from CalEEMod*)
in units of grams/trip

Vehicle Class	**Vehicle Speed (mph)**	**DPM (grams/trip)**
LHDT1	Idle	0.001095
LHDT2	Idle	0.001531
MHDT	Idle	0.000181
HHDT	Idle	0.002115
T7 Ag	Idle	0.002115

*CalEEMod Version 2020.4.0

Almond Sheller Project

Off Season Emissions (DPM)—Unmitigated Concentrations

		Maximum DPM (ug/m3)	UTM X	UTM Y
		3.8483E-03	691511.55	4169004.64
Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec):	1.78E-07	2.5388E-03	691506.70	4168892.79
Annual Average Total DPM Emission Rate - On-site-Road Segment 1 (grams/sec):	2.08E-07			
Annual Average Total DPM Emission Rate - On-site-Road Segment 2 (grams/sec):	8.74E-05			
Annual Average Total DPM Emission Rate - On-site Truck Idle (grams/sec):	7.55E-08			

X	Y	Unit Emissions VALUES AVERAGED Offsite Truck Travel	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 1	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 2	Unit Emissions VALUES AVERAGED On-site Truck Idle	Offsite Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 1 Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 2 Annual DPM Exhaust w/Actual Emissions (ug/m3)	On-site Truck Idle Annual DPM Exhaust w/Actual Emissions (ug/m3)	**Total DPM (ug/m3)**
691440.11	4168757.21	53.66444	12.48249	6.74768	12.05051	9.54E-06	2.59E-06	5.89E-04	9.10E-07	6.0251E-04
691441.12	4168740.17	54.32980	11.52916	6.40725	11.18675	9.66E-06	2.40E-06	5.60E-04	8.45E-07	5.7263E-04
691393.51	4168741.18	28.25195	8.51691	5.16869	8.43857	5.02E-06	1.77E-06	4.52E-04	6.37E-07	4.5896E-04
691554.37	4168769.24	38.34351	39.26007	14.58564	39.53836	6.82E-06	8.16E-06	1.27E-03	2.99E-06	1.2921E-03
691400.53	4168760.72	30.34146	9.64259	5.64489	9.47646	5.40E-06	2.00E-06	4.93E-04	7.16E-07	5.0124E-04
691530.82	4168750.20	60.31925	26.11319	11.12960	25.88586	1.07E-05	5.42E-06	9.72E-04	1.96E-06	9.9037E-04
691530.31	4168737.17	62.29774	23.42469	10.44974	23.50427	1.11E-05	4.87E-06	9.13E-04	1.78E-06	9.3059E-04
691538.83	4168689.06	56.44274	17.98067	8.97340	18.55927	1.00E-05	3.74E-06	7.84E-04	1.40E-06	7.9908E-04
691565.89	4168677.03	37.76047	19.89184	10.12985	20.48255	6.71E-06	4.13E-06	8.85E-04	1.55E-06	8.9732E-04
691454.65	4168675.53	69.89826	9.29499	5.57452	9.16801	1.24E-05	1.93E-06	4.87E-04	6.92E-07	5.0204E-04
691461.06	4168623.27	78.28591	7.79324	4.91443	7.88763	1.39E-05	1.62E-06	4.29E-04	5.96E-07	4.4545E-04
691421.97	4168620.26	38.24784	6.22942	4.19457	6.27747	6.80E-06	1.29E-06	3.66E-04	4.74E-07	3.7500E-04
691549.25	4168596.21	52.11165	11.40742	6.74849	11.82001	9.27E-06	2.37E-06	5.90E-04	8.93E-07	6.0207E-04
691568.30	4168594.21	39.80211	12.20102	7.43694	12.63628	7.08E-06	2.53E-06	6.50E-04	9.54E-07	6.6025E-04
691556.77	4168514.03	48.86024	8.09761	5.42105	8.40612	8.69E-06	1.68E-06	4.74E-04	6.35E-07	4.8458E-04
691511.55	4169004.64	7.30561	113.31047	43.69931	79.18092	1.30E-06	2.35E-05	3.82E-03	5.98E-06	3.8483E-03
691503.45	4169016.57	6.72656	91.34407	39.01053	64.39784	1.20E-06	1.90E-05	3.41E-03	4.86E-06	3.4329E-03
691425.07	4169063.43	5.32936	42.58665	23.82643	34.91513	9.48E-07	8.85E-06	2.08E-03	2.64E-06	2.0939E-03
691327.52	4169024.66	8.31911	39.21223	17.94872	36.73941	1.48E-06	8.15E-06	1.57E-03	2.78E-06	1.5804E-03
691447.65	4169079.61	4.58193	35.69975	21.95628	28.70481	8.15E-07	7.42E-06	1.92E-03	2.17E-06	1.9285E-03
691495.78	4169070.67	4.48762	38.63453	24.37207	29.97609	7.98E-07	8.03E-06	2.13E-03	2.26E-06	2.1402E-03
691510.69	4169078.34	4.15852	33.80486	22.81231	26.55134	7.39E-07	7.02E-06	1.99E-03	2.01E-06	2.0026E-03
691548.18	4169071.09	3.93337	34.78006	24.13675	26.48793	6.99E-07	7.23E-06	2.11E-03	2.00E-06	2.1185E-03
691583.54	4169054.48	3.94720	40.33890	27.92704	29.08731	7.02E-07	8.38E-06	2.44E-03	2.20E-06	2.4509E-03
691596.74	4169086.86	3.24662	23.90460	19.60491	19.59709	5.77E-07	4.97E-06	1.71E-03	1.48E-06	1.7197E-03
691498.39	4169122.01	3.34401	20.51570	15.80307	17.43456	5.95E-07	4.26E-06	1.38E-03	1.32E-06	1.3867E-03
691511.79	4169116.58	3.37367	21.28115	16.40199	17.91762	6.00E-07	4.42E-06	1.43E-03	1.35E-06	1.4392E-03
691612.82	4169124.18	2.67806	15.29487	13.89908	13.50602	4.76E-07	3.18E-06	1.21E-03	1.02E-06	1.2189E-03
691615.71	4169140.84	2.49671	13.12795	12.18443	11.83291	4.44E-07	2.73E-06	1.06E-03	8.94E-07	1.0685E-03
691639.97	4169187.55	2.04573	8.79023	8.59724	8.23173	3.64E-07	1.83E-06	7.51E-04	6.22E-07	7.5386E-04
691626.94	4169196.60	2.02327	8.56921	8.28247	8.06318	3.60E-07	1.78E-06	7.24E-04	6.09E-07	7.2629E-04
691546.55	4169198.77	2.28734	9.93512	8.93617	9.19543	4.07E-07	2.06E-06	7.81E-04	6.95E-07	7.8382E-04
691517.95	4169134.68	3.06841	17.52382	14.15630	15.13886	5.46E-07	3.64E-06	1.24E-03	1.14E-06	1.2420E-03
691549.81	4169125.63	3.01125	17.91534	14.76188	15.49869	5.35E-07	3.72E-06	1.29E-03	1.17E-06	1.2950E-03
691552.35	4169135.05	2.87906	16.27397	13.68256	14.28030	5.12E-07	3.38E-06	1.20E-03	1.08E-06	1.2003E-03
691550.17	4169157.13	2.64775	13.47446	11.67370	12.11002	4.71E-07	2.80E-06	1.02E-03	9.15E-07	1.0240E-03
691628.49	4169277.05	1.61237	5.53016	5.43623	5.35595	2.87E-07	1.15E-06	4.75E-04	4.05E-07	4.7674E-04
691631.99	4169255.00	1.69794	6.11975	6.01252	5.89338	3.02E-07	1.27E-06	5.25E-04	4.45E-07	5.2726E-04
691668.08	4169234.45	1.71465	6.27554	6.40238	6.02558	3.05E-07	1.30E-06	5.59E-04	4.55E-07	5.6137E-04
691704.66	4169220.42	1.70944	6.14438	6.55964	5.91268	3.04E-07	1.28E-06	5.73E-04	4.47E-07	5.7507E-04
691719.20	4169208.89	1.72890	6.27410	6.80981	6.04702	3.07E-07	1.30E-06	5.95E-04	4.57E-07	5.9696E-04
691698.15	4169165.29	2.01542	8.48203	9.05131	7.98573	3.58E-07	1.76E-06	7.91E-04	6.03E-07	7.9343E-04
691800.39	4169158.77	1.75960	6.57053	7.57478	6.34934	3.13E-07	1.36E-06	6.62E-04	4.80E-07	6.6388E-04
691785.85	4169172.81	1.72957	6.40584	7.24684	6.17694	3.08E-07	1.33E-06	6.33E-04	4.67E-07	6.3518E-04
691882.58	4169138.73	1.65165	5.75672	6.83671	5.61602	2.94E-07	1.20E-06	5.97E-04	4.24E-07	5.9916E-04
691909.14	4169134.22	1.60880	5.45218	6.53183	5.35131	2.86E-07	1.13E-06	5.71E-04	4.04E-07	5.7244E-04
691588.80	4169332.77	1.47725	4.53174	4.39708	4.41980	2.63E-07	9.41E-07	3.84E-04	3.34E-07	3.8566E-04
691574.65	4169379.94	1.33541	3.77853	3.67583	3.70257	2.37E-07	7.85E-07	3.21E-04	2.80E-07	3.2242E-04
691940.90	4169126.13	1.56673	5.12800	6.21758	5.06517	2.79E-07	1.07E-06	5.43E-04	3.83E-07	5.4489E-04
691964.45	4169125.61	1.51864	4.80643	5.87325	4.78129	2.70E-07	9.98E-07	5.13E-04	3.61E-07	5.1471E-04
692035.62	4169140.52	1.34388	3.81236	4.66917	3.85196	2.39E-07	7.92E-07	4.08E-04	2.91E-07	4.0921E-04
692048.97	4169140.26	1.32272	3.69172	4.53246	3.73621	2.35E-07	7.67E-07	3.96E-04	2.82E-07	3.9723E-04
692062.83	4169163.29	1.24495	3.35835	4.02174	3.38886	2.21E-07	6.98E-07	3.51E-04	2.56E-07	3.5251E-04
692075.66	4169171.40	1.20938	3.19944	3.81969	3.23608	2.15E-07	6.65E-07	3.34E-04	2.44E-07	3.3481E-04
692162.26	4169160.15	1.11964	2.72873	3.33563	2.78254	1.99E-07	5.67E-07	2.91E-04	2.10E-07	2.9237E-04
692164.36	4169145.49	1.14464	2.80934	3.46427	2.85397	2.04E-07	5.84E-07	3.03E-04	2.16E-07	3.0364E-04
692179.53	4169145.49	1.12543	2.72376	3.35811	2.76553	2.00E-07	5.66E-07	2.93E-04	2.09E-07	2.9433E-04
692194.88	4169132.19	1.13072	2.71740	3.37364	2.74761	2.01E-07	5.65E-07	2.95E-04	2.08E-07	2.9569E-04
692206.67	4169126.40	1.12604	2.68375	3.34060	2.70893	2.00E-07	5.58E-07	2.92E-04	2.05E-07	2.9279E-04
691466.77	4168373.67	75.22017	3.91858	2.75120	4.02156	1.34E-05	8.14E-07	2.40E-04	3.04E-07	2.5483E-04
691453.41	4168320.26	53.81275	3.32358	2.39339	3.40879	9.57E-06	6.90E-07	2.09E-04	2.57E-07	2.1960E-04
691537.75	4168319.55	79.34369	4.07603	3.15303	4.21981	1.41E-05	8.47E-07	2.75E-04	3.19E-07	2.9072E-04
691409.97	4168212.93	28.44112	2.38316	1.79069	2.44041	5.06E-06	4.95E-07	1.56E-04	1.84E-07	1.6217E-04
691405.40	4168168.24	26.19041	2.18353	1.66362	2.23566	4.66E-06	4.54E-07	1.45E-04	1.69E-07	1.5061E-04
691535.39	4168247.96	91.37749	3.38169	2.72719	3.49838	1.62E-05	7.03E-07	2.38E-04	2.64E-07	2.5546E-04
691558.74	4168206.32	57.61665	3.16697	2.69792	3.28249	1.02E-05	6.58E-07	2.36E-04	2.48E-07	2.4684E-04
691586.67	4168224.10	38.80591	3.41357	3.00836	3.55343	6.90E-06	7.09E-07	2.63E-04	2.68E-07	2.7068E-04
691580.58	4168186.01	42.39272	3.09569	2.74364	3.21795	7.54E-06	6.43E-07	2.40E-04	2.43E-07	2.4811E-04
691545.54	4168110.86	81.21065	2.53073	2.20194	2.61662	1.44E-05	5.26E-07	1.92E-04	1.98E-07	2.0752E-04
691540.46	4168095.63	94.61411	2.43982	2.12187	2.52121	1.68E-05	5.07E-07	1.85E-04	1.90E-07	2.0289E-04
691486.13	4168117.46	91.99664	2.35489	1.91936	2.42804	1.64E-05	4.89E-07	1.68E-04	1.83E-07	1.8470E-04
691586.16	4168105.78	40.51888	2.60610	2.38542	2.70932	7.21E-06	5.41E-07	2.08E-04	2.05E-07	2.1634E-04
691480.55	4168089.54	74.28650	2.21439	1.81829	2.28283	1.32E-05	4.60E-07	1.59E-04	1.72E-07	1.7269E-04
691368.84	4168031.65	12.43239	1.63276	1.29091	1.66944	2.21E-06	3.39E-07	1.13E-04	1.26E-07	1.1545E-04
691468.87	4168043.84	51.56518	2.00317	1.66034	2.06463	9.17E-06	4.16E-07	1.45E-04	1.56E-07	1.5479E-04
691469.88	4168026.06	49.92308	1.94646	1.62571	2.00631	8.88E-06	4.04E-07	1.42E-04	1.52E-07	1.5145E-04
691543.51	4168055.52	89.99579	2.26439	2.00192	2.33927	1.60E-05	4.70E-07	1.75E-04	1.77E-07	1.9154E-04
691543.00	4168041.30	92.37702	2.20323	1.95508	2.27560	1.64E-05	4.58E-07	1.71E-04	1.72E-07	1.8785E-04
691571.44	4168062.62	50.01927	2.35825	2.14542	2.44390	8.89E-06	4.90E-07	1.87E-04	1.85E-07	1.9699E-04
691452.62	4168100.71	42.76824	2.15020	1.71950	2.21380	7.61E-06	4.47E-07	1.50E-04	1.67E-07	1.5843E-04
691506.70	4168892.79	80.21075	144.69616	28.49268	71.06640	1.43E-05	3.01E-05	2.49E-03	5.37E-06	2.5388E-03

CONCUNIT ug/m^3
DEPUNIT g/m^2

Health Risk Assessment

2040 Emission Estimates

Health Risk Assessment

Peak Season 2040 Emissions

Almond Sheller Project

Estimation of On-site Area Emissions During the Peak Season

Size of area source (accounted for in AERMOD):		37,474.9	sq-meters
Season	**On-site Activity**	**On-site DPM (tons)**	
Peak Season	On-site Equipment	0.01880	tons/year
Total Peak Season (On-site Equipment + Dust)		1.880E-02	tons/year
Average Emission		1.707E+04	grams
		5.413E-04	grams/sec
		1.444E-08	grams/m2-sec

Almond Sheller Project

Diesel Vehicle Emissions (Peak Season)

Facility Operations

24 hrs/day, 153 days/year (seasonal)

Roadway Links Modeled

Link	Truck Type	Average Speed (mph)	Emission Factor (g/mi)	Trips per Daily (in and out)	Link Length (m)	Link Length (mi)	Ave Emissions Over Link (g/day)	Ave Emissions (lbs/day)	Average Emissions (g/sec)	Emissions for all Vehicles (g/sec)
SLINE2	**LHDT1**	5 mph	0.024	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	LHDT2	5 mph	0.038	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	MHDT	5 mph	0.005	3.0	603.9	0.38	5.765E-03	1.27E-05	6.672E-08	
	HHDT	5 mph	0.011	17.0	603.9	0.38	6.882E-02	1.52E-04	7.965E-07	
	T7 Ag	5 mph	0.019	11.0	603.9	0.38	7.875E-02	1.73E-04	9.115E-07	**1.77E-06**
SLINE3	**LHDT1**	5 mph	0.024	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	5 mph	0.038	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	MHDT	5 mph	0.005	3.0	461	0.29	4.40E-03	9.69E-06	5.09E-08	
	HHDT	5 mph	0.011	17.0	461	0.29	5.25E-02	1.16E-04	6.08E-07	
	T7 Ag	5 mph	0.019	11.0	461	0.29	6.01E-02	1.32E-04	6.96E-07	**1.35E-06**

Diesel Vehicle Emissions (Peak Season)

Diesel truck Idling Emissions

Onsite Vehicle Travel Segments	Truck Type	DPM Emission Factor (grams/trip)	Number Idling Vehicle Trips/day	Emissions (g/day)	Emissions (lb/day)	Average Emissions (g/sec)	Total Emissions for all Vehicles (g/sec)
SLINE4	**LHDT1**	0.0011	0.0	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	0.0015	0.0	0.00E+00	0.00E+00	0.00E+00	
	MHDT	0.0005	3.0	1.37E-03	3.01E-06	1.58E-08	
	HHDT	0.0025	17.0	4.27E-02	9.40E-05	4.94E-07	
	T7 Ag	0.0025	11.0	2.76E-02	6.08E-05	3.20E-07	**8.29E-07**

Almond Sheller Project

Project Operations 24 hours/day

Off-site DSL Truck Roadway Emissions (Peak Season)

Segment ID	Description	% total Trips
SLINE1	Road Segment 1 – Offsite Truck Travel	100.0%
	Total	100.0%

Segment ID: SLINE1
Travel Distance: 981.3 meters
Operations 24 hours/day

Vehicle Class	Daily Trips (trips/day)	Emission Factor (g/mi)	Travel Distance (mi)	Emissions (g/day)	Emissions (g/sec)
LHDT1-DSL	0	0.012	0.61	0.00	0.00E+00
LHDT2-DSL	0	0.020	0.61	0.00	0.00E+00
MHDT-DSL	3	0.003	0.61	0.01	6.20E-08
HHDT-DSL	17	0.006	0.61	0.06	6.99E-07
T7 Ag	11	0.011	0.61	0.07	8.37E-07
Total	31	—	—	—	**1.60E-06**

DPM **2040**

EMFAC2017 Running Diesel Exhaust Emissions
in units of grams/mile

		Emission Factor (g/mi)			
		5 mph	**10 mph**	**25 mph**	**35 mph**
LHDT1	DSL	0.0240	0.0202	0.0116	0.0091
LHDT2	DSL	0.0380	0.0331	0.0197	0.0156
MHDT	DSL	0.0051	0.0045	0.0029	0.0038
HHDT	DSL	0.0108	0.0095	0.0058	0.0078
T7 Ag	DSL	0.0191	0.0168	0.0108	0.0142

Idling Emissions for Trucks (Emission Factors from CalEEMod*)
in units of grams/trip

Vehicle Class	**Vehicle Speed (mph)**	**DPM (grams/trip)**
LHDT1	Idle	0.001134
LHDT2	Idle	0.001491
MHDT	Idle	0.000456
HHDT	Idle	0.002510
T7 Ag	Idle	0.002510

*CalEEMod Version 2020.4.0

Almond Sheller Project

Peak Season Emissions (DPM)—Unmitigated Concentrations

		Maximum DPM (ug/m3)	UTM X	UTM Y
		2.3992E-02	691511.55	4169004.64
Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec):	1.60E-06	1.5906E-02	691506.70	4168892.79
Annual Average Total DPM Emission Rate - On-site-Road Segment 1 (grams/sec):	1.77E-06			
Annual Average Total DPM Emission Rate - On-site-Road Segment 2 (grams/sec):	5.43E-04			
Annual Average Total DPM Emission Rate - On-site Truck Idle (grams/sec):	8.29E-07			

X	Y	Unit Emissions VALUES AVERAGED Offsite Truck Travel	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 1	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 2	Unit Emissions VALUES AVERAGED On-site Truck Idle	Offsite Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 1 Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 2 Annual DPM Exhaust w/Actual Emissions (ug/m3)	On-site Truck Idle Annual DPM Exhaust w/Actual Emissions (ug/m3)	**Total DPM (ug/m3)**
691440.11	4168757.21	53.66444	12.48249	6.74768	12.05051	8.58E-05	2.22E-05	3.66E-03	9.99E-06	3.7796E-03
691441.12	4168740.17	54.32980	11.52916	6.40725	11.18675	8.69E-05	2.05E-05	3.48E-03	9.28E-06	3.5935E-03
691393.51	4168741.18	28.25195	8.51691	5.16869	8.43857	4.52E-05	1.51E-05	2.80E-03	7.00E-06	2.8721E-03
691554.37	4168769.24	38.34351	39.26007	14.58564	39.53836	6.13E-05	6.97E-05	7.91E-03	3.28E-05	8.0787E-03
691400.53	4168760.72	30.34146	9.64259	5.64489	9.47646	4.85E-05	1.71E-05	3.06E-03	7.86E-06	3.1367E-03
691530.82	4168750.20	60.31925	26.11319	11.12960	25.88586	9.64E-05	4.63E-05	6.04E-03	2.15E-05	6.2038E-03
691530.31	4168737.17	62.29774	23.42469	10.44974	23.50427	9.96E-05	4.16E-05	5.67E-03	1.95E-05	5.8312E-03
691538.83	4168689.06	56.44274	17.98067	8.97340	18.55927	9.02E-05	3.19E-05	4.87E-03	1.54E-05	5.0070E-03
691565.89	4168677.03	37.76047	19.89184	10.12985	20.48255	6.04E-05	3.53E-05	5.50E-03	1.70E-05	5.6097E-03
691454.65	4168675.53	69.89826	9.29499	5.57452	9.16801	1.12E-04	1.65E-05	3.03E-03	7.60E-06	3.1609E-03
691461.06	4168623.27	78.28591	7.79324	4.91443	7.88763	1.25E-04	1.38E-05	2.67E-03	6.54E-06	2.8124E-03
691421.97	4168620.26	38.24784	6.22942	4.19457	6.27747	6.11E-05	1.11E-05	2.28E-03	5.21E-06	2.3536E-03
691549.25	4168596.21	52.11165	11.40742	6.74849	11.82001	8.33E-05	2.02E-05	3.66E-03	9.80E-06	3.7754E-03
691568.30	4168594.21	39.80211	12.20102	7.43694	12.63628	6.36E-05	2.17E-05	4.04E-03	1.05E-05	4.1314E-03
691556.77	4168514.03	48.86024	8.09761	5.42105	8.40612	7.81E-05	1.44E-05	2.94E-03	6.97E-06	3.0412E-03
691511.55	4169004.64	7.30561	113.31047	43.69931	79.18092	1.17E-05	2.01E-04	2.37E-02	6.57E-05	2.3992E-02
691503.45	4169016.57	6.72656	91.34407	39.01053	64.39784	1.08E-05	1.62E-04	2.12E-02	5.34E-05	2.1395E-02
691425.07	4169063.43	5.32936	42.58665	23.82643	34.91513	8.52E-06	7.56E-05	1.29E-02	2.90E-05	1.3043E-02
691327.52	4169024.66	8.31911	39.21223	17.94872	36.73941	1.33E-05	6.96E-05	9.74E-03	3.05E-05	9.8533E-03
691447.65	4169079.61	4.58193	35.69975	21.95628	28.70481	7.32E-06	6.34E-05	1.19E-02	2.38E-05	1.2009E-02
691495.78	4169070.67	4.48762	38.63453	24.37207	29.97609	7.17E-06	6.86E-05	1.32E-02	2.49E-05	1.3326E-02
691510.69	4169078.34	4.15852	33.80486	22.81231	26.55134	6.65E-06	6.00E-05	1.24E-02	2.20E-05	1.2468E-02
691548.18	4169071.09	3.93337	34.78006	24.13675	26.48793	6.29E-06	6.17E-05	1.31E-02	2.20E-05	1.3188E-02
691583.54	4169054.48	3.94720	40.33890	27.92704	29.08731	6.31E-06	7.16E-05	1.52E-02	2.41E-05	1.5257E-02
691596.74	4169086.86	3.24662	23.90460	19.60491	19.59709	5.19E-06	4.24E-05	1.06E-02	1.63E-05	1.0703E-02
691498.39	4169122.01	3.34401	20.51570	15.80307	17.43456	5.35E-06	3.64E-05	8.58E-03	1.45E-05	8.6318E-03
691511.79	4169116.58	3.37367	21.28115	16.40199	17.91762	5.39E-06	3.78E-05	8.90E-03	1.49E-05	8.9586E-03
691612.82	4169124.18	2.67806	15.29487	13.89908	13.50602	4.28E-06	2.71E-05	7.54E-03	1.12E-05	7.5850E-03
691615.71	4169140.84	2.49671	13.12795	12.18443	11.83291	3.99E-06	2.33E-05	6.61E-03	9.81E-06	6.6490E-03
691639.97	4169187.55	2.04573	8.79023	8.59724	8.23173	3.27E-06	1.56E-05	4.67E-03	6.83E-06	4.6910E-03
691626.94	4169196.60	2.02327	8.56921	8.28247	8.06318	3.23E-06	1.52E-05	4.49E-03	6.69E-06	4.5196E-03
691546.55	4169198.77	2.28734	9.93512	8.93617	9.19543	3.66E-06	1.76E-05	4.85E-03	7.63E-06	4.8782E-03
691517.95	4169134.68	3.06841	17.52382	14.15630	15.13886	4.91E-06	3.11E-05	7.68E-03	1.26E-05	7.7305E-03
691549.81	4169125.63	3.01125	17.91534	14.76188	15.49869	4.81E-06	3.18E-05	8.01E-03	1.29E-05	8.0600E-03
691552.35	4169135.05	2.87906	16.27397	13.68256	14.28030	4.60E-06	2.89E-05	7.42E-03	1.18E-05	7.4702E-03
691550.17	4169157.13	2.64775	13.47446	11.67370	12.11002	4.23E-06	2.39E-05	6.33E-03	1.00E-05	6.3730E-03
691628.49	4169277.05	1.61237	5.53016	5.43623	5.35595	2.58E-06	9.81E-06	2.95E-03	4.44E-06	2.9668E-03
691631.99	4169255.00	1.69794	6.11975	6.01252	5.89338	2.71E-06	1.09E-05	3.26E-03	4.89E-06	3.2812E-03
691668.08	4169234.45	1.71465	6.27554	6.40238	6.02558	2.74E-06	1.11E-05	3.47E-03	5.00E-06	3.4931E-03
691704.66	4169220.42	1.70944	6.14438	6.55964	5.91268	2.73E-06	1.09E-05	3.56E-03	4.90E-06	3.5782E-03
691719.20	4169208.89	1.72890	6.27410	6.80981	6.04702	2.76E-06	1.11E-05	3.70E-03	5.01E-06	3.7143E-03
691698.15	4169165.29	2.01542	8.48203	9.05131	7.98573	3.22E-06	1.51E-05	4.91E-03	6.62E-06	4.9366E-03
691800.39	4169158.77	1.75960	6.57053	7.57478	6.34934	2.81E-06	1.17E-05	4.11E-03	5.27E-06	4.1302E-03
691785.85	4169172.81	1.72957	6.40584	7.24684	6.17694	2.76E-06	1.14E-05	3.93E-03	5.12E-06	3.9518E-03
691882.58	4169138.73	1.65165	5.75672	6.83671	5.61602	2.64E-06	1.02E-05	3.71E-03	4.66E-06	3.7275E-03
691909.14	4169134.22	1.60880	5.45218	6.53183	5.35131	2.57E-06	9.68E-06	3.54E-03	4.44E-06	3.5612E-03
691588.80	4169332.77	1.47725	4.53174	4.39708	4.41980	2.36E-06	8.04E-06	2.39E-03	3.67E-06	2.4002E-03
691574.65	4169379.94	1.33541	3.77853	3.67583	3.70257	2.13E-06	6.71E-06	1.99E-03	3.07E-06	2.0066E-03
691940.90	4169126.13	1.56673	5.12800	6.21758	5.06517	2.50E-06	9.10E-06	3.37E-03	4.20E-06	3.3898E-03
691964.45	4169125.61	1.51864	4.80643	5.87325	4.78129	2.43E-06	8.53E-06	3.19E-03	3.96E-06	3.2021E-03
692035.62	4169140.52	1.34388	3.81236	4.66917	3.85196	2.15E-06	6.77E-06	2.53E-03	3.19E-06	2.5459E-03
692048.97	4169140.26	1.32272	3.69172	4.53246	3.73621	2.11E-06	6.55E-06	2.46E-03	3.10E-06	2.4713E-03
692062.83	4169163.29	1.24495	3.35835	4.02174	3.38886	1.99E-06	5.96E-06	2.18E-03	2.81E-06	2.1932E-03
692075.66	4169171.40	1.20938	3.19944	3.81969	3.23608	1.93E-06	5.68E-06	2.07E-03	2.68E-06	2.0831E-03
692162.26	4169160.15	1.11964	2.72873	3.33563	2.78254	1.79E-06	4.84E-06	1.81E-03	2.31E-06	1.8190E-03
692164.36	4169145.49	1.14464	2.80934	3.46427	2.85397	1.83E-06	4.99E-06	1.88E-03	2.37E-06	1.8891E-03
692179.53	4169145.49	1.12543	2.72376	3.35811	2.76553	1.80E-06	4.83E-06	1.82E-03	2.29E-06	1.8312E-03
692194.88	4169132.19	1.13072	2.71740	3.37364	2.74761	1.81E-06	4.82E-06	1.83E-03	2.28E-06	1.8396E-03
692206.67	4169126.40	1.12604	2.68375	3.34060	2.70893	1.80E-06	4.76E-06	1.81E-03	2.25E-06	1.8216E-03
691466.77	4168373.67	75.22017	3.91858	2.75120	4.02156	1.20E-04	6.95E-06	1.49E-03	3.33E-06	1.6235E-03
691453.41	4168320.26	53.81275	3.32358	2.39339	3.40879	8.60E-05	5.90E-06	1.30E-03	2.83E-06	1.3935E-03
691537.75	4168319.55	79.34369	4.07603	3.15303	4.21981	1.27E-04	7.23E-06	1.71E-03	3.50E-06	1.8486E-03
691409.97	4168212.93	28.44112	2.38316	1.79069	2.44041	4.55E-05	4.23E-06	9.72E-04	2.02E-06	1.0234E-03
691405.40	4168168.24	26.19041	2.18353	1.66362	2.23566	4.19E-05	3.88E-06	9.03E-04	1.85E-06	9.5037E-04
691535.39	4168247.96	91.37749	3.38169	2.72719	3.49838	1.46E-04	6.00E-06	1.48E-03	2.90E-06	1.6349E-03
691558.74	4168206.32	57.61665	3.16697	2.69792	3.28249	9.21E-05	5.62E-06	1.46E-03	2.72E-06	1.5645E-03
691586.67	4168224.10	38.80591	3.41357	3.00836	3.55343	6.20E-05	6.06E-06	1.63E-03	2.95E-06	1.7035E-03
691580.58	4168186.01	42.39272	3.09569	2.74364	3.21795	6.78E-05	5.49E-06	1.49E-03	2.67E-06	1.5648E-03
691545.54	4168110.86	81.21065	2.53073	2.20194	2.61662	1.30E-04	4.49E-06	1.19E-03	2.17E-06	1.3314E-03
691540.46	4168095.63	94.61411	2.43982	2.12187	2.52121	1.51E-04	4.33E-06	1.15E-03	2.09E-06	1.3091E-03
691486.13	4168117.46	91.99664	2.35489	1.91936	2.42804	1.47E-04	4.18E-06	1.04E-03	2.01E-06	1.1948E-03
691586.16	4168105.78	40.51888	2.60610	2.38542	2.70932	6.48E-05	4.63E-06	1.29E-03	2.25E-06	1.3661E-03
691480.55	4168089.54	74.28650	2.21439	1.81829	2.28283	1.19E-04	3.93E-06	9.87E-04	1.89E-06	1.1113E-03
691368.84	4168031.65	12.43239	1.63276	1.29091	1.66944	1.99E-05	2.90E-06	7.01E-04	1.38E-06	7.2467E-04
691468.87	4168043.84	51.56518	2.00317	1.66034	2.06463	8.24E-05	3.56E-06	9.01E-04	1.71E-06	9.8869E-04
691469.88	4168026.06	49.92308	1.94646	1.62571	2.00631	7.98E-05	3.45E-06	8.82E-04	1.66E-06	9.6712E-04
691543.51	4168055.52	89.99579	2.26439	2.00192	2.33927	1.44E-04	4.02E-06	1.09E-03	1.94E-06	1.2362E-03
691543.00	4168041.30	92.37702	2.20323	1.95508	2.27560	1.48E-04	3.91E-06	1.06E-03	1.89E-06	1.2144E-03
691571.44	4168062.62	50.01927	2.35825	2.14542	2.44390	8.00E-05	4.19E-06	1.16E-03	2.03E-06	1.2504E-03
691452.62	4168100.71	42.76824	2.15020	1.71950	2.21380	6.84E-05	3.82E-06	9.33E-04	1.84E-06	1.0071E-03
691506.70	4168892.79	80.21075	144.69616	28.49268	71.06640	1.28E-04	2.57E-04	1.55E-02	5.89E-05	1.5906E-02

CONCUNIT ug/m^3
DEPUNIT g/m^2

Health Risk Assessment

Off Season 2040 Emissions

Almond Sheller Project

Estimation of On-site Area Emissions During the Off Season

Size of area source (accounted for in AERMOD):		37,474.9	sq-meters
Season	**On-site Activity**	**On-site DPM (tons)**	
Off-Season	On-site Equipment*	0.003028571	tons/year
Total Off-Season (On-site Equipment)		3.029E-03	tons/year
Average Emission		2.750E+03	grams
		8.720E-05	grams/sec
		2.327E-09	grams/m2-sec

* Multiplied CalEEMod output by 1/7 to account for reduced use during off season (1 day a month to 1 day a week).

Almond Sheller Project

Diesel Vehicle Emissions (Off Season)

Roadway Links Modeled

Link	Truck Type	Average Speed (mph)	Emission Factor (g/mi)	Trips per Daily (in and out)	Link Length (m)	Link Length (mi)	Ave Emissions Over Link (g/day)	Ave Emissions (lbs/day)	Average Emissions (g/sec)	Emissions for all Vehicles (g/sec)
SLINE2	**LHDT1**	5 mph	0.024	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	LHDT2	5 mph	0.038	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	MHDT	5 mph	0.005	1.0	603.9	0.38	1.922E-03	4.23E-06	2.224E-08	
	HHDT	5 mph	0.011	2.0	603.9	0.38	8.096E-03	1.78E-05	9.371E-08	
	T7 Ag	5 mph	0.019	1.0	603.9	0.38	7.159E-03	1.58E-05	8.286E-08	**1.99E-07**
SLINE3	**LHDT1**	5 mph	0.024	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	5 mph	0.038	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	MHDT	5 mph	0.005	1.0	461	0.29	1.47E-03	3.23E-06	1.70E-08	
	HHDT	5 mph	0.011	2.0	461	0.29	6.18E-03	1.36E-05	7.15E-08	
	T7 Ag	5 mph	0.019	1.0	461	0.29	5.47E-03	1.20E-05	6.33E-08	**1.52E-07**

Diesel Vehicle Emissions (Off Season)

Diesel truck Idling Emissions

Onsite Vehicle Travel Segments	Truck Type	DPM Emission Factor (grams/trip)	Number Idling Vehicle Trips/day	Emissions (g/day)	Emissions (lb/day)	Average Emissions (g/sec)	Total Emissions for all Vehicles (g/sec)
SLINE4	**LHDT1**	0.0011	0.0	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	0.0015	0.0	0.00E+00	0.00E+00	0.00E+00	
	MHDT	0.0005	1.0	4.56E-04	1.00E-06	5.28E-09	
	HHDT	0.0025	2.0	5.02E-03	1.11E-05	5.81E-08	
	T7 Ag	0.0025	1.0	2.51E-03	5.53E-06	2.91E-08	**9.24E-08**

Almond Sheller Project

Off-site DSL Truck Roadway Emissions (Off Season)

Segment ID	Description	% total Trips
SLINE1	Road Segment 1 – Offsite Truck Travel	100.0%
	Total	100.0%

Segment ID: SLINE1
Travel Distance: 981.3 meters
Operations 24 hours/day

Vehicle Class	Daily Trips (trips/day)	Emission Factor (g/mi)	Travel Distance (mi)	Emissions (g/day)	Emissions (g/sec)
LHDT1-DSL	0	0.012	0.61	0.00	0.00E+00
LHDT2-DSL	0	0.020	0.61	0.00	0.00E+00
MHDT-DSL	1	0.003	0.61	0.00	2.07E-08
HHDT-DSL	2	0.006	0.61	0.01	8.23E-08
T7 Ag	1	0.011	0.61	0.01	7.61E-08
Total	4	—	—	—	**1.79E-07**

DPM 2040

EMFAC2017 Running Diesel Exhaust Emissions
in units of grams/mile

		Emission Factor (g/mi)			
		5 mph	**10 mph**	**25 mph**	**35 mph**
LHDT1	DSL	0.0240	0.0202	0.0116	0.0091
LHDT2	DSL	0.0380	0.0331	0.0197	0.0156
MHDT	DSL	0.0051	0.0045	0.0029	0.0038
HHDT	DSL	0.0108	0.0095	0.0058	0.0078
T7 Ag	DSL	0.0191	0.0168	0.0108	0.0142

Idling Emissions for Trucks (Emission Factors from CalEEMod*)
in units of grams/trip

Vehicle Class	**Vehicle Speed (mph)**	**DPM (grams/trip)**
LHDT1	Idle	0.001134
LHDT2	Idle	0.001491
MHDT	Idle	0.000456
HHDT	Idle	0.002510
T7 Ag	Idle	0.002510

*CalEEMod Version 2020.4.0

Almond Sheller Project

Off Season Emissions (DPM)—Unmitigated Concentrations

		Maximum DPM (ug/m3)	UTM X	UTM Y
		3.8484E-03	691511.55	4169004.64
Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec):	1.79E-07	2.5386E-03	691506.70	4168892.79
Annual Average Total DPM Emission Rate - On-site-Road Segment 1 (grams/sec):	1.99E-07			
Annual Average Total DPM Emission Rate - On-site-Road Segment 2 (grams/sec):	8.74E-05			
Annual Average Total DPM Emission Rate - On-site Truck Idle (grams/sec):	9.24E-08			

X	Y	Unit Emissions VALUES AVERAGED Offsite Truck Travel	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 1	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 2	Unit Emissions VALUES AVERAGED On-site Truck Idle	Offsite Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 1 Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 2 Annual DPM Exhaust w/Actual Emissions (ug/m3)	On-site Truck Idle Annual DPM Exhaust w/Actual Emissions (ug/m3)	**Total DPM (ug/m3)**
691440.11	4168757.21	53.66444	12.48249	6.74768	12.05051	9.61E-06	2.48E-06	5.89E-04	1.11E-06	6.0263E-04
691441.12	4168740.17	54.32980	11.52916	6.40725	11.18675	9.73E-06	2.29E-06	5.60E-04	1.03E-06	5.7274E-04
691393.51	4168741.18	28.25195	8.51691	5.16869	8.43857	5.06E-06	1.69E-06	4.51E-04	7.80E-07	4.5903E-04
691554.37	4168769.24	38.34351	39.26007	14.58564	39.53836	6.87E-06	7.81E-06	1.27E-03	3.65E-06	1.2924E-03
691400.53	4168760.72	30.34146	9.64259	5.64489	9.47646	5.43E-06	1.92E-06	4.93E-04	8.76E-07	5.0132E-04
691530.82	4168750.20	60.31925	26.11319	11.12960	25.88586	1.08E-05	5.19E-06	9.72E-04	2.39E-06	9.9058E-04
691530.31	4168737.17	62.29774	23.42469	10.44974	23.50427	1.12E-05	4.66E-06	9.13E-04	2.17E-06	9.3079E-04
691538.83	4168689.06	56.44274	17.98067	8.97340	18.55927	1.01E-05	3.57E-06	7.84E-04	1.72E-06	7.9924E-04
691565.89	4168677.03	37.76047	19.89184	10.12985	20.48255	6.76E-06	3.95E-06	8.85E-04	1.89E-06	8.9747E-04
691454.65	4168675.53	69.89826	9.29499	5.57452	9.16801	1.25E-05	1.85E-06	4.87E-04	8.47E-07	5.0216E-04
691461.06	4168623.27	78.28591	7.79324	4.91443	7.88763	1.40E-05	1.55E-06	4.29E-04	7.29E-07	4.4558E-04
691421.97	4168620.26	38.24784	6.22942	4.19457	6.27747	6.85E-06	1.24E-06	3.66E-04	5.80E-07	3.7507E-04
691549.25	4168596.21	52.11165	11.40742	6.74849	11.82001	9.33E-06	2.27E-06	5.89E-04	1.09E-06	6.0218E-04
691568.30	4168594.21	39.80211	12.20102	7.43694	12.63628	7.13E-06	2.43E-06	6.50E-04	1.17E-06	6.6035E-04
691556.77	4168514.03	48.86024	8.09761	5.42105	8.40612	8.75E-06	1.61E-06	4.74E-04	7.77E-07	4.8467E-04
691511.55	4169004.64	7.30561	113.31047	43.69931	79.18092	1.31E-06	2.25E-05	3.82E-03	7.32E-06	3.8484E-03
691503.45	4169016.57	6.72656	91.34407	39.01053	64.39784	1.20E-06	1.82E-05	3.41E-03	5.95E-06	3.4330E-03
691425.07	4169063.43	5.32936	42.58665	23.82643	34.91513	9.54E-07	8.47E-06	2.08E-03	3.23E-06	2.0939E-03
691327.52	4169024.66	8.31911	39.21223	17.94872	36.73941	1.49E-06	7.80E-06	1.57E-03	3.40E-06	1.5805E-03
691447.65	4169079.61	4.58193	35.69975	21.95628	28.70481	8.20E-07	7.10E-06	1.92E-03	2.65E-06	1.9285E-03
691495.78	4169070.67	4.48762	38.63453	24.37207	29.97609	8.04E-07	7.68E-06	2.13E-03	2.77E-06	2.1402E-03
691510.69	4169078.34	4.15852	33.80486	22.81231	26.55134	7.45E-07	6.72E-06	1.99E-03	2.45E-06	2.0026E-03
691548.18	4169071.09	3.93337	34.78006	24.13675	26.48793	7.04E-07	6.91E-06	2.11E-03	2.45E-06	2.1185E-03
691583.54	4169054.48	3.94720	40.33890	27.92704	29.08731	7.07E-07	8.02E-06	2.44E-03	2.69E-06	2.4509E-03
691596.74	4169086.86	3.24662	23.90460	19.60491	19.59709	5.81E-07	4.75E-06	1.71E-03	1.81E-06	1.7197E-03
691498.39	4169122.01	3.34401	20.51570	15.80307	17.43456	5.99E-07	4.08E-06	1.38E-03	1.61E-06	1.3867E-03
691511.79	4169116.58	3.37367	21.28115	16.40199	17.91762	6.04E-07	4.23E-06	1.43E-03	1.66E-06	1.4392E-03
691612.82	4169124.18	2.67806	15.29487	13.89908	13.50602	4.80E-07	3.04E-06	1.21E-03	1.25E-06	1.2189E-03
691615.71	4169140.84	2.49671	13.12795	12.18443	11.83291	4.47E-07	2.61E-06	1.06E-03	1.09E-06	1.0685E-03
691639.97	4169187.55	2.04573	8.79023	8.59724	8.23173	3.66E-07	1.75E-06	7.51E-04	7.61E-07	7.5386E-04
691626.94	4169196.60	2.02327	8.56921	8.28247	8.06318	3.62E-07	1.70E-06	7.23E-04	7.45E-07	7.2630E-04
691546.55	4169198.77	2.28734	9.93512	8.93617	9.19543	4.10E-07	1.98E-06	7.81E-04	8.50E-07	7.8383E-04
691517.95	4169134.68	3.06841	17.52382	14.15630	15.13886	5.49E-07	3.48E-06	1.24E-03	1.40E-06	1.2420E-03
691549.81	4169125.63	3.01125	17.91534	14.76188	15.49869	5.39E-07	3.56E-06	1.29E-03	1.43E-06	1.2950E-03
691552.35	4169135.05	2.87906	16.27397	13.68256	14.28030	5.16E-07	3.24E-06	1.20E-03	1.32E-06	1.2003E-03
691550.17	4169157.13	2.64775	13.47446	11.67370	12.11002	4.74E-07	2.68E-06	1.02E-03	1.12E-06	1.0240E-03
691628.49	4169277.05	1.61237	5.53016	5.43623	5.35595	2.89E-07	1.10E-06	4.75E-04	4.95E-07	4.7675E-04
691631.99	4169255.00	1.69794	6.11975	6.01252	5.89338	3.04E-07	1.22E-06	5.25E-04	5.45E-07	5.2727E-04
691668.08	4169234.45	1.71465	6.27554	6.40238	6.02558	3.07E-07	1.25E-06	5.59E-04	5.57E-07	5.6137E-04
691704.66	4169220.42	1.70944	6.14438	6.55964	5.91268	3.06E-07	1.22E-06	5.73E-04	5.47E-07	5.7507E-04
691719.20	4169208.89	1.72890	6.27410	6.80981	6.04702	3.10E-07	1.25E-06	5.95E-04	5.59E-07	5.9697E-04
691698.15	4169165.29	2.01542	8.48203	9.05131	7.98573	3.61E-07	1.69E-06	7.91E-04	7.38E-07	7.9343E-04
691800.39	4169158.77	1.75960	6.57053	7.57478	6.34934	3.15E-07	1.31E-06	6.62E-04	5.87E-07	6.6388E-04
691785.85	4169172.81	1.72957	6.40584	7.24684	6.17694	3.10E-07	1.27E-06	6.33E-04	5.71E-07	6.3518E-04
691882.58	4169138.73	1.65165	5.75672	6.83671	5.61602	2.96E-07	1.14E-06	5.97E-04	5.19E-07	5.9916E-04
691909.14	4169134.22	1.60880	5.45218	6.53183	5.35131	2.88E-07	1.08E-06	5.71E-04	4.95E-07	5.7243E-04
691588.80	4169332.77	1.47725	4.53174	4.39708	4.41980	2.65E-07	9.01E-07	3.84E-04	4.09E-07	3.8567E-04
691574.65	4169379.94	1.33541	3.77853	3.67583	3.70257	2.39E-07	7.51E-07	3.21E-04	3.42E-07	3.2242E-04
691940.90	4169126.13	1.56673	5.12800	6.21758	5.06517	2.81E-07	1.02E-06	5.43E-04	4.68E-07	5.4489E-04
691964.45	4169125.61	1.51864	4.80643	5.87325	4.78129	2.72E-07	9.56E-07	5.13E-04	4.42E-07	5.1471E-04
692035.62	4169140.52	1.34388	3.81236	4.66917	3.85196	2.41E-07	7.58E-07	4.08E-04	3.56E-07	4.0922E-04
692048.97	4169140.26	1.32272	3.69172	4.53246	3.73621	2.37E-07	7.34E-07	3.96E-04	3.45E-07	3.9724E-04
692062.83	4169163.29	1.24495	3.35835	4.02174	3.38886	2.23E-07	6.68E-07	3.51E-04	3.13E-07	3.5251E-04
692075.66	4169171.40	1.20938	3.19944	3.81969	3.23608	2.17E-07	6.36E-07	3.34E-04	2.99E-07	3.3481E-04
692162.26	4169160.15	1.11964	2.72873	3.33563	2.78254	2.00E-07	5.43E-07	2.91E-04	2.57E-07	2.9237E-04
692164.36	4169145.49	1.14464	2.80934	3.46427	2.85397	2.05E-07	5.59E-07	3.03E-04	2.64E-07	3.0364E-04
692179.53	4169145.49	1.12543	2.72376	3.35811	2.76553	2.02E-07	5.42E-07	2.93E-04	2.56E-07	2.9434E-04
692194.88	4169132.19	1.13072	2.71740	3.37364	2.74761	2.02E-07	5.40E-07	2.95E-04	2.54E-07	2.9569E-04
692206.67	4169126.40	1.12604	2.68375	3.34060	2.70893	2.02E-07	5.34E-07	2.92E-04	2.50E-07	2.9279E-04
691466.77	4168373.67	75.22017	3.91858	2.75120	4.02156	1.35E-05	7.79E-07	2.40E-04	3.72E-07	2.5494E-04
691453.41	4168320.26	53.81275	3.32358	2.39339	3.40879	9.64E-06	6.61E-07	2.09E-04	3.15E-07	2.1968E-04
691537.75	4168319.55	79.34369	4.07603	3.15303	4.21981	1.42E-05	8.10E-07	2.75E-04	3.90E-07	2.9083E-04
691409.97	4168212.93	28.44112	2.38316	1.79069	2.44041	5.09E-06	4.74E-07	1.56E-04	2.26E-07	1.6221E-04
691405.40	4168168.24	26.19041	2.18353	1.66362	2.23566	4.69E-06	4.34E-07	1.45E-04	2.07E-07	1.5065E-04
691535.39	4168247.96	91.37749	3.38169	2.72719	3.49838	1.64E-05	6.72E-07	2.38E-04	3.23E-07	2.5558E-04
691558.74	4168206.32	57.61665	3.16697	2.69792	3.28249	1.03E-05	6.30E-07	2.36E-04	3.03E-07	2.4692E-04
691586.67	4168224.10	38.80591	3.41357	3.00836	3.55343	6.95E-06	6.79E-07	2.63E-04	3.28E-07	2.7074E-04
691580.58	4168186.01	42.39272	3.09569	2.74364	3.21795	7.59E-06	6.15E-07	2.40E-04	2.97E-07	2.4817E-04
691545.54	4168110.86	81.21065	2.53073	2.20194	2.61662	1.45E-05	5.03E-07	1.92E-04	2.42E-07	2.0763E-04
691540.46	4168095.63	94.61411	2.43982	2.12187	2.52121	1.69E-05	4.85E-07	1.85E-04	2.33E-07	2.0301E-04
691486.13	4168117.46	91.99664	2.35489	1.91936	2.42804	1.65E-05	4.68E-07	1.68E-04	2.24E-07	1.8482E-04
691586.16	4168105.78	40.51888	2.60610	2.38542	2.70932	7.26E-06	5.18E-07	2.08E-04	2.50E-07	2.1639E-04
691480.55	4168089.54	74.28650	2.21439	1.81829	2.28283	1.33E-05	4.40E-07	1.59E-04	2.11E-07	1.7278E-04
691368.84	4168031.65	12.43239	1.63276	1.29091	1.66944	2.23E-06	3.25E-07	1.13E-04	1.54E-07	1.1547E-04
691468.87	4168043.84	51.56518	2.00317	1.66034	2.06463	9.23E-06	3.98E-07	1.45E-04	1.91E-07	1.5486E-04
691469.88	4168026.06	49.92308	1.94646	1.62571	2.00631	8.94E-06	3.87E-07	1.42E-04	1.85E-07	1.5152E-04
691543.51	4168055.52	89.99579	2.26439	2.00192	2.33927	1.61E-05	4.50E-07	1.75E-04	2.16E-07	1.9165E-04
691543.00	4168041.30	92.37702	2.20323	1.95508	2.27560	1.65E-05	4.38E-07	1.71E-04	2.10E-07	1.8797E-04
691571.44	4168062.62	50.01927	2.35825	2.14542	2.44390	8.96E-06	4.69E-07	1.87E-04	2.26E-07	1.9706E-04
691452.62	4168100.71	42.76824	2.15020	1.71950	2.21380	7.66E-06	4.27E-07	1.50E-04	2.05E-07	1.5849E-04
691506.70	4168892.79	80.21075	144.69616	28.49268	71.06640	1.44E-05	2.88E-05	2.49E-03	6.57E-06	2.5386E-03

CONCUNIT ug/m^3
DEPUNIT g/m^2

Health Risk Assessment

2050 Emission Estimates

Health Risk Assessment

Peak Season 2050 Emissions

Almond Sheller Project

Estimation of On-site Area Emissions During the Peak Season

Size of area source (accounted for in AERMOD):		37,474.9	sq-meters
Season	**On-site Activity**	**On-site DPM (tons)**	
Peak Season	On-site Equipment	0.01880	tons/year
Total Peak Season (On-site Equipment)		1.880E-02	tons/year
Average Emission		1.707E+04	grams
		5.413E-04	grams/sec
		1.444E-08	grams/m2-sec

Almond Sheller Project

Diesel Vehicle Emissions (Peak Season)

Facility Operations

24 hrs/day, 153 days/year (seasonal)

Roadway Links Modeled

Link	Truck Type	Average Speed (mph)	Emission Factor (g/mi)	Trips per Daily (in and out)	Link Length (m)	Link Length (mi)	Ave Emissions Over Link (g/day)	Ave Emissions (lbs/day)	Average Emissions (g/sec)	Emissions for all Vehicles (g/sec)
SLINE2	**LHDT1**	5 mph	0.013	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	LHDT2	5 mph	0.031	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	MHDT	5 mph	0.005	3.0	603.9	0.38	5.541E-03	1.22E-05	6.413E-08	
	HHDT	5 mph	0.011	17.0	603.9	0.38	6.746E-02	1.49E-04	7.808E-07	
	T7 Ag	5 mph	0.020	11.0	603.9	0.38	8.137E-02	1.79E-04	9.417E-07	**1.79E-06**
SLINE3	**LHDT1**	5 mph	0.013	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	5 mph	0.031	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	MHDT	5 mph	0.005	3.0	461	0.29	4.23E-03	9.32E-06	4.90E-08	
	HHDT	5 mph	0.011	17.0	461	0.29	5.15E-02	1.13E-04	5.96E-07	
	T7 Ag	5 mph	0.020	11.0	461	0.29	6.21E-02	1.37E-04	7.19E-07	**1.36E-06**

Diesel Vehicle Emissions (Peak Season)

Diesel truck Idling Emissions

Onsite Vehicle Travel Segments	Truck Type	DPM Emission Factor (grams/trip)	Number Idling Vehicle Trips/day	Emissions (g/day)	Emissions (lb/day)	Average Emissions (g/sec)	Total Emissions for all Vehicles (g/sec)
SLINE4	**LHDT1**	0.0010	0.0	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	0.0015	0.0	0.00E+00	0.00E+00	0.00E+00	
	MHDT	0.0001	3.0	2.43E-04	5.35E-07	2.81E-09	
	HHDT	0.0020	17.0	3.39E-02	7.46E-05	3.92E-07	
	T7 Ag	0.0020	11.0	2.19E-02	4.83E-05	2.54E-07	**6.49E-07**

Almond Sheller Project

Project Operations 24 hours/day

Off-site DSL Truck Roadway Emissions (Peak Season)

Segment ID	Description	% total Trips
SLINE1	Road Segment 1 – Offsite Truck Travel	100.0%
	Total	100.0%

Segment ID: SLINE1
Travel Distance: 981.3 meters
Operations 24 hours/day

Vehicle Class	Daily Trips (trips/day)	Emission Factor (g/mi)	Travel Distance (mi)	Emissions (g/day)	Emissions (g/sec)
LHDT1-DSL	0	0.008	0.61	0.00	0.00E+00
LHDT2-DSL	0	0.018	0.61	0.00	0.00E+00
MHDT-DSL	3	0.003	0.61	0.01	5.92E-08
HHDT-DSL	17	0.006	0.61	0.06	7.00E-07
T7 Ag	11	0.011	0.61	0.07	8.65E-07
Total	31	—	—	—	**1.62E-06**

DPM **2050**

EMFAC2017 Running Diesel Exhaust Emissions
in units of grams/mile

		Emission Factor (g/mi)			
		5 mph	**10 mph**	**25 mph**	**35 mph**
LHDT1	DSL	0.0128	0.0119	0.0075	0.0060
LHDT2	DSL	0.0311	0.0287	0.0180	0.0143
MHDT	DSL	0.0049	0.0043	0.0028	0.0037
HHDT	DSL	0.0106	0.0094	0.0058	0.0078
T7 Ag	DSL	0.0197	0.0173	0.0111	0.0147

Idling Emissions for Trucks (Emission Factors from CalEEMod*)
in units of grams/trip

Vehicle Class	**Vehicle Speed (mph)**	**DPM (grams/trip)**
LHDT1	Idle	0.000981
LHDT2	Idle	0.001544
MHDT	Idle	0.000081
HHDT	Idle	0.001993
T7 Ag	Idle	0.001993

*CalEEMod Version 2020.4.0

Almond Sheller Project

Peak Season Emissions (DPM)—Unmitigated Concentrations

		Maximum DPM (ug/m3)	UTM X	UTM Y
		2.3980E-02	691511.55	4169004.64
Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec):	1.62E-06	1.5897E-02	691506.70	4168892.79
Annual Average Total DPM Emission Rate - On-site-Road Segment 1 (grams/sec):	1.79E-06			
Annual Average Total DPM Emission Rate - On-site-Road Segment 2 (grams/sec):	5.43E-04			
Annual Average Total DPM Emission Rate - On-site Truck Idle (grams/sec):	6.49E-07			

X	Y	Unit Emissions VALUES AVERAGED Offsite Truck Travel	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 1	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 2	Unit Emissions VALUES AVERAGED On-site Truck Idle	Offsite Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 1 Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 2 Annual DPM Exhaust w/Actual Emissions (ug/m3)	On-site Truck Idle Annual DPM Exhaust w/Actual Emissions (ug/m3)	**Total DPM (ug/m3)**
691440.11	4168757.21	53.66444	12.48249	6.74768	12.05051	8.71E-05	2.23E-05	3.66E-03	7.82E-06	3.7790E-03
691441.12	4168740.17	54.32980	11.52916	6.40725	11.18675	8.82E-05	2.06E-05	3.48E-03	7.26E-06	3.5931E-03
691393.51	4168741.18	28.25195	8.51691	5.16869	8.43857	4.59E-05	1.52E-05	2.80E-03	5.47E-06	2.8714E-03
691554.37	4168769.24	38.34351	39.26007	14.58564	39.53836	6.23E-05	7.01E-05	7.92E-03	2.56E-05	8.0731E-03
691400.53	4168760.72	30.34146	9.64259	5.64489	9.47646	4.93E-05	1.72E-05	3.06E-03	6.15E-06	3.1359E-03
691530.82	4168750.20	60.31925	26.11319	11.12960	25.88586	9.80E-05	4.67E-05	6.04E-03	1.68E-05	6.2010E-03
691530.31	4168737.17	62.29774	23.42469	10.44974	23.50427	1.01E-04	4.19E-05	5.67E-03	1.52E-05	5.8290E-03
691538.83	4168689.06	56.44274	17.98067	8.97340	18.55927	9.17E-05	3.21E-05	4.87E-03	1.20E-05	5.0054E-03
691565.89	4168677.03	37.76047	19.89184	10.12985	20.48255	6.13E-05	3.55E-05	5.50E-03	1.33E-05	5.6072E-03
691454.65	4168675.53	69.89826	9.29499	5.57452	9.16801	1.14E-04	1.66E-05	3.03E-03	5.95E-06	3.1612E-03
691461.06	4168623.27	78.28591	7.79324	4.91443	7.88763	1.27E-04	1.39E-05	2.67E-03	5.12E-06	2.8131E-03
691421.97	4168620.26	38.24784	6.22942	4.19457	6.27747	6.21E-05	1.11E-05	2.28E-03	4.07E-06	2.3536E-03
691549.25	4168596.21	52.11165	11.40742	6.74849	11.82001	8.46E-05	2.04E-05	3.66E-03	7.67E-06	3.7748E-03
691568.30	4168594.21	39.80211	12.20102	7.43694	12.63628	6.46E-05	2.18E-05	4.04E-03	8.20E-06	4.1304E-03
691556.77	4168514.03	48.86024	8.09761	5.42105	8.40612	7.93E-05	1.45E-05	2.94E-03	5.45E-06	3.0411E-03
691511.55	4169004.64	7.30561	113.31047	43.69931	79.18092	1.19E-05	2.02E-04	2.37E-02	5.14E-05	2.3980E-02
691503.45	4169016.57	6.72656	91.34407	39.01053	64.39784	1.09E-05	1.63E-04	2.12E-02	4.18E-05	2.1385E-02
691425.07	4169063.43	5.32936	42.58665	23.82643	34.91513	8.65E-06	7.61E-05	1.29E-02	2.26E-05	1.3037E-02
691327.52	4169024.66	8.31911	39.21223	17.94872	36.73941	1.35E-05	7.01E-05	9.74E-03	2.38E-05	9.8475E-03
691447.65	4169079.61	4.58193	35.69975	21.95628	28.70481	7.44E-06	6.38E-05	1.19E-02	1.86E-05	1.2005E-02
691495.78	4169070.67	4.48762	38.63453	24.37207	29.97609	7.29E-06	6.90E-05	1.32E-02	1.94E-05	1.3322E-02
691510.69	4169078.34	4.15852	33.80486	22.81231	26.55134	6.75E-06	6.04E-05	1.24E-02	1.72E-05	1.2464E-02
691548.18	4169071.09	3.93337	34.78006	24.13675	26.48793	6.39E-06	6.21E-05	1.31E-02	1.72E-05	1.3184E-02
691583.54	4169054.48	3.94720	40.33890	27.92704	29.08731	6.41E-06	7.21E-05	1.52E-02	1.89E-05	1.5252E-02
691596.74	4169086.86	3.24662	23.90460	19.60491	19.59709	5.27E-06	4.27E-05	1.06E-02	1.27E-05	1.0700E-02
691498.39	4169122.01	3.34401	20.51570	15.80307	17.43456	5.43E-06	3.67E-05	8.58E-03	1.13E-05	8.6291E-03
691511.79	4169116.58	3.37367	21.28115	16.40199	17.91762	5.48E-06	3.80E-05	8.90E-03	1.16E-05	8.9559E-03
691612.82	4169124.18	2.67806	15.29487	13.89908	13.50602	4.35E-06	2.73E-05	7.54E-03	8.76E-06	7.5829E-03
691615.71	4169140.84	2.49671	13.12795	12.18443	11.83291	4.05E-06	2.35E-05	6.61E-03	7.68E-06	6.6472E-03
691639.97	4169187.55	2.04573	8.79023	8.59724	8.23173	3.32E-06	1.57E-05	4.67E-03	5.34E-06	4.6898E-03
691626.94	4169196.60	2.02327	8.56921	8.28247	8.06318	3.29E-06	1.53E-05	4.49E-03	5.23E-06	4.5184E-03
691546.55	4169198.77	2.28734	9.93512	8.93617	9.19543	3.71E-06	1.78E-05	4.85E-03	5.97E-06	4.8768E-03
691517.95	4169134.68	3.06841	17.52382	14.15630	15.13886	4.98E-06	3.13E-05	7.68E-03	9.82E-06	7.7282E-03
691549.81	4169125.63	3.01125	17.91534	14.76188	15.49869	4.89E-06	3.20E-05	8.01E-03	1.01E-05	8.0577E-03
691552.35	4169135.05	2.87906	16.27397	13.68256	14.28030	4.68E-06	2.91E-05	7.43E-03	9.26E-06	7.4680E-03
691550.17	4169157.13	2.64775	13.47446	11.67370	12.11002	4.30E-06	2.41E-05	6.33E-03	7.86E-06	6.3711E-03
691628.49	4169277.05	1.61237	5.53016	5.43623	5.35595	2.62E-06	9.88E-06	2.95E-03	3.47E-06	2.9660E-03
691631.99	4169255.00	1.69794	6.11975	6.01252	5.89338	2.76E-06	1.09E-05	3.26E-03	3.82E-06	3.2803E-03
691668.08	4169234.45	1.71465	6.27554	6.40238	6.02558	2.78E-06	1.12E-05	3.47E-03	3.91E-06	3.4922E-03
691704.66	4169220.42	1.70944	6.14438	6.55964	5.91268	2.78E-06	1.10E-05	3.56E-03	3.84E-06	3.5773E-03
691719.20	4169208.89	1.72890	6.27410	6.80981	6.04702	2.81E-06	1.12E-05	3.70E-03	3.92E-06	3.7134E-03
691698.15	4169165.29	2.01542	8.48203	9.05131	7.98573	3.27E-06	1.52E-05	4.91E-03	5.18E-06	4.9354E-03
691800.39	4169158.77	1.75960	6.57053	7.57478	6.34934	2.86E-06	1.17E-05	4.11E-03	4.12E-06	4.1293E-03
691785.85	4169172.81	1.72957	6.40584	7.24684	6.17694	2.81E-06	1.14E-05	3.93E-03	4.01E-06	3.9509E-03
691882.58	4169138.73	1.65165	5.75672	6.83671	5.61602	2.68E-06	1.03E-05	3.71E-03	3.64E-06	3.7266E-03
691909.14	4169134.22	1.60880	5.45218	6.53183	5.35131	2.61E-06	9.74E-06	3.54E-03	3.47E-06	3.5604E-03
691588.80	4169332.77	1.47725	4.53174	4.39708	4.41980	2.40E-06	8.10E-06	2.39E-03	2.87E-06	2.3995E-03
691574.65	4169379.94	1.33541	3.77853	3.67583	3.70257	2.17E-06	6.75E-06	1.99E-03	2.40E-06	2.0061E-03
691940.90	4169126.13	1.56673	5.12800	6.21758	5.06517	2.54E-06	9.16E-06	3.37E-03	3.29E-06	3.3890E-03
691964.45	4169125.61	1.51864	4.80643	5.87325	4.78129	2.47E-06	8.59E-06	3.19E-03	3.10E-06	3.2013E-03
692035.62	4169140.52	1.34388	3.81236	4.66917	3.85196	2.18E-06	6.81E-06	2.53E-03	2.50E-06	2.5453E-03
692048.97	4169140.26	1.32272	3.69172	4.53246	3.73621	2.15E-06	6.60E-06	2.46E-03	2.42E-06	2.4708E-03
692062.83	4169163.29	1.24495	3.35835	4.02174	3.38886	2.02E-06	6.00E-06	2.18E-03	2.20E-06	2.1927E-03
692075.66	4169171.40	1.20938	3.19944	3.81969	3.23608	1.96E-06	5.72E-06	2.07E-03	2.10E-06	2.0826E-03
692162.26	4169160.15	1.11964	2.72873	3.33563	2.78254	1.82E-06	4.88E-06	1.81E-03	1.81E-06	1.8186E-03
692164.36	4169145.49	1.14464	2.80934	3.46427	2.85397	1.86E-06	5.02E-06	1.88E-03	1.85E-06	1.8887E-03
692179.53	4169145.49	1.12543	2.72376	3.35811	2.76553	1.83E-06	4.87E-06	1.82E-03	1.79E-06	1.8308E-03
692194.88	4169132.19	1.13072	2.71740	3.37364	2.74761	1.84E-06	4.85E-06	1.83E-03	1.78E-06	1.8392E-03
692206.67	4169126.40	1.12604	2.68375	3.34060	2.70893	1.83E-06	4.79E-06	1.81E-03	1.76E-06	1.8212E-03
691466.77	4168373.67	75.22017	3.91858	2.75120	4.02156	1.22E-04	7.00E-06	1.49E-03	2.61E-06	1.6247E-03
691453.41	4168320.26	53.81275	3.32358	2.39339	3.40879	8.74E-05	5.94E-06	1.30E-03	2.21E-06	1.3943E-03
691537.75	4168319.55	79.34369	4.07603	3.15303	4.21981	1.29E-04	7.28E-06	1.71E-03	2.74E-06	1.8499E-03
691409.97	4168212.93	28.44112	2.38316	1.79069	2.44041	4.62E-05	4.26E-06	9.72E-04	1.58E-06	1.0238E-03
691405.40	4168168.24	26.19041	2.18353	1.66362	2.23566	4.25E-05	3.90E-06	9.03E-04	1.45E-06	9.5067E-04
691535.39	4168247.96	91.37749	3.38169	2.72719	3.49838	1.48E-04	6.04E-06	1.48E-03	2.27E-06	1.6366E-03
691558.74	4168206.32	57.61665	3.16697	2.69792	3.28249	9.36E-05	5.66E-06	1.46E-03	2.13E-06	1.5654E-03
691586.67	4168224.10	38.80591	3.41357	3.00836	3.55343	6.30E-05	6.10E-06	1.63E-03	2.31E-06	1.7039E-03
691580.58	4168186.01	42.39272	3.09569	2.74364	3.21795	6.88E-05	5.53E-06	1.49E-03	2.09E-06	1.5653E-03
691545.54	4168110.86	81.21065	2.53073	2.20194	2.61662	1.32E-04	4.52E-06	1.19E-03	1.70E-06	1.3330E-03
691540.46	4168095.63	94.61411	2.43982	2.12187	2.52121	1.54E-04	4.36E-06	1.15E-03	1.64E-06	1.3111E-03
691486.13	4168117.46	91.99664	2.35489	1.91936	2.42804	1.49E-04	4.21E-06	1.04E-03	1.58E-06	1.1967E-03
691586.16	4168105.78	40.51888	2.60610	2.38542	2.70932	6.58E-05	4.66E-06	1.29E-03	1.76E-06	1.3667E-03
691480.55	4168089.54	74.28650	2.21439	1.81829	2.28283	1.21E-04	3.96E-06	9.87E-04	1.48E-06	1.1128E-03
691368.84	4168031.65	12.43239	1.63276	1.29091	1.66944	2.02E-05	2.92E-06	7.01E-04	1.08E-06	7.2472E-04
691468.87	4168043.84	51.56518	2.00317	1.66034	2.06463	8.37E-05	3.58E-06	9.01E-04	1.34E-06	9.8966E-04
691469.88	4168026.06	49.92308	1.94646	1.62571	2.00631	8.11E-05	3.48E-06	8.82E-04	1.30E-06	9.6806E-04
691543.51	4168055.52	89.99579	2.26439	2.00192	2.33927	1.46E-04	4.05E-06	1.09E-03	1.52E-06	1.2381E-03
691543.00	4168041.30	92.37702	2.20323	1.95508	2.27560	1.50E-04	3.94E-06	1.06E-03	1.48E-06	1.2164E-03
691571.44	4168062.62	50.01927	2.35825	2.14542	2.44390	8.12E-05	4.21E-06	1.16E-03	1.59E-06	1.2513E-03
691452.62	4168100.71	42.76824	2.15020	1.71950	2.21380	6.95E-05	3.84E-06	9.33E-04	1.44E-06	1.0078E-03
691506.70	4168892.79	80.21075	144.69616	28.49268	71.06640	1.30E-04	2.59E-04	1.55E-02	4.61E-05	1.5897E-02

CONCUNIT ug/m^3
DEPUNIT g/m^2

Health Risk Assessment

Off Season 2050 Emissions

Almond Sheller Project

Estimation of On-site Area Emissions During the Off Season

Size of area source (accounted for in AERMOD):		37,474.9	sq-meters

Season	On-site Activity	On-site PM10 (tons)	
Off-Season	On-site Equipment*	0.003028571	tons/year
Total Off-Season (On-site Equipment)		3.029E-03	tons/year
Average Emission		2.750E+03	grams
		8.720E-05	grams/sec
		2.327E-09	grams/m2-sec

* Multiplied CalEEMod output by 1/7 to account for reduced use during off season (1 day a month to 1 day a week).

Almond Sheller Project

Diesel Vehicle Emissions (Off Season)

Roadway Links Modeled

Link	Truck Type	Average Speed (mph)	Emission Factor (g/mi)	Trips per Daily (in and out)	Link Length (m)	Link Length (mi)	Ave Emissions Over Link (g/day)	Ave Emissions (lbs/day)	Average Emissions (g/sec)	Emissions for all Vehicles (g/sec)
SLINE2	**LHDT1**	5 mph	0.013	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	LHDT2	5 mph	0.031	0.0	603.9	0.38	0.000E+00	0.00E+00	0.000E+00	
	MHDT	5 mph	0.005	1.0	603.9	0.38	1.847E-03	4.07E-06	2.138E-08	
	HHDT	5 mph	0.011	2.0	603.9	0.38	7.936E-03	1.75E-05	9.185E-08	
	T7 Ag	5 mph	0.020	1.0	603.9	0.38	7.397E-03	1.63E-05	8.561E-08	**1.99E-07**
SLINE3	**LHDT1**	5 mph	0.013	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	5 mph	0.031	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	
	MHDT	5 mph	0.005	1.0	461	0.29	1.41E-03	3.11E-06	1.63E-08	
	HHDT	5 mph	0.011	2.0	461	0.29	6.06E-03	1.33E-05	7.01E-08	
	T7 Ag	5 mph	0.020	1.0	461	0.29	5.65E-03	1.24E-05	6.54E-08	**1.52E-07**

Diesel Vehicle Emissions (Off Season)

Diesel truck Idling Emissions

Onsite Vehicle Travel Segments	Truck Type	DPM Emission Factor (grams/trip)	Number Idling Vehicle Trips/day	Emissions (g/day)	Emissions (lb/day)	Average Emissions (g/sec)	Total Emissions for all Vehicles (g/sec)
SLINE4	**LHDT1**	0.0010	0.0	0.00E+00	0.00E+00	0.00E+00	
	LHDT2	0.0015	0.0	0.00E+00	0.00E+00	0.00E+00	
	MHDT	0.0001	1.0	8.10E-05	1.78E-07	9.38E-10	
	HHDT	0.0020	2.0	3.99E-03	8.78E-06	4.61E-08	
	T7 Ag	0.0020	1.0	1.99E-03	4.39E-06	2.31E-08	**7.01E-08**

Almond Sheller Project

Off-site DSL Truck Roadway Emissions (Off Season)

Segment ID	Description	% total Trips
SLINE1	Road Segment 1 – Offsite Truck Travel	100.0%
	Total	100.0%

Segment ID: SLINE1
Travel Distance: 981.3 meters
Operations 24 hours/day

Vehicle Class	Daily Trips (trips/day)	Emission Factor (g/mi)	Travel Distance (mi)	Emissions (g/day)	Emissions (g/sec)
LHDT1-DSL	0	0.008	0.61	0.00	0.00E+00
LHDT2-DSL	0	0.018	0.61	0.00	0.00E+00
MHDT-DSL	1	0.003	0.61	0.00	1.97E-08
HHDT-DSL	2	0.006	0.61	0.01	8.23E-08
T7 Ag	1	0.011	0.61	0.01	7.86E-08
Total	4	—	—	—	**1.81E-07**

DPM **2050**

EMFAC2017 Running Diesel Exhaust Emissions
in units of grams/mile

		Emission Factor (g/mi)			
		5 mph	**10 mph**	**25 mph**	**35 mph**
LHDT1	DSL	0.0128	0.0119	0.0075	0.0060
LHDT2	DSL	0.0311	0.0287	0.0180	0.0143
MHDT	DSL	0.0049	0.0043	0.0028	0.0037
HHDT	DSL	0.0106	0.0094	0.0058	0.0078
T7 Ag	DSL	0.0197	0.0173	0.0111	0.0147

Idling Emissions for Trucks (Emission Factors from CalEEMod*)
in units of grams/trip

Vehicle Class	**Vehicle Speed (mph)**	**DPM (grams/trip)**
LHDT1	Idle	0.000981
LHDT2	Idle	0.001544
MHDT	Idle	0.000081
HHDT	Idle	0.001993
T7 Ag	Idle	0.001993

*CalEEMod Version 2020.4.0

Almond Sheller Project

Off Season Emissions (DPM)—Unmitigated Concentrations

		Maximum DPM (ug/m3)	UTM X	UTM Y
		3.8466E-03	691511.55	4169004.64
Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec):	1.81E-07	2.5371E-03	691506.70	4168892.79
Annual Average Total DPM Emission Rate - On-site-Road Segment 1 (grams/sec):	1.99E-07			
Annual Average Total DPM Emission Rate - On-site-Road Segment 2 (grams/sec):	8.74E-05			
Annual Average Total DPM Emission Rate - On-site Truck Idle (grams/sec):	7.01E-08			

X	Y	Unit Emissions VALUES AVERAGED Offsite Truck Travel	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 1	Unit Emissions VALUES AVERAGED On-site Truck Travel - Segment 2	Unit Emissions VALUES AVERAGED On-site Truck Idle	Offsite Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 1 Annual DPM Exhaust w/Actual Emissions (ug/m3)	Onsite-Road Segment 2 Annual DPM Exhaust w/Actual Emissions (ug/m3)	On-site Truck Idle Annual DPM Exhaust w/Actual Emissions (ug/m3)	**Total DPM (ug/m3)**
691440.11	4168757.21	53.66444	12.48249	6.74768	12.05051	9.70E-06	2.48E-06	5.89E-04	8.45E-07	6.0245E-04
691441.12	4168740.17	54.32980	11.52916	6.40725	11.18675	9.82E-06	2.29E-06	5.60E-04	7.85E-07	5.7258E-04
691393.51	4168741.18	28.25195	8.51691	5.16869	8.43857	5.10E-06	1.69E-06	4.51E-04	5.92E-07	4.5889E-04
691554.37	4168769.24	38.34351	39.26007	14.58564	39.53836	6.93E-06	7.81E-06	1.27E-03	2.77E-06	1.2916E-03
691400.53	4168760.72	30.34146	9.64259	5.64489	9.47646	5.48E-06	1.92E-06	4.93E-04	6.65E-07	5.0116E-04
691530.82	4168750.20	60.31925	26.11319	11.12960	25.88586	1.09E-05	5.19E-06	9.72E-04	1.82E-06	9.9010E-04
691530.31	4168737.17	62.29774	23.42469	10.44974	23.50427	1.13E-05	4.66E-06	9.13E-04	1.65E-06	9.3037E-04
691538.83	4168689.06	56.44274	17.98067	8.97340	18.55927	1.02E-05	3.58E-06	7.84E-04	1.30E-06	7.9892E-04
691565.89	4168677.03	37.76047	19.89184	10.12985	20.48255	6.82E-06	3.96E-06	8.85E-04	1.44E-06	8.9708E-04
691454.65	4168675.53	69.89826	9.29499	5.57452	9.16801	1.26E-05	1.85E-06	4.87E-04	6.43E-07	5.0207E-04
691461.06	4168623.27	78.28591	7.79324	4.91443	7.88763	1.41E-05	1.55E-06	4.29E-04	5.53E-07	4.4553E-04
691421.97	4168620.26	38.24784	6.22942	4.19457	6.27747	6.91E-06	1.24E-06	3.66E-04	4.40E-07	3.7499E-04
691549.25	4168596.21	52.11165	11.40742	6.74849	11.82001	9.42E-06	2.27E-06	5.89E-04	8.29E-07	6.0201E-04
691568.30	4168594.21	39.80211	12.20102	7.43694	12.63628	7.19E-06	2.43E-06	6.50E-04	8.86E-07	6.6014E-04
691556.77	4168514.03	48.86024	8.09761	5.42105	8.40612	8.83E-06	1.61E-06	4.74E-04	5.90E-07	4.8457E-04
691511.55	4169004.64	7.30561	113.31047	43.69931	79.18092	1.32E-06	2.25E-05	3.82E-03	5.55E-06	3.8466E-03
691503.45	4169016.57	6.72656	91.34407	39.01053	64.39784	1.22E-06	1.82E-05	3.41E-03	4.52E-06	3.4315E-03
691425.07	4169063.43	5.32936	42.58665	23.82643	34.91513	9.63E-07	8.47E-06	2.08E-03	2.45E-06	2.0932E-03
691327.52	4169024.66	8.31911	39.21223	17.94872	36.73941	1.50E-06	7.80E-06	1.57E-03	2.58E-06	1.5797E-03
691447.65	4169079.61	4.58193	35.69975	21.95628	28.70481	8.28E-07	7.10E-06	1.92E-03	2.01E-06	1.9279E-03
691495.78	4169070.67	4.48762	38.63453	24.37207	29.97609	8.11E-07	7.68E-06	2.13E-03	2.10E-06	2.1395E-03
691510.69	4169078.34	4.15852	33.80486	22.81231	26.55134	7.51E-07	6.72E-06	1.99E-03	1.86E-06	2.0020E-03
691548.18	4169071.09	3.93337	34.78006	24.13675	26.48793	7.11E-07	6.92E-06	2.11E-03	1.86E-06	2.1179E-03
691583.54	4169054.48	3.94720	40.33890	27.92704	29.08731	7.13E-07	8.02E-06	2.44E-03	2.04E-06	2.4503E-03
691596.74	4169086.86	3.24662	23.90460	19.60491	19.59709	5.87E-07	4.75E-06	1.71E-03	1.37E-06	1.7192E-03
691498.39	4169122.01	3.34401	20.51570	15.80307	17.43456	6.04E-07	4.08E-06	1.38E-03	1.22E-06	1.3863E-03
691511.79	4169116.58	3.37367	21.28115	16.40199	17.91762	6.10E-07	4.23E-06	1.43E-03	1.26E-06	1.4388E-03
691612.82	4169124.18	2.67806	15.29487	13.89908	13.50602	4.84E-07	3.04E-06	1.21E-03	9.47E-07	1.2186E-03
691615.71	4169140.84	2.49671	13.12795	12.18443	11.83291	4.51E-07	2.61E-06	1.06E-03	8.30E-07	1.0682E-03
691639.97	4169187.55	2.04573	8.79023	8.59724	8.23173	3.70E-07	1.75E-06	7.51E-04	5.77E-07	7.5368E-04
691626.94	4169196.60	2.02327	8.56921	8.28247	8.06318	3.66E-07	1.70E-06	7.23E-04	5.66E-07	7.2612E-04
691546.55	4169198.77	2.28734	9.93512	8.93617	9.19543	4.13E-07	1.98E-06	7.81E-04	6.45E-07	7.8363E-04
691517.95	4169134.68	3.06841	17.52382	14.15630	15.13886	5.54E-07	3.48E-06	1.24E-03	1.06E-06	1.2417E-03
691549.81	4169125.63	3.01125	17.91534	14.76188	15.49869	5.44E-07	3.56E-06	1.29E-03	1.09E-06	1.2947E-03
691552.35	4169135.05	2.87906	16.27397	13.68256	14.28030	5.20E-07	3.24E-06	1.20E-03	1.00E-06	1.2000E-03
691550.17	4169157.13	2.64775	13.47446	11.67370	12.11002	4.78E-07	2.68E-06	1.02E-03	8.49E-07	1.0237E-03
691628.49	4169277.05	1.61237	5.53016	5.43623	5.35595	2.91E-07	1.10E-06	4.75E-04	3.76E-07	4.7663E-04
691631.99	4169255.00	1.69794	6.11975	6.01252	5.89338	3.07E-07	1.22E-06	5.25E-04	4.13E-07	5.2714E-04
691668.08	4169234.45	1.71465	6.27554	6.40238	6.02558	3.10E-07	1.25E-06	5.59E-04	4.23E-07	5.6124E-04
691704.66	4169220.42	1.70944	6.14438	6.55964	5.91268	3.09E-07	1.22E-06	5.73E-04	4.15E-07	5.7494E-04
691719.20	4169208.89	1.72890	6.27410	6.80981	6.04702	3.12E-07	1.25E-06	5.95E-04	4.24E-07	5.9683E-04
691698.15	4169165.29	2.01542	8.48203	9.05131	7.98573	3.64E-07	1.69E-06	7.91E-04	5.60E-07	7.9326E-04
691800.39	4169158.77	1.75960	6.57053	7.57478	6.34934	3.18E-07	1.31E-06	6.62E-04	4.45E-07	6.6374E-04
691785.85	4169172.81	1.72957	6.40584	7.24684	6.17694	3.13E-07	1.27E-06	6.33E-04	4.33E-07	6.3504E-04
691882.58	4169138.73	1.65165	5.75672	6.83671	5.61602	2.98E-07	1.14E-06	5.97E-04	3.94E-07	5.9904E-04
691909.14	4169134.22	1.60880	5.45218	6.53183	5.35131	2.91E-07	1.08E-06	5.71E-04	3.75E-07	5.7232E-04
691588.80	4169332.77	1.47725	4.53174	4.39708	4.41980	2.67E-07	9.01E-07	3.84E-04	3.10E-07	3.8557E-04
691574.65	4169379.94	1.33541	3.77853	3.67583	3.70257	2.41E-07	7.51E-07	3.21E-04	2.60E-07	3.2234E-04
691940.90	4169126.13	1.56673	5.12800	6.21758	5.06517	2.83E-07	1.02E-06	5.43E-04	3.55E-07	5.4478E-04
691964.45	4169125.61	1.51864	4.80643	5.87325	4.78129	2.74E-07	9.56E-07	5.13E-04	3.35E-07	5.1461E-04
692035.62	4169140.52	1.34388	3.81236	4.66917	3.85196	2.43E-07	7.58E-07	4.08E-04	2.70E-07	4.0913E-04
692048.97	4169140.26	1.32272	3.69172	4.53246	3.73621	2.39E-07	7.34E-07	3.96E-04	2.62E-07	3.9715E-04
692062.83	4169163.29	1.24495	3.35835	4.02174	3.38886	2.25E-07	6.68E-07	3.51E-04	2.38E-07	3.5244E-04
692075.66	4169171.40	1.20938	3.19944	3.81969	3.23608	2.19E-07	6.36E-07	3.34E-04	2.27E-07	3.3474E-04
692162.26	4169160.15	1.11964	2.72873	3.33563	2.78254	2.02E-07	5.43E-07	2.91E-04	1.95E-07	2.9231E-04
692164.36	4169145.49	1.14464	2.80934	3.46427	2.85397	2.07E-07	5.59E-07	3.03E-04	2.00E-07	3.0358E-04
692179.53	4169145.49	1.12543	2.72376	3.35811	2.76553	2.03E-07	5.42E-07	2.93E-04	1.94E-07	2.9428E-04
692194.88	4169132.19	1.13072	2.71740	3.37364	2.74761	2.04E-07	5.40E-07	2.95E-04	1.93E-07	2.9563E-04
692206.67	4169126.40	1.12604	2.68375	3.34060	2.70893	2.03E-07	5.34E-07	2.92E-04	1.90E-07	2.9273E-04
691466.77	4168373.67	75.22017	3.91858	2.75120	4.02156	1.36E-05	7.79E-07	2.40E-04	2.82E-07	2.5498E-04
691453.41	4168320.26	53.81275	3.32358	2.39339	3.40879	9.72E-06	6.61E-07	2.09E-04	2.39E-07	2.1969E-04
691537.75	4168319.55	79.34369	4.07603	3.15303	4.21981	1.43E-05	8.10E-07	2.75E-04	2.96E-07	2.9087E-04
691409.97	4168212.93	28.44112	2.38316	1.79069	2.44041	5.14E-06	4.74E-07	1.56E-04	1.71E-07	1.6220E-04
691405.40	4168168.24	26.19041	2.18353	1.66362	2.23566	4.73E-06	4.34E-07	1.45E-04	1.57E-07	1.5064E-04
691535.39	4168247.96	91.37749	3.38169	2.72719	3.49838	1.65E-05	6.72E-07	2.38E-04	2.45E-07	2.5565E-04
691558.74	4168206.32	57.61665	3.16697	2.69792	3.28249	1.04E-05	6.30E-07	2.36E-04	2.30E-07	2.4694E-04
691586.67	4168224.10	38.80591	3.41357	3.00836	3.55343	7.01E-06	6.79E-07	2.63E-04	2.49E-07	2.7073E-04
691580.58	4168186.01	42.39272	3.09569	2.74364	3.21795	7.66E-06	6.16E-07	2.40E-04	2.26E-07	2.4816E-04
691545.54	4168110.86	81.21065	2.53073	2.20194	2.61662	1.47E-05	5.03E-07	1.92E-04	1.84E-07	2.0770E-04
691540.46	4168095.63	94.61411	2.43982	2.12187	2.52121	1.71E-05	4.85E-07	1.85E-04	1.77E-07	2.0311E-04
691486.13	4168117.46	91.99664	2.35489	1.91936	2.42804	1.66E-05	4.68E-07	1.68E-04	1.70E-07	1.8492E-04
691586.16	4168105.78	40.51888	2.60610	2.38542	2.70932	7.32E-06	5.18E-07	2.08E-04	1.90E-07	2.1640E-04
691480.55	4168089.54	74.28650	2.21439	1.81829	2.28283	1.34E-05	4.40E-07	1.59E-04	1.60E-07	1.7285E-04
691368.84	4168031.65	12.43239	1.63276	1.29091	1.66944	2.25E-06	3.25E-07	1.13E-04	1.17E-07	1.1545E-04
691468.87	4168043.84	51.56518	2.00317	1.66034	2.06463	9.32E-06	3.98E-07	1.45E-04	1.45E-07	1.5489E-04
691469.88	4168026.06	49.92308	1.94646	1.62571	2.00631	9.02E-06	3.87E-07	1.42E-04	1.41E-07	1.5156E-04
691543.51	4168055.52	89.99579	2.26439	2.00192	2.33927	1.63E-05	4.50E-07	1.75E-04	1.64E-07	1.9175E-04
691543.00	4168041.30	92.37702	2.20323	1.95508	2.27560	1.67E-05	4.38E-07	1.71E-04	1.60E-07	1.8807E-04
691571.44	4168062.62	50.01927	2.35825	2.14542	2.44390	9.04E-06	4.69E-07	1.87E-04	1.71E-07	1.9708E-04
691452.62	4168100.71	42.76824	2.15020	1.71950	2.21380	7.73E-06	4.28E-07	1.50E-04	1.55E-07	1.5851E-04
691506.70	4168892.79	80.21075	144.69616	28.49268	71.06640	1.45E-05	2.88E-05	2.49E-03	4.98E-06	2.5371E-03

CONCUNIT ug/m^3
DEPUNIT g/m^2

ATTACHMENT B
Health Risk Assessment (Dust-generating Almond Processing Operations)

Cancer Risk from Almond Hulling Operations

Almond Processing Emissions Profile Applied

Maximum Cancer Risk	9.65250
UTM	691506.7, 4168892.79
Receptor	On-site residential receptor (REC #81)

Maximum Cancer Risk Offsite	5.64610
UTM	691511.55, 4169004.64
Receptor	Off-site residential receptor (REC #16)

*HARP - HRACalc v22118 6/8/2022 7:16:31 AM - Cancer Risk - Input File: F:\AS_HRA\HRA (v3)\HARP\AS\hra\HullAllHRAInput.hra

REC	GRP	X	Y	RISK_SUM	SCENARIO	Cancer Risk per Million
1	ALL	691440.11	4168757.21	8.23E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.82290
2	ALL	691441.12	4168740.17	7.74E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.77364
3	ALL	691393.51	4168741.18	5.56E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.55585
4	ALL	691554.37	4168769.24	4.11E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	4.10600
5	ALL	691400.53	4168760.72	6.27E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.62742
6	ALL	691530.82	4168750.2	2.30E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	2.30230
7	ALL	691530.31	4168737.17	2.11E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	2.11150
8	ALL	691538.83	4168689.06	1.77E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	1.76520
9	ALL	691565.89	4168677.03	2.09E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	2.09310
10	ALL	691454.65	4168675.53	6.67E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.66738
11	ALL	691461.06	4168623.27	6.03E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.60271
12	ALL	691421.97	4168620.26	4.48E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.44780
13	ALL	691549.25	4168596.21	1.13E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	1.12930
14	ALL	691568.3	4168594.21	1.24E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	1.23920
15	ALL	691556.77	4168514.03	7.94E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.79379
16	ALL	691511.55	4169004.64	5.65E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	5.64610
17	ALL	691503.45	4169016.57	4.76E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	4.76370
18	ALL	691425.07	4169063.43	2.94E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	2.93550
19	ALL	691327.52	4169024.66	3.85E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	3.84620
20	ALL	691447.65	4169079.61	2.43E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	2.43320
21	ALL	691495.78	4169070.67	2.38E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	2.38320
22	ALL	691510.69	4169078.34	2.10E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	2.09610
23	ALL	691548.18	4169071.09	2.03E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	2.02850
24	ALL	691583.54	4169054.48	2.11E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	2.11170
25	ALL	691596.74	4169086.86	1.47E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	1.47310
26	ALL	691498.39	4169122.01	1.44E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	1.44210
27	ALL	691511.79	4169116.58	1.46E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	1.46410
28	ALL	691612.82	4169124.18	1.05E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	1.04520
29	ALL	691615.71	4169140.84	9.26E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.92589
30	ALL	691639.97	4169187.55	6.58E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.65778
31	ALL	691626.94	4169196.6	6.49E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.64876
32	ALL	691546.55	4169198.77	7.68E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.76793
33	ALL	691517.95	4169134.68	1.25E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	1.25090
34	ALL	691549.81	4169125.63	1.24E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	1.24420
35	ALL	691552.35	4169135.05	1.15E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	1.15080
36	ALL	691550.17	4169157.13	9.89E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.98949
37	ALL	691628.49	4169277.05	4.43E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.44337
38	ALL	691631.99	4169255	4.84E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.48416
39	ALL	691668.08	4169234.45	4.89E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.48900
40	ALL	691704.66	4169220.42	4.80E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.48025
41	ALL	691719.2	4169208.89	4.93E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.49255
42	ALL	691698.15	4169165.29	6.38E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.63801
43	ALL	691800.39	4169158.77	5.29E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.52949
44	ALL	691785.85	4169172.81	5.16E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.51600
45	ALL	691882.58	4169138.73	4.76E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.47560
46	ALL	691909.14	4169134.22	4.58E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.45792
47	ALL	691588.8	4169332.77	3.78E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.37829
48	ALL	691574.65	4169379.94	3.22E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.32210
49	ALL	691940.9	4169126.13	4.43E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.44260
50	ALL	691964.45	4169125.61	4.22E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.42174
51	ALL	692035.62	4169140.52	3.45E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.34511
52	ALL	692048.97	4169140.26	3.36E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.33597
53	ALL	692062.83	4169163.29	3.06E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.30592

54	ALL	692075.66	4169171.4	2.92E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.29203
55	ALL	692162.26	4169160.15	2.56E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.25619
56	ALL	692164.36	4169145.49	2.64E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.26384
57	ALL	692179.53	4169145.49	2.56E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.25645
58	ALL	692194.88	4169132.19	2.57E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.25654
59	ALL	692206.67	4169126.4	2.54E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.25399
60	ALL	691466.77	4168373.67	3.42E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.34204
61	ALL	691453.41	4168320.26	2.87E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.28744
62	ALL	691537.75	4168319.55	3.82E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.38216
63	ALL	691409.97	4168212.93	2.00E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.20006
64	ALL	691405.4	4168168.24	1.84E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.18366
65	ALL	691535.39	4168247.96	3.15E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.31470
66	ALL	691558.74	4168206.32	2.98E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.29781
67	ALL	691586.67	4168224.1	3.27E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.32693
68	ALL	691580.58	4168186.01	2.94E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.29419
69	ALL	691545.54	4168110.86	2.35E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.23450
70	ALL	691540.46	4168095.63	2.25E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.22533
71	ALL	691486.13	4168117.46	2.12E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.21154
72	ALL	691586.16	4168105.78	2.47E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.24651
73	ALL	691480.55	4168089.54	1.98E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.19826
74	ALL	691368.84	4168031.65	1.36E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.13577
75	ALL	691468.87	4168043.84	1.78E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.17818
76	ALL	691469.88	4168026.06	1.73E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.17324
77	ALL	691543.51	4168055.52	2.09E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.20888
78	ALL	691543	4168041.3	2.03E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.20302
79	ALL	691571.44	4168062.62	2.21E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.22058
80	ALL	691452.62	4168100.71	1.89E-07	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	0.18911
81	ALL	691506.7	4168892.79	9.65E-06	70YrCancerDerived_InhSoilDermMMilk_FAH16to70	9.65250

NonCancerChronic from Almond Hulling Operations

Almond Processing Emissions Profile Applied

Chronic Max HI 0.31293
UTM 691506.7, 4168892.79
Receptor On-site residential receptor (REC #81)

Chronic Max HI at Offsite Receptor 0.18304
UTM 691511.55, 4169004.64
Receptor Off-site residential receptor (REC #16)

*HARP - HRACalc v22118 6/8/2022 7:16:31 AM - Chronic Risk - Input File: F:\AS_HRA\HRA (v3)\HARP\AS\hra\HullAllHRAInput.hra

REC	GRP	X	Y	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DE	RESP	SKIN	EYE	BONE/TEE	ENDO	BLOOD	ODOR	GENERAL	MAXHI
1	ALL	691440.11	4168757.21	NonCancerChronicDerived_InhSoilDermMMilk	1.43E-02	2.67E-02	0.00E+00	1.39E-03	5.71E-06	1.55E-02	1.53E-02	1.43E-02	0.00E+00	0.00E+00	0.00E+00	8.33E-04	0.00E+00	0.00E+00	2.67E-02
2	ALL	691441.12	4168740.17	NonCancerChronicDerived_InhSoilDermMMilk	1.34E-02	2.51E-02	0.00E+00	1.30E-03	5.36E-06	1.45E-02	1.43E-02	1.34E-02	0.00E+00	0.00E+00	0.00E+00	7.83E-04	0.00E+00	0.00E+00	2.51E-02
3	ALL	691393.51	4168741.18	NonCancerChronicDerived_InhSoilDermMMilk	9.64E-03	1.80E-02	0.00E+00	9.36E-04	3.85E-06	1.04E-02	1.03E-02	9.63E-03	0.00E+00	0.00E+00	0.00E+00	5.63E-04	0.00E+00	0.00E+00	1.80E-02
4	ALL	691554.37	4168769.24	NonCancerChronicDerived_InhSoilDermMMilk	7.12E-02	1.33E-01	0.00E+00	6.91E-03	2.85E-05	7.71E-02	7.61E-02	7.12E-02	0.00E+00	0.00E+00	0.00E+00	4.16E-03	0.00E+00	0.00E+00	1.33E-01
5	ALL	691400.53	4168760.72	NonCancerChronicDerived_InhSoilDermMMilk	1.09E-02	2.03E-02	0.00E+00	1.06E-03	4.35E-06	1.18E-02	1.16E-02	1.09E-02	0.00E+00	0.00E+00	0.00E+00	6.35E-04	0.00E+00	0.00E+00	2.03E-02
6	ALL	691530.82	4168750.2	NonCancerChronicDerived_InhSoilDermMMilk	3.99E-02	7.46E-02	0.00E+00	3.88E-03	1.60E-05	4.33E-02	4.27E-02	3.99E-02	0.00E+00	0.00E+00	0.00E+00	2.33E-03	0.00E+00	0.00E+00	7.46E-02
7	ALL	691530.31	4168737.17	NonCancerChronicDerived_InhSoilDermMMilk	3.66E-02	6.85E-02	0.00E+00	3.56E-03	1.46E-05	3.97E-02	3.91E-02	3.66E-02	0.00E+00	0.00E+00	0.00E+00	2.14E-03	0.00E+00	0.00E+00	6.85E-02
8	ALL	691538.83	4168689.06	NonCancerChronicDerived_InhSoilDermMMilk	3.06E-02	5.72E-02	0.00E+00	2.97E-03	1.22E-05	3.32E-02	3.27E-02	3.06E-02	0.00E+00	0.00E+00	0.00E+00	1.79E-03	0.00E+00	0.00E+00	5.72E-02
9	ALL	691565.89	4168677.03	NonCancerChronicDerived_InhSoilDermMMilk	3.63E-02	6.79E-02	0.00E+00	3.52E-03	1.45E-05	3.93E-02	3.88E-02	3.63E-02	0.00E+00	0.00E+00	0.00E+00	2.12E-03	0.00E+00	0.00E+00	6.79E-02
10	ALL	691454.65	4168675.53	NonCancerChronicDerived_InhSoilDermMMilk	1.16E-02	2.16E-02	0.00E+00	1.12E-03	4.63E-06	1.25E-02	1.24E-02	1.16E-02	0.00E+00	0.00E+00	0.00E+00	6.75E-04	0.00E+00	0.00E+00	2.16E-02
11	ALL	691461.06	4168623.27	NonCancerChronicDerived_InhSoilDermMMilk	1.05E-02	1.95E-02	0.00E+00	1.01E-03	4.18E-06	1.13E-02	1.12E-02	1.04E-02	0.00E+00	0.00E+00	0.00E+00	6.10E-04	0.00E+00	0.00E+00	1.95E-02
12	ALL	691421.97	4168620.26	NonCancerChronicDerived_InhSoilDermMMilk	7.76E-03	1.45E-02	0.00E+00	7.54E-04	3.10E-06	8.41E-03	8.30E-03	7.76E-03	0.00E+00	0.00E+00	0.00E+00	4.53E-04	0.00E+00	0.00E+00	1.45E-02
13	ALL	691549.25	4168596.21	NonCancerChronicDerived_InhSoilDermMMilk	1.96E-02	3.66E-02	0.00E+00	1.90E-03	7.83E-06	2.12E-02	2.09E-02	1.96E-02	0.00E+00	0.00E+00	0.00E+00	1.14E-03	0.00E+00	0.00E+00	3.66E-02
14	ALL	691568.3	4168594.21	NonCancerChronicDerived_InhSoilDermMMilk	2.15E-02	4.02E-02	0.00E+00	2.09E-03	8.59E-06	2.33E-02	2.30E-02	2.15E-02	0.00E+00	0.00E+00	0.00E+00	1.25E-03	0.00E+00	0.00E+00	4.02E-02
15	ALL	691556.77	4168514.03	NonCancerChronicDerived_InhSoilDermMMilk	1.38E-02	2.57E-02	0.00E+00	1.34E-03	5.50E-06	1.49E-02	1.47E-02	1.38E-02	0.00E+00	0.00E+00	0.00E+00	8.03E-04	0.00E+00	0.00E+00	2.57E-02
16	ALL	691511.55	4169004.64	NonCancerChronicDerived_InhSoilDermMMilk	9.79E-02	1.83E-01	0.00E+00	9.51E-03	3.91E-05	1.06E-01	1.05E-01	9.79E-02	0.00E+00	0.00E+00	0.00E+00	5.71E-03	0.00E+00	0.00E+00	1.83E-01
17	ALL	691503.45	4169016.57	NonCancerChronicDerived_InhSoilDermMMilk	8.26E-02	1.54E-01	0.00E+00	8.02E-03	3.30E-05	8.95E-02	8.83E-02	8.26E-02	0.00E+00	0.00E+00	0.00E+00	4.82E-03	0.00E+00	0.00E+00	1.54E-01
18	ALL	691425.07	4169063.43	NonCancerChronicDerived_InhSoilDermMMilk	5.09E-02	9.52E-02	0.00E+00	4.94E-03	2.04E-05	5.51E-02	5.44E-02	5.09E-02	0.00E+00	0.00E+00	0.00E+00	2.97E-03	0.00E+00	0.00E+00	9.52E-02
19	ALL	691327.52	4169024.66	NonCancerChronicDerived_InhSoilDermMMilk	6.67E-02	1.25E-01	0.00E+00	6.48E-03	2.67E-05	7.23E-02	7.13E-02	6.67E-02	0.00E+00	0.00E+00	0.00E+00	3.89E-03	0.00E+00	0.00E+00	1.25E-01
20	ALL	691447.65	4169079.61	NonCancerChronicDerived_InhSoilDermMMilk	4.22E-02	7.89E-02	0.00E+00	4.10E-03	1.69E-05	4.57E-02	4.51E-02	4.22E-02	0.00E+00	0.00E+00	0.00E+00	2.46E-03	0.00E+00	0.00E+00	7.89E-02
21	ALL	691495.78	4169070.67	NonCancerChronicDerived_InhSoilDermMMilk	4.13E-02	7.73E-02	0.00E+00	4.01E-03	1.65E-05	4.48E-02	4.42E-02	4.13E-02	0.00E+00	0.00E+00	0.00E+00	2.41E-03	0.00E+00	0.00E+00	7.73E-02
22	ALL	691510.69	4169078.34	NonCancerChronicDerived_InhSoilDermMMilk	3.63E-02	6.80E-02	0.00E+00	3.53E-03	1.45E-05	3.94E-02	3.89E-02	3.63E-02	0.00E+00	0.00E+00	0.00E+00	2.12E-03	0.00E+00	0.00E+00	6.80E-02
23	ALL	691548.18	4169071.09	NonCancerChronicDerived_InhSoilDermMMilk	3.52E-02	6.58E-02	0.00E+00	3.42E-03	1.41E-05	3.81E-02	3.76E-02	3.52E-02	0.00E+00	0.00E+00	0.00E+00	2.05E-03	0.00E+00	0.00E+00	6.58E-02
24	ALL	691583.54	4169054.48	NonCancerChronicDerived_InhSoilDermMMilk	3.66E-02	6.85E-02	0.00E+00	3.56E-03	1.46E-05	3.97E-02	3.91E-02	3.66E-02	0.00E+00	0.00E+00	0.00E+00	2.14E-03	0.00E+00	0.00E+00	6.85E-02
25	ALL	691596.74	4169086.86	NonCancerChronicDerived_InhSoilDermMMilk	2.55E-02	4.78E-02	0.00E+00	2.48E-03	1.02E-05	2.77E-02	2.73E-02	2.55E-02	0.00E+00	0.00E+00	0.00E+00	1.49E-03	0.00E+00	0.00E+00	4.78E-02
26	ALL	691498.39	4169122.01	NonCancerChronicDerived_InhSoilDermMMilk	2.50E-02	4.68E-02	0.00E+00	2.43E-03	1.00E-05	2.71E-02	2.67E-02	2.50E-02	0.00E+00	0.00E+00	0.00E+00	1.46E-03	0.00E+00	0.00E+00	4.68E-02
27	ALL	691511.79	4169116.58	NonCancerChronicDerived_InhSoilDermMMilk	2.54E-02	4.75E-02	0.00E+00	2.47E-03	1.02E-05	2.75E-02	2.71E-02	2.54E-02	0.00E+00	0.00E+00	0.00E+00	1.48E-03	0.00E+00	0.00E+00	4.75E-02
28	ALL	691612.82	4169124.18	NonCancerChronicDerived_InhSoilDermMMilk	1.81E-02	3.39E-02	0.00E+00	1.76E-03	7.25E-06	1.96E-02	1.94E-02	1.81E-02	0.00E+00	0.00E+00	0.00E+00	1.06E-03	0.00E+00	0.00E+00	3.39E-02
29	ALL	691615.71	4169140.84	NonCancerChronicDerived_InhSoilDermMMilk	1.61E-02	3.00E-02	0.00E+00	1.56E-03	6.42E-06	1.74E-02	1.72E-02	1.60E-02	0.00E+00	0.00E+00	0.00E+00	9.37E-04	0.00E+00	0.00E+00	3.00E-02
30	ALL	691639.97	4169187.55	NonCancerChronicDerived_InhSoilDermMMilk	1.14E-02	2.13E-02	0.00E+00	1.11E-03	4.56E-06	1.24E-02	1.22E-02	1.14E-02	0.00E+00	0.00E+00	0.00E+00	6.66E-04	0.00E+00	0.00E+00	2.13E-02
31	ALL	691626.94	4169196.6	NonCancerChronicDerived_InhSoilDermMMilk	1.12E-02	2.10E-02	0.00E+00	1.09E-03	4.50E-06	1.22E-02	1.20E-02	1.12E-02	0.00E+00	0.00E+00	0.00E+00	6.57E-04	0.00E+00	0.00E+00	2.10E-02
32	ALL	691546.55	4169198.77	NonCancerChronicDerived_InhSoilDermMMilk	1.33E-02	2.49E-02	0.00E+00	1.29E-03	5.32E-06	1.44E-02	1.42E-02	1.33E-02	0.00E+00	0.00E+00	0.00E+00	7.77E-04	0.00E+00	0.00E+00	2.49E-02
33	ALL	691517.95	4169134.68	NonCancerChronicDerived_InhSoilDermMMilk	2.17E-02	4.06E-02	0.00E+00	2.11E-03	8.67E-06	2.35E-02	2.32E-02	2.17E-02	0.00E+00	0.00E+00	0.00E+00	1.27E-03	0.00E+00	0.00E+00	4.06E-02
34	ALL	691549.81	4169125.63	NonCancerChronicDerived_InhSoilDermMMilk	2.16E-02	4.03E-02	0.00E+00	2.10E-03	8.63E-06	2.34E-02	2.31E-02	2.16E-02	0.00E+00	0.00E+00	0.00E+00	1.26E-03	0.00E+00	0.00E+00	4.03E-02
35	ALL	691552.35	4169135.05	NonCancerChronicDerived_InhSoilDermMMilk	2.00E-02	3.73E-02	0.00E+00	1.94E-03	7.98E-06	2.16E-02	2.13E-02	1.99E-02	0.00E+00	0.00E+00	0.00E+00	1.16E-03	0.00E+00	0.00E+00	3.73E-02
36	ALL	691550.17	4169157.13	NonCancerChronicDerived_InhSoilDermMMilk	1.72E-02	3.21E-02	0.00E+00	1.67E-03	6.86E-06	1.86E-02	1.83E-02	1.71E-02	0.00E+00	0.00E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	3.21E-02
37	ALL	691628.49	4169277.05	NonCancerChronicDerived_InhSoilDermMMilk	7.69E-03	1.44E-02	0.00E+00	7.47E-04	3.07E-06	8.33E-03	8.22E-03	7.68E-03	0.00E+00	0.00E+00	0.00E+00	4.49E-04	0.00E+00	0.00E+00	1.44E-02
38	ALL	691631.99	4169255	NonCancerChronicDerived_InhSoilDermMMilk	8.39E-03	1.57E-02	0.00E+00	8.15E-04	3.36E-06	9.10E-03	8.97E-03	8.39E-03	0.00E+00	0.00E+00	0.00E+00	4.90E-04	0.00E+00	0.00E+00	1.57E-02
39	ALL	691668.08	4169234.45	NonCancerChronicDerived_InhSoilDermMMilk	8.48E-03	1.59E-02	0.00E+00	8.23E-04	3.39E-06	9.19E-03	9.06E-03	8.48E-03	0.00E+00	0.00E+00	0.00E+00	4.95E-04	0.00E+00	0.00E+00	1.59E-02
40	ALL	691704.66	4169220.42	NonCancerChronicDerived_InhSoilDermMMilk	8.33E-03	1.56E-02	0.00E+00	8.09E-04	3.33E-06	9.02E-03	8.90E-03	8.32E-03	0.00E+00	0.00E+00	0.00E+00	4.86E-04	0.00E+00	0.00E+00	1.56E-02
41	ALL	691719.2	4169208.89	NonCancerChronicDerived_InhSoilDermMMilk	8.54E-03	1.60E-02	0.00E+00	8.29E-04	3.42E-06	9.25E-03	9.13E-03	8.54E-03	0.00E+00	0.00E+00	0.00E+00	4.98E-04	0.00E+00	0.00E+00	1.60E-02
42	ALL	691698.15	4169165.29	NonCancerChronicDerived_InhSoilDermMMilk	1.11E-02	2.07E-02	0.00E+00	1.07E-03	4.42E-06	1.20E-02	1.18E-02	1.11E-02	0.00E+00	0.00E+00	0.00E+00	6.46E-04	0.00E+00	0.00E+00	2.07E-02
43	ALL	691800.39	4169158.77	NonCancerChronicDerived_InhSoilDermMMilk	9.18E-03	1.72E-02	0.00E+00	8.92E-04	3.67E-06	9.95E-03	9.81E-03	9.18E-03	0.00E+00	0.00E+00	0.00E+00	5.36E-04	0.00E+00	0.00E+00	1.72E-02
44	ALL	691785.85	4169172.81	NonCancerChronicDerived_InhSoilDermMMilk	8.95E-03	1.67E-02	0.00E+00	8.69E-04	3.58E-06	9.69E-03	9.56E-03	8.94E-03	0.00E+00	0.00E+00	0.00E+00	5.22E-04	0.00E+00	0.00E+00	1.67E-02
45	ALL	691882.58	4169138.73	NonCancerChronicDerived_InhSoilDermMMilk	8.25E-03	1.54E-02	0.00E+00	8.01E-04	3.30E-06	8.93E-03	8.82E-03	8.24E-03	0.00E+00	0.00E+00	0.00E+00	4.81E-04	0.00E+00	0.00E+00	1.54E-02
46	ALL	691909.14	4169134.22	NonCancerChronicDerived_InhSoilDermMMilk	7.94E-03	1.48E-02	0.00E+00	7.71E-04	3.18E-06	8.60E-03	8.49E-03	7.94E-03	0.00E+00	0.00E+00	0.00E+00	4.63E-04	0.00E+00	0.00E+00	1.48E-02
47	ALL	691588.8	4169332.77	NonCancerChronicDerived_InhSoilDermMMilk	6.56E-03	1.23E-02	0.00E+00	6.37E-04	2.62E-06	7.11E-03	7.01E-03	6.56E-03	0.00E+00	0.00E+00	0.00E+00	3.83E-04	0.00E+00	0.00E+00	1.23E-02
48	ALL	691574.65	4169379.94	NonCancerChronicDerived_InhSoilDermMMilk	5.58E-03	1.04E-02	0.00E+00	5.42E-04	2.23E-06	6.05E-03	5.97E-03	5.58E-03	0.00E+00	0.00E+00	0.00E+00	3.26E-04	0.00E+00	0.00E+00	1.04E-02
49	ALL	691940.9	4169126.13	NonCancerChronicDerived_InhSoilDermMMilk	7.67E-03	1.43E-02	0.00E+00	7.45E-04	3.07E-06	8.31E-03	8.20E-03	7.67E-03	0.00E+00	0.00E+00	0.00E+00	4.48E-04	0.00E+00	0.00E+00	1.43E-02
50	ALL	691964.45	4169125.61	NonCancerChronicDerived_InhSoilDermMMilk	7.31E-03	1.37E-02	0.00E+00	7.10E-04	2.92E-06	7.92E-03	7.82E-03	7.31E-03	0.00E+00	0.00E+00	0.00E+00	4.27E-04	0.00E+00	0.00E+00	1.37E-02
51	ALL	692035.62	4169140.52	NonCancerChronicDerived_InhSoilDermMMilk	5.98E-03	1.12E-02	0.00E+00	5.81E-04	2.39E-06	6.48E-03	6.40E-03	5.98E-03	0.00E+00	0.00E+00	0.00E+00	3.49E-04	0.00E+00	0.00E+00	1.12E-02
52	ALL	692048.97	4169140.26	NonCancerChronicDerived_InhSoilDermMMilk	5.83E-03	1.09E-02	0.00E+00	5.66E-04	2.33E-06	6.31E-03	6.23E-03	5.82E-03	0.00E+00	0.00E+00	0.00E+00	3.40E-04	0.00E+00	0.00E+00	1.09E-02
53	ALL	692062.83	4169163.29	NonCancerChronicDerived_InhSoilDermMMilk	5.30E-03	9.92E-03	0.00E+00	5.15E-04	2.12E-06	5.75E-03	5.67E-03	5.30E-03	0.00E+00	0.00E+00	0.00E+00	3.10E-04	0.00E+00	0.00E+00	9.92E-03
54	ALL	692075.66	4169171.4	NonCancerChronicDerived_InhSoilDermMMilk	5.06E-03	9.47E-03	0.00E+00	4.92E-04	2.02E-06	5.49E-03	5.41E-03	5.06E-03	0.00E+00	0.00E+00	0.00E+00	2.96E-04	0.00E+00	0.00E+00	9.47E-03
55	ALL	692162.26	4169160.15	NonCancerChronicDerived_InhSoilDermMMilk	4.44E-03	8.31E-03	0.00E+00	4.31E-04	1.78E-06	4.81E-03	4.75E-03	4.44E-03	0.00E+00	0.00E+00	0.00E+00	2.59E-04	0.00E+00	0.00E+00	8.31E-03
56	ALL	692164.36	4169145.49	NonCancerChronicDerived_InhSoilDermMMilk	4.57E-03	8.55E-03	0.00E+00	4.44E-04	1.83E-06	4.96E-03	4.89E-03	4.57E-03	0.00E+00	0.00E+00	0.00E+00	2.67E-04	0.00E+00	0.00E+00	8.55E-03
57	ALL	692179.53	4169145.49	NonCancerChronicDerived_InhSoilDermMMilk	4.45E-03	8.31E-03	0.00E+00	4.32E-04	1.78E-06	4.82E-03	4.75E-03	4.44E-03	0.00E+00	0.00E+00	0.00E+00	2.60E-04	0.00E+00	0.00E+00	8.31E-03
58	ALL	692194.88	4169132.19	NonCancerChronicDerived_InhSoilDermMMilk	4.45E-03	8.32E-03	0.00E+00	4.32E-04	1.78E-06	4.82E-03	4.76E-03	4.45E-03	0.00E+00	0.00E+00	0.00E+00	2.60E-04	0.00E+00	0.00E+00	8.32E-03
59	ALL	692206.67	4169126.4	NonCancerChronicDerived_InhSoilDermMMilk	4.40E-03	8.23E-03	0.00E+00	4.28E-04	1.76E-06	4.77E-03	4.71E-03	4.40E-03	0.00E+00	0.00E+00	0.00E+00	2.57E-04	0.00E+00	0.00E+00	8.23E-03
60	ALL	691466.77	4168373.67	NonCancerChronicDerived_InhSoilDermMMilk	5.93E-03	1.11E-02	0.00E+00	5.76E-04	2.37E-06	6.43E-03	6.34E-03	5.93E-03	0.00E+00	0.00E+00	0.00E+00	3.46E-04	0.00E+00	0.00E+00	1.11E-02
61	ALL	691453.41	4168320.26	NonCancerChronicDerived_InhSoilDermMMilk	4.98E-03	9.32E-03	0.00E+00	4.84E-04	1.99E-06	5.40E-03	5.33E-03	4.98E-03	0.00E+00	0.00E+00	0.00E+00	2.91E-04	0.00E+00	0.00E+00	9.32E-03
62	ALL	691537.75	4168319.55	NonCancerChronicDerived_InhSoilDermMMilk	6.63E-03	1.24E-02	0.00E+00	6.43E-04	2.65E-06	7.18E-03	7.08E-03	6.62E-03	0.00E+00	0.00E+00	0.00E+00	3.87E-04	0.00E+00	0.00E+00	1.24E-02
63	ALL	691409.97	4168212.93	NonCancerChronicDerived_InhSoilDermMMilk	3.47E-03	6.49E-03	0.00E+00	3.37E-04	1.39E-06	3.76E-03	3.71E-03	3.47E-03	0.00E+00	0.00E+00	0.00E+00	2.02E-04	0.00E+00	0.00E+00	6.49E-03
64	ALL	691405.4	4168168.24	NonCancerChronicDerived_InhSoilDermMMilk	3.18E-03	5.95E-03	0.00E+00	3.09E-04	1.27E-06	3.45E-03	3.40E-03	3.18E-03	0.00E+00	0.00E+00	0.00E+00	1.86E-04	0.00E+00	0.00E+00	5.95E-03
65	ALL	691535.39	4168247.96	NonCancerChronicDerived_InhSoilDermMMilk	5.46E-03	1.02E-02	0.00E+00	5.30E-04	2.18E-06	5.91E-03	5.83E-03	5.45E-03	0.00E+00	0.00E+00	0.00E+00	3.18E-04	0.00E+00	0.00E+00	1.02E-02
66	ALL	691558.74	4168206.32	NonCancerChronicDerived_InhSoilDermMMilk	5.16E-03	9.65E-03	0.00E+00	5.01E-04	2.07E-06	5.59E-03	5.52E-03	5.16E-03	0.00E+00	0.00E+00	0.00E+00	3.01E-04	0.00E+00	0.00E+00	9.65E-03
67	ALL	691586.67	4168224.1	NonCancerChronicDerived_InhSoilDermMMilk	5.67E-03	1.06E-02	0.00E+00	5.50E-04	2.27E-06	6.14E-03	6.06E-03	5.67E-03	0.00E+00	0.00E+00	0.00E+00	3.31E-04	0.00E+00	0.00E+00	1.06E-02
68	ALL	691580.58	4168186.01	NonCancerChronicDerived_InhSoilDermMMilk	5.10E-03	9.54E-03	0.00E+00	4.95E-04	2.04E-06	5.53E-03	5.45E-03	5.10E-03	0.00E+00	0.00E+00	0.00E+00	2.98E-04	0.00E+00	0.00E+00	9.54E-03
69	ALL	691545.54	4168110.86	NonCancerChronicDerived_InhSoilDermMMilk	4.07E-03	7.60E-03	0.00E+00	3.95E-04	1.63E-06	4.41E-03	4.35E-03	4.06E-03	0.00E+00	0.00E+00	0.00E+00	2.37E-04	0.00E+00	0.00E+00	7.60E-03
70	ALL	691540.46	4168095.63	NonCancerChronicDerived_InhSoilDermMMilk	3.91E-03	7.31E-03	0.00E+00	3.79E-04	1.56E-06	4.23E-03	4.18E-03	3.91E-03	0.00E+00	0.00E+00	0.00E+00	2.28E-04	0.00E+00	0.00E+00	7.31E-03
71	ALL	691486.13	4168117.46	NonCancerChronicDerived_InhSoilDermMMilk	3.67E-03	6.86E-03	0.00E+00	3.56E-04	1.47E-06	3.97E-03	3.92E-03	3.67E-03	0.00E+00	0.00E+00	0.00E+00	2.14E-04	0.00E+00	0.00E+00	6.86E-03
72	ALL	691586.16	4168105.78	NonCancerChronicDerived_InhSoilDermMMilk	4.27E-03	7.99E-03	0.00E+00	4.15E-04	1.71E-06	4.63E-03	4.57E-03	4.27E-03	0.00E+00	0.00E+00	0.00E+00	2.49E-04	0.00E+00	0.00E+00	7.99E-03
73	ALL	691480.55	4168089.54	NonCancerChronicDerived_InhSoilDermMMilk	3.44E-03	6.43E-03	0.00E+00	3.34E-04	1.37E-06	3.72E-03	3.67E-03	3.44E-03	0.00E+00	0.00E+00	0.00E+00	2.01E-04	0.00E+00	0.00E+00	6.43E-03
74	ALL	691368.84	4168031.65	NonCancerChronicDerived_InhSoilDermMMilk	2.35E-03	4.40E-03	0.00E+00	2.29E-04	9.41E-07	2.55E-03	2.52E-03	2.35E-03	0.00E+00	0.00E+00	0.00E+00	1.37E-04	0.00E+00	0.00E+00	4.40E-03
75	ALL	691468.87	4168043.84	NonCancerChronicDerived_InhSoilDermMMilk	3.09E-03	5.78E-03	0.00E+00	3.00E-04	1.24E-06	3.35E-03	3.30E-03	3.09E-03	0.00E+00	0.00E+00	0.00E+00	1.80E-04	0.00E+00	0.00E+00	5.78E-03
76	ALL	691469.88	4168026.06	NonCancerChronicDerived_InhSoilDermMMilk	3.00E-03	5.62E-03	0.00E+00	2.92E-04	1.20E-06	3.25E-03	3.21E-03	3.00E-03	0.00E+00	0.00E+00	0.00E+00	1.75E-04	0.00E+00	0.00E+00	5.62E-03
77	ALL	691543.51	4168055.52	NonCancerChronicDerived_InhSoilDermMMilk	3.62E-03	6.77E-03	0.00E+00	3.52E-04	1.45E-06	3.92E-03	3.87E-03	3.62E-03	0.00E+00	0.00E+00	0.00E+00	2.11E-04	0.00E+00	0.00E+00	6.77E-03
78	ALL	691543	4168041.3	NonCancerChronicDerived_InhSoilDermMMilk	3.52E-03	6.58E-03	0.00E+00	3.42E-04	1.41E-06	3.81E-03	3.76E-03	3.52E-03	0.00E+00	0.00E+00	0.00E+00	2.05E-04	0.00E+00	0.00E+00	6.58E-03
79	ALL	691571.44	4168062.62	NonCancerChronicDerived_InhSoilDermMMilk	3.82E-03	7.15E-03	0.00E+00	3.71E-04	1.53E-06	4.14E-03	4.09E-03	3.82E-03	0.00E+00	0.00E+00	0.00E+00	2.23E-04	0.00E+00	0.00E+00	7.15E-03
80	ALL	691452.62	4168100.71	NonCancerChronicDerived_InhSoilDermMMilk	3.28E-03	6.13E-03	0.00E+00	3.18E-04	1.31E-06	3.55E-03	3.51E-03	3.28E-03	0.00E+00	0.00E+00	0.00E+00	1.91E-04	0.00E+00	0.00E+00	6.13E-03
81	ALL	691506.7	4168892.79	NonCancerChronicDerived_InhSoilDermMMilk	1.67E-01	3.13E-01	0.00E+00	1.63E-02	6.69E-05	1.81E-01	1.79E-01	1.67E-01	0.00E+00	0.00E+00	0.00E+00	9.77E-03	0.00E+00	0.00E+00	3.13E-01

NonCancer Acute Hazard from Almond Hulling Operations

Almond Processing Emissions Profile Applied

Acute Max HI	0.94006
UTM	691506.7, 4168892.79
Receptor	On-site residential receptor (REC #81)
Acute Max HI at Offsite Receptor	0.41438
UTM	691511.55, 4169004.64
Receptor	Off-site residential receptor (REC #16)

*HARP - HRACalc v22118 6/8/2022 7:16:31 AM - Acute Risk - Input File: F:\AS_HRA\HRA (v3)\HARP\AS\hra\HullAllHRAInput.hra

REC	GRP	X	Y	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVE	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	MAXHI
1	ALL	691440.11	4168757.21	NonCancerAcute	5.68E-02	1.06E-01	1.36E-01	0.00E+00	0.00E+00	1.06E-01	2.00E-01	0.00E+00	4.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01
2	ALL	691441.12	4168740.17	NonCancerAcute	5.56E-02	1.04E-01	1.33E-01	0.00E+00	0.00E+00	1.04E-01	1.95E-01	0.00E+00	4.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-01
3	ALL	691393.51	4168741.18	NonCancerAcute	4.31E-02	8.04E-02	1.03E-01	0.00E+00	0.00E+00	8.04E-02	1.51E-01	0.00E+00	3.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-01
4	ALL	691554.37	4168769.24	NonCancerAcute	1.04E-01	1.94E-01	2.50E-01	0.00E+00	0.00E+00	1.94E-01	3.66E-01	0.00E+00	8.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.66E-01
5	ALL	691400.53	4168760.72	NonCancerAcute	4.79E-02	8.95E-02	1.15E-01	0.00E+00	0.00E+00	8.95E-02	1.68E-01	0.00E+00	3.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E-01
6	ALL	691530.82	4168750.2	NonCancerAcute	8.79E-02	1.64E-01	2.11E-01	0.00E+00	0.00E+00	1.64E-01	3.09E-01	0.00E+00	7.09E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.09E-01
7	ALL	691530.31	4168737.17	NonCancerAcute	7.61E-02	1.42E-01	1.83E-01	0.00E+00	0.00E+00	1.42E-01	2.68E-01	0.00E+00	6.15E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-01
8	ALL	691538.83	4168689.06	NonCancerAcute	5.40E-02	1.01E-01	1.30E-01	0.00E+00	0.00E+00	1.01E-01	1.90E-01	0.00E+00	4.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-01
9	ALL	691565.89	4168677.03	NonCancerAcute	6.35E-02	1.19E-01	1.52E-01	0.00E+00	0.00E+00	1.19E-01	2.23E-01	0.00E+00	5.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E-01
10	ALL	691454.65	4168675.53	NonCancerAcute	5.89E-02	1.10E-01	1.41E-01	0.00E+00	0.00E+00	1.10E-01	2.07E-01	0.00E+00	4.76E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E-01
11	ALL	691461.06	4168623.27	NonCancerAcute	3.37E-02	6.29E-02	8.09E-02	0.00E+00	0.00E+00	6.29E-02	1.19E-01	0.00E+00	2.72E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-01
12	ALL	691421.97	4168620.26	NonCancerAcute	4.33E-02	8.08E-02	1.04E-01	0.00E+00	0.00E+00	8.08E-02	1.52E-01	0.00E+00	3.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-01
13	ALL	691549.25	4168596.21	NonCancerAcute	4.09E-02	7.64E-02	9.83E-02	0.00E+00	0.00E+00	7.64E-02	1.44E-01	0.00E+00	3.31E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-01
14	ALL	691568.3	4168594.21	NonCancerAcute	4.00E-02	7.46E-02	9.59E-02	0.00E+00	0.00E+00	7.46E-02	1.40E-01	0.00E+00	3.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-01
15	ALL	691556.77	4168514.03	NonCancerAcute	2.97E-02	5.55E-02	7.13E-02	0.00E+00	0.00E+00	5.55E-02	1.04E-01	0.00E+00	2.40E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-01
16	ALL	691511.55	4169004.64	NonCancerAcute	1.18E-01	2.20E-01	2.83E-01	0.00E+00	0.00E+00	2.20E-01	4.14E-01	0.00E+00	9.52E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.14E-01
17	ALL	691503.45	4169016.57	NonCancerAcute	1.03E-01	1.92E-01	2.47E-01	0.00E+00	0.00E+00	1.92E-01	3.61E-01	0.00E+00	8.30E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.61E-01
18	ALL	691425.07	4169063.43	NonCancerAcute	5.39E-02	1.01E-01	1.29E-01	0.00E+00	0.00E+00	1.01E-01	1.89E-01	0.00E+00	4.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-01
19	ALL	691327.52	4169024.66	NonCancerAcute	4.63E-02	8.64E-02	1.11E-01	0.00E+00	0.00E+00	8.64E-02	1.63E-01	0.00E+00	3.74E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-01
20	ALL	691447.65	4169079.61	NonCancerAcute	5.44E-02	1.02E-01	1.31E-01	0.00E+00	0.00E+00	1.02E-01	1.91E-01	0.00E+00	4.40E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E-01
21	ALL	691495.78	4169070.67	NonCancerAcute	6.03E-02	1.13E-01	1.45E-01	0.00E+00	0.00E+00	1.13E-01	2.12E-01	0.00E+00	4.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-01
22	ALL	691510.69	4169078.34	NonCancerAcute	5.39E-02	1.01E-01	1.29E-01	0.00E+00	0.00E+00	1.01E-01	1.89E-01	0.00E+00	4.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-01
23	ALL	691548.18	4169071.09	NonCancerAcute	5.97E-02	1.12E-01	1.43E-01	0.00E+00	0.00E+00	1.12E-01	2.10E-01	0.00E+00	4.82E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E-01
24	ALL	691583.54	4169054.48	NonCancerAcute	7.22E-02	1.35E-01	1.73E-01	0.00E+00	0.00E+00	1.35E-01	2.54E-01	0.00E+00	5.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-01
25	ALL	691596.74	4169086.86	NonCancerAcute	6.14E-02	1.15E-01	1.47E-01	0.00E+00	0.00E+00	1.15E-01	2.16E-01	0.00E+00	4.96E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-01
26	ALL	691498.39	4169122.01	NonCancerAcute	4.03E-02	7.52E-02	9.67E-02	0.00E+00	0.00E+00	7.52E-02	1.42E-01	0.00E+00	3.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-01
27	ALL	691511.79	4169116.58	NonCancerAcute	4.16E-02	7.77E-02	9.99E-02	0.00E+00	0.00E+00	7.77E-02	1.46E-01	0.00E+00	3.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-01
28	ALL	691612.82	4169124.18	NonCancerAcute	4.67E-02	8.71E-02	1.12E-01	0.00E+00	0.00E+00	8.71E-02	1.64E-01	0.00E+00	3.77E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-01
29	ALL	691615.71	4169140.84	NonCancerAcute	4.22E-02	7.88E-02	1.01E-01	0.00E+00	0.00E+00	7.88E-02	1.48E-01	0.00E+00	3.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-01
30	ALL	691639.97	4169187.55	NonCancerAcute	3.04E-02	5.68E-02	7.30E-02	0.00E+00	0.00E+00	5.68E-02	1.07E-01	0.00E+00	2.46E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-01
31	ALL	691626.94	4169196.6	NonCancerAcute	3.10E-02	5.78E-02	7.43E-02	0.00E+00	0.00E+00	5.78E-02	1.09E-01	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-01
32	ALL	691546.55	4169198.77	NonCancerAcute	2.96E-02	5.52E-02	7.09E-02	0.00E+00	0.00E+00	5.52E-02	1.04E-01	0.00E+00	2.39E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-01
33	ALL	691517.95	4169134.68	NonCancerAcute	3.96E-02	7.39E-02	9.51E-02	0.00E+00	0.00E+00	7.39E-02	1.39E-01	0.00E+00	3.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-01
34	ALL	691549.81	4169125.63	NonCancerAcute	4.29E-02	8.01E-02	1.03E-01	0.00E+00	0.00E+00	8.01E-02	1.51E-01	0.00E+00	3.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-01
35	ALL	691552.35	4169135.05	NonCancerAcute	4.07E-02	7.59E-02	9.76E-02	0.00E+00	0.00E+00	7.59E-02	1.43E-01	0.00E+00	3.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-01
36	ALL	691550.17	4169157.13	NonCancerAcute	3.61E-02	6.74E-02	8.66E-02	0.00E+00	0.00E+00	6.74E-02	1.27E-01	0.00E+00	2.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-01
37	ALL	691628.49	4169277.05	NonCancerAcute	2.38E-02	4.44E-02	5.71E-02	0.00E+00	0.00E+00	4.44E-02	8.36E-02	0.00E+00	1.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.36E-02
38	ALL	691631.99	4169255	NonCancerAcute	2.49E-02	4.65E-02	5.97E-02	0.00E+00	0.00E+00	4.65E-02	8.75E-02	0.00E+00	2.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.75E-02
39	ALL	691668.08	4169234.45	NonCancerAcute	2.45E-02	4.58E-02	5.89E-02	0.00E+00	0.00E+00	4.58E-02	8.63E-02	0.00E+00	1.98E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.63E-02
40	ALL	691704.66	4169220.42	NonCancerAcute	2.81E-02	5.24E-02	6.73E-02	0.00E+00	0.00E+00	5.24E-02	9.86E-02	0.00E+00	2.27E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.86E-02
41	ALL	691719.2	4169208.89	NonCancerAcute	2.68E-02	5.01E-02	6.44E-02	0.00E+00	0.00E+00	5.01E-02	9.43E-02	0.00E+00	2.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.43E-02
42	ALL	691698.15	4169165.29	NonCancerAcute	3.29E-02	6.14E-02	7.89E-02	0.00E+00	0.00E+00	6.14E-02	1.16E-01	0.00E+00	2.65E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-01
43	ALL	691800.39	4169158.77	NonCancerAcute	2.58E-02	4.81E-02	6.19E-02	0.00E+00	0.00E+00	4.81E-02	9.06E-02	0.00E+00	2.08E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.06E-02
44	ALL	691785.85	4169172.81	NonCancerAcute	2.51E-02	4.69E-02	6.02E-02	0.00E+00	0.00E+00	4.69E-02	8.82E-02	0.00E+00	2.03E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.82E-02
45	ALL	691882.58	4169138.73	NonCancerAcute	2.04E-02	3.80E-02	4.89E-02	0.00E+00	0.00E+00	3.80E-02	7.16E-02	0.00E+00	1.65E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.16E-02
46	ALL	691909.14	4169134.22	NonCancerAcute	1.95E-02	3.63E-02	4.67E-02	0.00E+00	0.00E+00	3.63E-02	6.84E-02	0.00E+00	1.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.84E-02
47	ALL	691588.8	4169332.77	NonCancerAcute	1.80E-02	3.37E-02	4.33E-02	0.00E+00	0.00E+00	3.37E-02	6.34E-02	0.00E+00	1.46E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.34E-02
48	ALL	691574.65	4169379.94	NonCancerAcute	1.62E-02	3.02E-02	3.88E-02	0.00E+00	0.00E+00	3.02E-02	5.69E-02	0.00E+00	1.31E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.69E-02
49	ALL	691940.9	4169126.13	NonCancerAcute	1.80E-02	3.35E-02	4.31E-02	0.00E+00	0.00E+00	3.35E-02	6.32E-02	0.00E+00	1.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.32E-02
50	ALL	691964.45	4169125.61	NonCancerAcute	1.67E-02	3.12E-02	4.02E-02	0.00E+00	0.00E+00	3.12E-02	5.88E-02	0.00E+00	1.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.88E-02
51	ALL	692035.62	4169140.52	NonCancerAcute	1.44E-02	2.68E-02	3.44E-02	0.00E+00	0.00E+00	2.68E-02	5.04E-02	0.00E+00	1.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.04E-02
52	ALL	692048.97	4169140.26	NonCancerAcute	1.42E-02	2.64E-02	3.40E-02	0.00E+00	0.00E+00	2.64E-02	4.98E-02	0.00E+00	1.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.98E-02
53	ALL	692062.83	4169163.29	NonCancerAcute	1.28E-02	2.40E-02	3.08E-02	0.00E+00	0.00E+00	2.40E-02	4.51E-02	0.00E+00	1.04E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.51E-02
54	ALL	692075.66	4169171.4	NonCancerAcute	1.24E-02	2.31E-02	2.97E-02	0.00E+00	0.00E+00	2.31E-02	4.35E-02	0.00E+00	9.99E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.35E-02
55	ALL	692162.26	4169160.15	NonCancerAcute	1.07E-02	1.99E-02	2.56E-02	0.00E+00	0.00E+00	1.99E-02	3.75E-02	0.00E+00	8.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-02
56	ALL	692164.36	4169145.49	NonCancerAcute	1.08E-02	2.02E-02	2.60E-02	0.00E+00	0.00E+00	2.02E-02	3.81E-02	0.00E+00	8.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E-02
57	ALL	692179.53	4169145.49	NonCancerAcute	1.05E-02	1.97E-02	2.53E-02	0.00E+00	0.00E+00	1.97E-02	3.70E-02	0.00E+00	8.51E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E-02
58	ALL	692194.88	4169132.19	NonCancerAcute	1.03E-02	1.92E-02	2.46E-02	0.00E+00	0.00E+00	1.92E-02	3.61E-02	0.00E+00	8.29E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.61E-02
59	ALL	692206.67	4169126.4	NonCancerAcute	1.01E-02	1.88E-02	2.42E-02	0.00E+00	0.00E+00	1.88E-02	3.55E-02	0.00E+00	8.15E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-02
60	ALL	691466.77	4168373.67	NonCancerAcute	1.51E-02	2.83E-02	3.63E-02	0.00E+00	0.00E+00	2.83E-02	5.32E-02	0.00E+00	1.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.32E-02
61	ALL	691453.41	4168320.26	NonCancerAcute	1.32E-02	2.47E-02	3.17E-02	0.00E+00	0.00E+00	2.47E-02	4.65E-02	0.00E+00	1.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.65E-02
62	ALL	691537.75	4168319.55	NonCancerAcute	1.70E-02	3.18E-02	4.09E-02	0.00E+00	0.00E+00	3.18E-02	5.99E-02	0.00E+00	1.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.99E-02
63	ALL	691409.97	4168212.93	NonCancerAcute	1.03E-02	1.92E-02	2.47E-02	0.00E+00	0.00E+00	1.92E-02	3.62E-02	0.00E+00	8.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.62E-02
64	ALL	691405.4	4168168.24	NonCancerAcute	9.47E-03	1.77E-02	2.27E-02	0.00E+00	0.00E+00	1.77E-02	3.33E-02	0.00E+00	7.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-02
65	ALL	691535.39	4168247.96	NonCancerAcute	1.45E-02	2.71E-02	3.48E-02	0.00E+00	0.00E+00	2.71E-02	5.09E-02	0.00E+00	1.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.09E-02
66	ALL	691558.74	4168206.32	NonCancerAcute	1.22E-02	2.28E-02	2.93E-02	0.00E+00	0.00E+00	2.28E-02	4.29E-02	0.00E+00	9.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.29E-02
67	ALL	691586.67	4168224.1	NonCancerAcute	1.09E-02	2.04E-02	2.62E-02	0.00E+00	0.00E+00	2.04E-02	3.84E-02	0.00E+00	8.83E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-02
68	ALL	691580.58	4168186.01	NonCancerAcute	1.03E-02	1.92E-02	2.47E-02	0.00E+00	0.00E+00	1.92E-02	3.61E-02	0.00E+00	8.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.61E-02
69	ALL	691545.54	4168110.86	NonCancerAcute	1.06E-02	1.98E-02	2.55E-02	0.00E+00	0.00E+00	1.98E-02	3.73E-02	0.00E+00	8.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E-02
70	ALL	691540.46	4168095.63	NonCancerAcute	1.05E-02	1.95E-02	2.51E-02	0.00E+00	0.00E+00	1.95E-02	3.68E-02	0.00E+00	8.45E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.68E-02
71	ALL	691486.13	4168117.46	NonCancerAcute	1.07E-02	2.00E-02	2.58E-02	0.00E+00	0.00E+00	2.00E-02	3.78E-02	0.00E+00	8.67E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.78E-02
72	ALL	691586.16	4168105.78	NonCancerAcute	8.77E-03	1.64E-02	2.10E-02	0.00E+00	0.00E+00	1.64E-02	3.08E-02	0.00E+00	7.08E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E-02
73	ALL	691480.55	4168089.54	NonCancerAcute	1.02E-02	1.90E-02	2.44E-02	0.00E+00	0.00E+00	1.90E-02	3.57E-02	0.00E+00	8.20E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.57E-02
74	ALL	691368.84	4168031.65	NonCancerAcute	7.48E-03	1.40E-02	1.79E-02	0.00E+00	0.00E+00	1.40E-02	2.63E-02	0.00E+00	6.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.63E-02
75	ALL	691468.87	4168043.84	NonCancerAcute	9.16E-03	1.71E-02	2.20E-02	0.00E+00	0.00E+00	1.71E-02	3.22E-02	0.00E+00	7.40E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.22E-02
76	ALL	691469.88	4168026.06	NonCancerAcute	9.06E-03	1.69E-02	2.17E-02	0.00E+00	0.00E+00	1.69E-02	3.18E-02	0.00E+00	7.31E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-02
77	ALL	691543.51	4168055.52	NonCancerAcute	9.64E-03	1.80E-02	2.31E-02	0.00E+00	0.00E+00	1.80E-02	3.39E-02	0.00E+00	7.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E-02
78	ALL	691543	4168041.3	NonCancerAcute	9.41E-03	1.76E-02	2.26E-02	0.00E+00	0.00E+00	1.76E-02	3.31E-02	0.00E+00	7.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.31E-02
79	ALL	691571.44	4168062.62	NonCancerAcute	8.40E-03	1.57E-02	2.02E-02	0.00E+00	0.00E+00	1.57E-02	2.95E-02	0.00E+00	6.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.95E-02
80	ALL	691452.62	4168100.71	NonCancerAcute	8.78E-03	1.64E-02	2.11E-02	0.00E+00	0.00E+00	1.64E-02	3.09E-02	0.00E+00	7.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.09E-02
81	ALL	691506.7	4168892.79	NonCancerAcute	2.67E-01	4.99E-01	6.42E-01	0.00E+00	0.00E+00	4.99E-01	9.40E-01	0.00E+00	2.16E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.40E-01

Almond Processing Emissions From Permitted Sources

On average, field weight yields 13 percent debris, 50 percent hulls, 14 percent shells, and 23 percent clean almond meats and pieces,

170 - outbound meats. Mid Aug- Mid Oct.

ALMONDS, UPC: 020527015776 weighs 169 g/metric cup (5.6 oz/US cup)
https://www.aqua-calc.com/calculate/food-volume-to-weight/substance/almonds-coma-and-blank-upc-column--blank-020527015776

metric cups	cubic yards
1	≡ 0.0003270
3,058.22	≡ 1

169g	1 metric cup	1 gram	0.000001102311 tons
1 metric cup	0.0003270 cy	1 g	1.1023E-06
		30.6	
516819.5719	g/cy	12.8	

30.6 cy per load

170 loads

5202 cy almonds

2688495413 g almonds

2963.558067 tons almonds per year

	Filterable PM		Condensable Inorganic		PM PM-10b		Factors for Asses Independent Variable PM-10b	2963.558 tons almonds per year
	kg/Mg	lb/ton	kg/Mg	lb/ton	kg/Mg	lb/ton	lb/ton	lb PM10/yr
Unloading	0.03	0.06	ND	ND	ND	ND	0.06	177.8135
Precleaning cyclone	0.48	0.95	ND	ND	0.41	0.82	0.82	2430.118
Precleaning baghouse	0.0084	0.017	ND	ND	0.0075	0.015	0.015	44.45337
Hulling/separating cyclone	0.57	1.1	ND	ND	0.41	0.81	0.81	2400.482
Hulling/separating baghouse	0.0078	0.016	ND	ND	0.0065	0.013	0.013	38.52625
Hulling/shelling baghouse	0.026	0.051	0.0068	0.014	ND	ND	0.051	151.1415
Classifier screen deck cyclone	0.2	0.4	ND	ND	0.16	0.31	0.31	918.703
Air leg	0.26	0.51	ND	ND	ND	ND	0.51	1511.415
Roaster	ND	ND	ND	ND	ND	ND	ND	N/A

Source: EPA "9.10.2.1 Almond Processing"

Green highlight = emission factor used in the anlaysis

Total **7672.652** lbs/PM10 per year
3.836326 tons/PM10 per year

Peak Season Mid Aug- Mid Oct.
Peak Season 66 days
Maximum Per Day 116.2523 lbs/PM10 per day
0.058126 tons/PM10 per day

District Toxic Profile ID	58
Description	Almond Processing Dust Emissions
Source	Emission factors are derived from the 1997 soil profile, "Composite of three almond orchards" from EPA Speciate 4.0., test data from Central Valley CA Almond Growers.

Project Emissions (lbs)

Pollutant Name	Emission Factor	Emission Factor Units	CAS#	Total Per Year	Maximum per Day	Maximum per Day
Aluminum	9.58E-02	lb/lb PM10	7429905	7.35E+02	1.11E+01	9.28081E-01
Ammonia	1.98E-03	lb/lb PM10	7664417	1.52E+01	2.30E-01	1.91816E-02
Antimony	1.02E-04	lb/lb PM10	7440360	7.83E-01	1.19E-02	9.88145E-04
Arsenic	5.00E-06	lb/lb PM10	7440382	3.84E-02	5.81E-04	4.84385E-05
Barium	8.75E-04	lb/lb PM10	7440393	6.71E+00	1.02E-01	8.47673E-03
Bromine	1.10E-05	lb/lb PM10	7726956	8.44E-02	1.28E-03	1.06565E-04
Cadmium	3.00E-06	lb/lb PM10	7440439	2.30E-02	3.49E-04	2.90631E-05
Chromium	1.20E-05	lb/lb PM10	7440473	9.21E-02	1.40E-03	1.16252E-04
Chromium, hexavalent (& compounds)	6.00E-07	lb/lb PM10	18540299	4.60E-03	6.98E-05	5.81262E-06
Cobalt	8.00E-06	lb/lb PM10	7440484	6.14E-02	9.30E-04	7.75015E-05
Copper	1.69E-04	lb/lb PM10	7440508	1.30E+00	1.96E-02	1.63722E-03
Lead	6.20E-05	lb/lb PM10	7439921	4.76E-01	7.21E-03	6.00637E-04
Manganese	1.04E-03	lb/lb PM10	7439965	7.98E+00	1.21E-01	1.00752E-02
Mercury	1.30E-05	lb/lb PM10	7439976	9.97E-02	1.51E-03	1.25940E-04
Nickel	1.20E-05	lb/lb PM10	7440020	9.21E-02	1.40E-03	1.16252E-04
Phosphorus	1.57E-03	lb/lb PM10	7723140	1.20E+01	1.83E-01	1.52097E-02
Selenium	3.00E-06	lb/lb PM10	7782492	2.30E-02	3.49E-04	2.90631E-05
Silver	3.00E-06	lb/lb PM10	7440224	2.30E-02	3.49E-04	2.90631E-05
SULFATES	1.01E-02	lb/lb PM10	9960	7.75E+01	1.17E+00	9.78457E-02
Vanadium (fume or dust)	4.20E-05	lb/lb PM10	7440622	3.22E-01	4.88E-03	4.06883E-04
Zinc	1.58E-03	lb/lb PM10	7440666	1.21E+01	1.84E-01	1.53066E-02

X	Y	AVERAGE CONC	ZELEV	ZHILL	ZFLAG	AVE	GRP	RANK	NET ID	DATE(CONC)
691440.11	4168757.21	1861.13278	42.67	42.67	1.2	1-HR	ALL	1ST		13020301
691441.12	4168740.17	1821.45581	42.67	42.67	1.2	1-HR	ALL	1ST		13120108
691393.51	4168741.18	1411.54252	42.46	42.46	1.2	1-HR	ALL	1ST		17121021
691554.37	4168769.24	3413.80949	42.67	42.67	1.2	1-HR	ALL	1ST		14010802
691400.53	4168760.72	1570.47759	42.37	42.37	1.2	1-HR	ALL	1ST		14021105
691530.82	4168750.2	2878.84952	42.67	42.67	1.2	1-HR	ALL	1ST		14010209
691530.31	4168737.17	2494.59431	42.67	42.67	1.2	1-HR	ALL	1ST		14010209
691538.83	4168689.06	1769.32114	42.67	42.67	1.2	1-HR	ALL	1ST		14010802
691565.89	4168677.03	2080.46036	42.67	42.67	1.2	1-HR	ALL	1ST		14021408
691454.65	4168675.53	1931.33387	42.67	42.67	1.2	1-HR	ALL	1ST		17123009
691461.06	4168623.27	1105.08713	42.67	42.67	1.2	1-HR	ALL	1ST		13012906
691421.97	4168620.26	1419.28955	42.67	42.67	1.2	1-HR	ALL	1ST		17123009
691549.25	4168596.21	1341.5932	42.67	42.67	1.2	1-HR	ALL	1ST		14021408
691568.3	4168594.21	1309.25521	42.67	42.67	1.2	1-HR	ALL	1ST		14021408
691556.77	4168514.03	973.98265	42.67	42.67	1.2	1-HR	ALL	1ST		14021408
691511.55	4169004.64	3863.21397	42.67	42.67	1.2	1-HR	ALL	1ST		13110608
691503.45	4169016.57	3369.32854	42.67	42.67	1.2	1-HR	ALL	1ST		13110608
691425.07	4169063.43	1765.27713	42.22	42.22	1.2	1-HR	ALL	1ST		13021108
691327.52	4169024.66	1516.93732	41.9	41.9	1.2	1-HR	ALL	1ST		16010809
691447.65	4169079.61	1783.9095	42.14	42.14	1.2	1-HR	ALL	1ST		13110608
691495.78	4169070.67	1975.85324	42.67	42.67	1.2	1-HR	ALL	1ST		14011617
691510.69	4169078.34	1765.49374	42.67	42.67	1.2	1-HR	ALL	1ST		15120408
691548.18	4169071.09	1957.47439	42.67	42.67	1.2	1-HR	ALL	1ST		16092707
691583.54	4169054.48	2365.53861	42.67	42.67	1.2	1-HR	ALL	1ST		17072306
691596.74	4169086.86	2013.04687	42.67	42.67	1.2	1-HR	ALL	1ST		13011717
691498.39	4169122.01	1319.70197	42.43	42.43	1.2	1-HR	ALL	1ST		15120408
691511.79	4169116.58	1364.24485	42.64	42.64	1.2	1-HR	ALL	1ST		13111808
691612.82	4169124.18	1528.9746	42.67	42.67	1.2	1-HR	ALL	1ST		13011717
691615.71	4169140.84	1383.39976	42.67	42.67	1.2	1-HR	ALL	1ST		13011717
691639.97	4169187.55	997.40908	42.67	42.67	1.2	1-HR	ALL	1ST		16022023
691626.94	4169196.6	1015.03824	42.67	42.67	1.2	1-HR	ALL	1ST		13011717
691546.55	4169198.77	968.45675	42.43	42.43	1.2	1-HR	ALL	1ST		16092707
691517.95	4169134.68	1298.06664	42.52	42.52	1.2	1-HR	ALL	1ST		13111808
691549.81	4169125.63	1406.77746	42.67	42.67	1.2	1-HR	ALL	1ST		16092707
691552.35	4169135.05	1332.87361	42.67	42.67	1.2	1-HR	ALL	1ST		16092707
691550.17	4169157.13	1183.05972	42.66	42.66	1.2	1-HR	ALL	1ST		16092707
691628.49	4169277.05	779.61178	42.67	42.67	1.2	1-HR	ALL	1ST		13011717
691631.99	4169255	815.6151	42.67	42.67	1.2	1-HR	ALL	1ST		13011717
691668.08	4169234.45	804.23999	42.67	42.67	1.2	1-HR	ALL	1ST		13060806
691704.66	4169220.42	919.26207	42.67	42.67	1.2	1-HR	ALL	1ST		14021508
691719.2	4169208.89	879.09029	42.67	42.67	1.2	1-HR	ALL	1ST		14021208
691698.15	4169165.29	1077.02078	42.67	42.67	1.2	1-HR	ALL	1ST		14021208
691800.39	4169158.77	844.78641	42.67	42.67	1.2	1-HR	ALL	1ST		14021708
691785.85	4169172.81	822.52733	42.67	42.67	1.2	1-HR	ALL	1ST		14021708
691882.58	4169138.73	667.85196	42.67	42.67	1.2	1-HR	ALL	1ST		14122104
691909.14	4169134.22	637.42104	42.67	42.67	1.2	1-HR	ALL	1ST		17012408
691588.8	4169332.77	591.39419	41.05	41.05	1.2	1-HR	ALL	1ST		15021520
691574.65	4169379.94	530.24426	39.49	39.49	1.2	1-HR	ALL	1ST		17072306
691940.9	4169126.13	588.88936	41.51	41.51	1.2	1-HR	ALL	1ST		13122217
691964.45	4169125.61	548.54472	41.62	41.62	1.2	1-HR	ALL	1ST		16022424
692035.62	4169140.52	470.24569	43	43	1.2	1-HR	ALL	1ST		14010317
692048.97	4169140.26	463.91647	43.13	43.13	1.2	1-HR	ALL	1ST		14010317
692062.83	4169163.29	420.66485	41.26	43.28	1.2	1-HR	ALL	1ST		16120418
692075.66	4169171.4	405.46409	41.8	41.8	1.2	1-HR	ALL	1ST		16120418
692162.26	4169160.15	349.29165	43.81	43.81	1.2	1-HR	ALL	1ST		16022320
692164.36	4169145.49	355.43872	44.07	44.07	1.2	1-HR	ALL	1ST		13020219

692179.53	4169145.49	345.335	43.91	43.91	1.2	1-HR	ALL	1ST	13020219
692194.88	4169132.19	336.51075	43.58	43.58	1.2	1-HR	ALL	1ST	16022101
692206.67	4169126.4	330.69305	43.38	43.38	1.2	1-HR	ALL	1ST	13010317
691466.77	4168373.67	496.15405	42.38	42.38	1.2	1-HR	ALL	1ST	17121505
691453.41	4168320.26	433.27254	42.37	42.37	1.2	1-HR	ALL	1ST	17121505
691537.75	4168319.55	558.52738	42.37	42.37	1.2	1-HR	ALL	1ST	14021408
691409.97	4168212.93	337.55671	42.37	42.37	1.2	1-HR	ALL	1ST	15120405
691405.4	4168168.24	310.41559	42.37	42.37	1.2	1-HR	ALL	1ST	15120405
691535.39	4168247.96	474.86609	42.37	42.37	1.2	1-HR	ALL	1ST	14021408
691558.74	4168206.32	399.52611	42.37	42.37	1.2	1-HR	ALL	1ST	14021408
691586.67	4168224.1	358.38363	42.37	42.37	1.2	1-HR	ALL	1ST	13020206
691580.58	4168186.01	336.77735	42.37	42.37	1.2	1-HR	ALL	1ST	13020206
691545.54	4168110.86	348.03936	42.37	42.37	1.2	1-HR	ALL	1ST	14021408
691540.46	4168095.63	342.83387	42.37	42.37	1.2	1-HR	ALL	1ST	14021408
691486.13	4168117.46	351.93639	42.37	42.37	1.2	1-HR	ALL	1ST	14021408
691586.16	4168105.78	287.24026	42.37	42.37	1.2	1-HR	ALL	1ST	13020206
691480.55	4168089.54	332.69463	42.37	42.37	1.2	1-HR	ALL	1ST	14021408
691368.84	4168031.65	245.0257	42.06	42.06	1.2	1-HR	ALL	1ST	15120405
691468.87	4168043.84	300.12527	42.37	42.37	1.2	1-HR	ALL	1ST	14021408
691469.88	4168026.06	296.7577	42.37	42.37	1.2	1-HR	ALL	1ST	14021408
691543.51	4168055.52	315.90919	42.37	42.37	1.2	1-HR	ALL	1ST	14021408
691543	4168041.3	308.31187	42.37	42.37	1.2	1-HR	ALL	1ST	14021408
691571.44	4168062.62	275.28543	42.37	42.37	1.2	1-HR	ALL	1ST	14021408
691452.62	4168100.71	287.83864	42.37	42.37	1.2	1-HR	ALL	1ST	14021408
691506.7	4168892.79	8764.05177	42.67	42.67	1.2	1-HR	ALL	1ST	13030108

** CONCUNIT ug/ m^3
** DEPUNIT g/m^ 2

* MODELING OPTI ONS USED: Reg DFAULT CONC E LEV FLGP OL RURAL ADJ_U*
* PLOT FILE OF PERIOD VALUES AVERAGED ACROSS 0 YEARS FOR SOUR CE GROUP : ALL
* FOR A TOTAL OF 81 RECEPTORS.
* FORMA T: (3(1X,F13.5) ,3(1X,F8.2),2X, A6,2X,A8, 2X,I8.8,2 X,A8)
* X Y AVERAGE CONC ZELEV ZHILL ZFLAG AVE GRP NUM HRS NET ID
*

691440.11	4168757.21	8.80089	42.67	42.67	1.2	PERIOD	ALL	43824	
691441.12	4168740.17	8.27405	42.67	42.67	1.2	PERIOD	ALL	43824	
691393.51	4168741.18	5.94478	42.46	42.46	1.2	PERIOD	ALL	43824	
691554.37	4168769.24	43.9137	42.67	42.67	1.2	PERIOD	ALL	43824	
691400.53	4168760.72	6.7102	42.37	42.37	1.2	PERIOD	ALL	43824	
691530.82	4168750.2	24.62312	42.67	42.67	1.2	PERIOD	ALL	43824	
691530.31	4168737.17	22.58267	42.67	42.67	1.2	PERIOD	ALL	43824	
691538.83	4168689.06	18.87879	42.67	42.67	1.2	PERIOD	ALL	43824	
691565.89	4168677.03	22.38593	42.67	42.67	1.2	PERIOD	ALL	43824	
691454.65	4168675.53	7.13753	42.67	42.67	1.2	PERIOD	ALL	43824	
691461.06	4168623.27	6.44598	42.67	42.67	1.2	PERIOD	ALL	43824	
691421.97	4168620.26	4.78917	42.67	42.67	1.2	PERIOD	ALL	43824	
691549.25	4168596.21	12.07764	42.67	42.67	1.2	PERIOD	ALL	43824	
691568.3	4168594.21	13.25317	42.67	42.67	1.2	PERIOD	ALL	43824	
691556.77	4168514.03	8.4895	42.67	42.67	1.2	PERIOD	ALL	43824	
691511.55	4169004.64	60.38419	42.67	42.67	1.2	PERIOD	ALL	43824	
691503.45	4169016.57	50.94747	42.67	42.67	1.2	PERIOD	ALL	43824	
691425.07	4169063.43	31.39544	42.22	42.22	1.2	PERIOD	ALL	43824	
691327.52	4169024.66	41.13477	41.9	41.9	1.2	PERIOD	ALL	43824	
691447.65	4169079.61	26.02284	42.14	42.14	1.2	PERIOD	ALL	43824	
691495.78	4169070.67	25.4876	42.67	42.67	1.2	PERIOD	ALL	43824	
691510.69	4169078.34	22.41755	42.67	42.67	1.2	PERIOD	ALL	43824	
691548.18	4169071.09	21.69432	42.67	42.67	1.2	PERIOD	ALL	43824	
691583.54	4169054.48	22.58433	42.67	42.67	1.2	PERIOD	ALL	43824	
691596.74	4169086.86	15.75518	42.67	42.67	1.2	PERIOD	ALL	43824	
691498.39	4169122.01	15.42339	42.43	42.43	1.2	PERIOD	ALL	43824	
691511.79	4169116.58	15.65794	42.64	42.64	1.2	PERIOD	ALL	43824	
691612.82	4169124.18	11.1783	42.67	42.67	1.2	PERIOD	ALL	43824	
691615.71	4169140.84	9.90236	42.67	42.67	1.2	PERIOD	ALL	43824	
691639.97	4169187.55	7.03493	42.67	42.67	1.2	PERIOD	ALL	43824	
691626.94	4169196.6	6.93844	42.67	42.67	1.2	PERIOD	ALL	43824	
691546.55	4169198.77	8.21298	42.43	42.43	1.2	PERIOD	ALL	43824	
691517.95	4169134.68	13.37849	42.52	42.52	1.2	PERIOD	ALL	43824	
691549.81	4169125.63	13.30656	42.67	42.67	1.2	PERIOD	ALL	43824	
691552.35	4169135.05	12.30798	42.67	42.67	1.2	PERIOD	ALL	43824	
691550.17	4169157.13	10.58254	42.66	42.66	1.2	PERIOD	ALL	43824	
691628.49	4169277.05	4.74176	42.67	42.67	1.2	PERIOD	ALL	43824	
691631.99	4169255	5.17807	42.67	42.67	1.2	PERIOD	ALL	43824	
691668.08	4169234.45	5.22982	42.67	42.67	1.2	PERIOD	ALL	43824	
691704.66	4169220.42	5.13624	42.67	42.67	1.2	PERIOD	ALL	43824	
691719.2	4169208.89	5.26774	42.67	42.67	1.2	PERIOD	ALL	43824	
691698.15	4169165.29	6.82343	42.67	42.67	1.2	PERIOD	ALL	43824	
691800.39	4169158.77	5.66285	42.67	42.67	1.2	PERIOD	ALL	43824	
691785.85	4169172.81	5.51861	42.67	42.67	1.2	PERIOD	ALL	43824	
691882.58	4169138.73	5.08646	42.67	42.67	1.2	PERIOD	ALL	43824	
691909.14	4169134.22	4.89745	42.67	42.67	1.2	PERIOD	ALL	43824	
691588.8	4169332.77	4.04581	41.05	41.05	1.2	PERIOD	ALL	43824	
691574.65	4169379.94	3.44478	39.49	39.49	1.2	PERIOD	ALL	43824	
691940.9	4169126.13	4.73356	41.51	41.51	1.2	PERIOD	ALL	43824	
691964.45	4169125.61	4.51052	41.62	41.62	1.2	PERIOD	ALL	43824	
692035.62	4169140.52	3.69096	43	43	1.2	PERIOD	ALL	43824	
692048.97	4169140.26	3.59318	43.13	43.13	1.2	PERIOD	ALL	43824	
692062.83	4169163.29	3.27177	41.26	43.28	1.2	PERIOD	ALL	43824	

692075.66	4169171.4	3.12325	41.8	41.8	1.2	PERIOD	ALL	43824
692162.26	4169160.15	2.73993	43.81	43.81	1.2	PERIOD	ALL	43824
692164.36	4169145.49	2.82172	44.07	44.07	1.2	PERIOD	ALL	43824
692179.53	4169145.49	2.74266	43.91	43.91	1.2	PERIOD	ALL	43824
692194.88	4169132.19	2.74367	43.58	43.58	1.2	PERIOD	ALL	43824
692206.67	4169126.4	2.71639	43.38	43.38	1.2	PERIOD	ALL	43824
691466.77	4168373.67	3.65808	42.38	42.38	1.2	PERIOD	ALL	43824
691453.41	4168320.26	3.07416	42.37	42.37	1.2	PERIOD	ALL	43824
691537.75	4168319.55	4.08713	42.37	42.37	1.2	PERIOD	ALL	43824
691409.97	4168212.93	2.13965	42.37	42.37	1.2	PERIOD	ALL	43824
691405.4	4168168.24	1.96427	42.37	42.37	1.2	PERIOD	ALL	43824
691535.39	4168247.96	3.3657	42.37	42.37	1.2	PERIOD	ALL	43824
691558.74	4168206.32	3.18505	42.37	42.37	1.2	PERIOD	ALL	43824
691586.67	4168224.1	3.49647	42.37	42.37	1.2	PERIOD	ALL	43824
691580.58	4168186.01	3.14638	42.37	42.37	1.2	PERIOD	ALL	43824
691545.54	4168110.86	2.50793	42.37	42.37	1.2	PERIOD	ALL	43824
691540.46	4168095.63	2.40989	42.37	42.37	1.2	PERIOD	ALL	43824
691486.13	4168117.46	2.26241	42.37	42.37	1.2	PERIOD	ALL	43824
691586.16	4168105.78	2.63639	42.37	42.37	1.2	PERIOD	ALL	43824
691480.55	4168089.54	2.12034	42.37	42.37	1.2	PERIOD	ALL	43824
691368.84	4168031.65	1.45201	42.06	42.06	1.2	PERIOD	ALL	43824
691468.87	4168043.84	1.90565	42.37	42.37	1.2	PERIOD	ALL	43824
691469.88	4168026.06	1.85276	42.37	42.37	1.2	PERIOD	ALL	43824
691543.51	4168055.52	2.23394	42.37	42.37	1.2	PERIOD	ALL	43824
691543	4168041.3	2.17131	42.37	42.37	1.2	PERIOD	ALL	43824
691571.44	4168062.62	2.35906	42.37	42.37	1.2	PERIOD	ALL	43824
691452.62	4168100.71	2.02256	42.37	42.37	1.2	PERIOD	ALL	43824
691506.7	4168892.79	103.2325	42.67	42.67	1.2	PERIOD	ALL	43824

** CONCUNIT ug/ m^3

** DEPUNIT g/m^ 2

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
1010 10th Street, Suite 3400, Modesto, CA 95354
Planning Phone: (209) 525-6330 Fax: (209) 525-5911
Building Phone: (209) 525-6557 Fax: (209) 525-7759

Stanislaus County
PLANNING AND COMMUNITY DEVELOPMENT

Amended Mitigation Monitoring and Reporting Program

(New text is in bold font and deleted text is in strikethrough.)
Adapted from CEQA Guidelines sec. 15097 Final Text, October 26, 1998
March 12, 2025

1. Project title and location:	Use Permit Application No. PLN2019-0075 Masroc Farms 616 N. Hopper Road, on the southeast corner of Hopper Road and Creekside Lane, north of the Modesto Irrigation District Main Canal, in the Modesto area. APNs 009-016-024 & -025.
2. Project Applicant name and address:	David Zwald, Masroc Farms 616 N. Hopper Road Modesto, CA 953
3. Person Responsible for Implementing Mitigation Program (Applicant Representative):	David Zwald, Masroc Farms
4. Contact person at County:	Kristen Anaya, Senior Planner (209) 525-6330

MITIGATION MEASURES AND MONITORING PROGRAM:

XII. NOISE

No. 1 Mitigation Measure: Noise control measures, consisting of noise barriers, greaseable bearings, rubber surfaces, bag house exhaust silencers, acoustic screens, and equipment shielding, as identified in the Environmental Noise Assessment Update by Bollard Acoustical Consultants, Inc. dated October 25, 2024 shall be implemented and maintained during facility operations where noise-generating hulling, shelling, sorting equipment, and auger lines are used, unless alternative measures providing equivalent or greater noise attenuation are approved and implemented pursuant to Mitigation Measure No. 3.

Who Implements the Measure:	Operator/Property Owner
When should the measure be implemented:	Upon project approval
When should it be completed:	Ongoing
Who verifies compliance:	Stanislaus County Planning Department, in consultation with a qualified noise consultant

Other Responsible Agencies: N/A

No. 2 Mitigation Measure: Prior to start of the 2025 almond harvest season, the existing auger line motor shall be replaced with a quieter model, subject to all applicable building permitting requirements.

Who Implements the Measure: Operator/Property Owner

When should the measure be implemented: Prior to the start of the 2025 almond harvest season

When should it be completed: Prior to the start of the 2025 almond harvest season

Who verifies compliance: Stanislaus County Planning Department, in consultation with a qualified noise consultant

Other Responsible Agencies: N/A

No. 3 Mitigation Measure: Noise levels associated with on-site activities shall comply with all applicable Stanislaus County noise standards. In the event that a documented noise complaint is received by the County, for noise resulting from activities associated with Use Permit No. PLN2019-0075, such complaint shall be investigated to determine if the allowable noise standards were exceeded. A documented noise complaint shall be considered one of the following:

A) ~~m~~**M**ultiple **bona fide** complaints received during a 24-hour period from more than one property owner and/or resident of the surrounding area; or,
B) ~~r~~**R**eceipt of noise measurements showing exceeded noise standards from a noise consultant determined by the County Planning Director to be qualified; or**,**
C) ~~r~~**R**eceipt of results from noise monitoring equipment calibrated by a noise consultant determined by the County Planning Director to be qualified and showing exceeded noise standards.

Upon receipt of a documented noise complaint, the County ~~may~~**shall** require additional noise analysis to be conducted, at the operator's/property owner's **expense**~~cost~~, in order to determine if noise standards may have been exceeded**, or to identify sound control measures to reduce on-site noise in the event the documented complaint via the methods identified in B or C above show exceeded noise standards**.

An exception to the noise analysis may be allowed by the County if the applicant has identified the source of the noise exceedance and provided verification of operational changes within 48 hours of being notified by the County, and the complaining party makes no further bona fide complaints for 48 hours.

Any additional noise analysis required to be conducted, including review, acceptance, development of recommended sound controls, and/or inspection associated with noise mitigation, shall be conducted by a qualified noise consultant, whose contract shall be procured either by the County Planning Department or by the operator/property owner. Should the County Planning Department procure the contract, a deposit based on actual cost of the noise analysis shall be made with the Planning

Department, by the operator/property owner, prior to any work being conducted. Should the operator/property owner choose to procure their own noise consultant, they shall be responsible to pay the County's costs to hire a third party to review the noise analysis if determined necessary. Upon receiving written notice from the County of the need for additional noise analysis or third-party review, the operator/property owner shall submit a deposit, in the amount determined necessary by the County, within 30-days of the deposit amount being identified by the County. The property owner/operator shall implement any **new or** additional sound control measures required to reduce noise to allowable levels within 30 days of the County having accepted the analysis as adequate. Additional time to implement County-approved sound control measures may be approved at the discretion of the Planning Director upon written request outlining the need for additional time and the interim steps to be taken to address the noise issues.

In the event the facility is determined to have exceeded noise standards, all equipment determined to be the source of exceedances shall cease operation during the daytime (7:00 a.m. to 10:00 p.m.) or nighttime (10:00 p.m. to 7:00 a.m.) period where exceedances occurred until sound reductions to comply with sound limits are achieved.

Who Implements the Measure:	Operator/Property Owner
When should the measure be implemented:	Upon project approval
When should it be completed:	Ongoing
Who verifies compliance:	Stanislaus County Planning Department, in consultation with a qualified noise consultant
Other Responsible Agencies:	N/A

I, the undersigned, do hereby certify that I understand and agree to be responsible for implementing the Mitigation Program for the above listed project.

Person Responsible for Implementing Mitigation Program

Date

Stanislaus County

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
1010 10TH Street, Suite 3400, Modesto, CA 95354
Planning Phone: (209) 525-6330 Fax: (209) 525-5911
Building Phone: (209) 525-6557 Fax: (209) 525-7759

MITIGATED NEGATIVE DECLARATION

NAME OF PROJECT: Use Permit Application No. PLN2019-0075 – Masroc Farms

LOCATION OF PROJECT: 616 N. Hopper Lane, on the southeast corner of Hopper Road and Creekside Lane, in the Modesto area.

PROJECT DEVELOPER: Dave Zwald, Masroc Farms

DESCRIPTION OF PROJECT: Request to expand and modify an existing almond hulling facility by adding shelling activities on-site, expanding outdoor storage, and permitting an existing 2,500 square-foot office and breakroom, on two parcels totaling 36.84± acres in the General Agriculture (A-2-40) zoning district.

Based upon the Initial Study, dated January 22, 2025 (amended on **March 12, 2025**), the Environmental Coordinator finds as follows:

1. This project does not have the potential to degrade the quality of the environment, nor to curtail the diversity of the environment.

2. This project will not have a detrimental effect upon either short-term or long-term environmental goals.

3. This project will not have impacts which are individually limited but cumulatively considerable.

4. This project will not have environmental impacts which will cause substantial adverse effects upon human beings, either directly or indirectly.

The aforementioned findings are contingent upon the following mitigation measures (if indicated) which shall be incorporated into this project:

1. Noise control measures, consisting of noise barriers, greaseable bearings, rubber surfaces, bag house exhaust silencers, acoustic screens, and equipment shielding, as identified in the Environmental Noise Assessment Update by Bollard Acoustical Consultants, Inc. dated October 25, 2024 shall be implemented and maintained during facility operations where noise-generating hulling, shelling, sorting equipment, and auger lines are used, unless alternative measures providing equivalent or greater noise attenuation are approved and implemented pursuant to Mitigation Measure No. 3.

2. Prior to start of the 2025 almond harvest season, the existing auger line motor shall be replaced with a quieter model, subject to all applicable building permitting requirements.

3. Noise levels associated with on-site activities shall comply with all applicable Stanislaus County noise standards. In the event that a documented noise complaint is received by the County, for noise resulting from activities associated with Use Permit No. PLN2019-0075, such complaint shall be investigated to determine if the allowable noise standards were exceeded. A documented noise complaint shall be considered one of the following:

   A) Multiple bona fide complaints received during a 24-hour period from more than one property owner and/or resident of the surrounding area; or,

B) Receipt of noise measurements showing exceeded noise standards from a noise consultant determined by the County Planning Director to be qualified; or,

C) Receipt of results from noise monitoring equipment calibrated by a noise consultant determined by the County Planning Director to be qualified and showing exceeded noise standards.

Upon receipt of a documented noise complaint, the County shall require additional noise analysis to be conducted, at the operator's/property owner's expense, in order to determine if noise standards may have been exceeded, or to identify sound control measures to reduce on-site noise in the event the documented complaint via the methods identified in B or C above show exceeded noise standards.

An exception to the noise analysis may be allowed by the County if the applicant has identified the source of the noise exceedance and provided verification of operational changes within 48 hours of being notified by the County, and the complaining party makes no further bona fide complaints for 48 hours.

Any additional noise analysis required to be conducted, including review, acceptance, development of recommended sound controls, and/or inspection associated with noise mitigation, shall be conducted by a qualified noise consultant, whose contract shall be procured either by the County Planning Department or by the operator/property owner. Should the County Planning Department procure the contract, a deposit based on actual cost of the noise analysis shall be made with the Planning Department, by the operator/property owner, prior to any work being conducted. Should the operator/property owner choose to procure their own noise consultant, they shall be responsible to pay the County's costs to hire a third party to review the noise analysis if determined necessary. Upon receiving written notice from the County of the need for additional noise analysis or third-party review, the operator/property owner shall submit a deposit, in the amount determined necessary by the County, within 30-days of the deposit amount being identified by the County. The property owner/operator shall implement any additional sound control measures required to reduce noise to allowable levels within 30 days of the County having accepted the analysis as adequate. Additional time to implement County-approved sound control measures may be approved at the discretion of the Planning Director upon written request outlining the need for additional time and the interim steps to be taken to address the noise issues.

In the event the facility is determined to have exceeded noise standards, all equipment determined to be the source of exceedances shall cease operation during the daytime (7:00 a.m. to 10:00 p.m.) or nighttime (10:00 p.m. to 7:00 a.m.) period where exceedances occurred until sound reductions to comply with sound limits are achieved.

The Initial Study and other environmental documents are available for public review at the Department of Planning and Community Development, 1010 10th Street, Suite 3400, Modesto, California.

Initial Study prepared by: Kristen Anaya, Senior Planner

Submit comments to: Stanislaus County
Planning and Community Development Department
1010 10th Street, Suite 3400
Modesto, California 95354

Masroc Farms Revised Project Description

The project is to permit and expand an existing legal non-conforming use at 616 N. Hopper Road for an almond hulling facility. In addition to the huller, the site includes almond orchards.

Historic Use

The use was established in 1968 by Duane Modean. Masroc Farms acquired the facility in 2011. Recordkeeping at the facility prior to the acquisition by Masroc Farms was spotty, so the following information is estimated and based upon information represented to Masroc Farms. The tonnage hulled ranged from 3.0 to 4.5 million meat pounds, depending on the size of the annual crop. The facility operated 7 days per week for 16 – 18 hours per day. The seasonal operation went from August to December. Vehicle trips averaged over 1,000 field runs hauled in 30-foot bobtail trucks. During the peak season, the facility employed seven (7) persons plus part-time truck drivers for the "morning and evening rush" for a total of ten (10) or eleven (11) employees.

Current Facility Information

Facilities

The facilities (current and proposed) are shown on the Site Plan. Prominent among them are the huller building, various equipment sheds and agricultural storage, an office, and a house and detached garage.

Also included are a drainage pond, stockpile areas, and solar panels.

The site is served by an established well and septic system.

The proposed future auger line will provide additional storage for hulls but does not correspond to any increase in vehicle trips, employees, or months/hours of operation. No other future facilities are proposed.

The chart below summarizes the main facilities.

Structure	Size	Status
Single Family Dwelling	900 sf	Existing
Garage	550 sf	Existing
Ag Storage Building	2150 sf	Existing
Shop/restroom	2100 sf	Existing
Office	2500 sf	Existing
Equipment Shed	6670 sf	Existing
Equipment Shed	5400 sf	Existing
Bag Houses	n/a	Existing
Huller	5400 sf	Existing
Water tank	10,000 gallon	Existing
Scale	n/a	Existing
Ground mount solar	n/a	Existing
Auger	n/a	Existing
Auger Extension	n/a	Future Proposed

Facility Process

Inbound nuts are field run. Outbound products include almond meats, almonds in-shell, hash, shells, hulls, and trash.

Field run almonds are brought to the site and either processed directly or stored in a stockpile. Whether processed directly or from a stockpile, the almonds go to a pit which is the in-bound portion of the huller. They are moved by elevator to the huller building where the hulling and shelling process takes place. Processed almonds (both meats and in-shell) are then placed in bins. The bins are stored inside the same building until picked up by the processors. No product is re-run through the huller/sheller. No other processes such as pasteurization or packaging are conducted.

The hulls and shells are sold to local dairies which transport those byproducts from the site. After the season is over, accumulated dirt is hauled off in one (1) or two (2) days in January or February.

Stockpiles last the length of the season, which averages 12 to 15 weeks. The processors' empty meat bins are on site during the length of the peak season with the last bin being removed usually on the last day of that season.

The machinery inside the huller building is not used during the off season although it might be turned on for maintenance on an occasional basis. Two (2) forklifts are used on the site intermittingly during the peak season to move bins. One (1) loader is used to collect and load both stockpiles and trash during the peak season. The loader is used during the off season to load trucks hauling away hulls until those are depleted.

Hash is separated during the hulling and shelling processes, so it is processed during the peak season. Once hulls and shells reach the outdoor piles, they are not brought back inside for additional machine processing. Water is not used in the processing. Fumigation of stockpiles occurs only during "bad worm" years under tarps which cover the stockpiles, and the fumigation is conducted by an outside licensed company.

The average tonnage that Masroc Farms hulls is 6 million meat pounds. It could be as low as 5.0 to 5.5 million meat pounds in low crop yield years. The maximum would be 7.0 million meat pounds.

{CONTINUED ON NEXT PAGE}

Peak v. Off-Peak Operation

Peak season runs from mid-August to November with the facility operating seven (7) days per week; twenty-four (24) hours per day. Employee count totals seven (7) with four (4) full-time and three (3) part-time employees. There are no current plans to have additional employees although there could be a need at some point for an additional employee or two.

Off-season runs from late-November to mid-August with the facility operating Monday through Friday or Saturday from 7 a.m. to 4 p.m. Employee count is four (4) full-time employees, however two (2) of these do work in the adjoining orchards so the actual employee count for the huller during the off-season is two (2) full-time employees.

{CONTINUED ON NEXT PAGE}

Vehicle Trips

Vehicle trips are summarized the chart below.

Trip Type	Vehicle Type	Number of Trips	Trip Frequency	Dates
Employee Peak Season	personal vehicle	2	daily	mid-August to November
Employee Off Season	personal vehicle	2	Monday-Friday or Saturday	November to mid-August
Customer Visits Peak Season	personal vehicle	occasional perhaps 10	occasional	mid-August to November
Customer Visits Off Season	n/a	n/a	n/a	n/a
Inbound field run almonds	semi-trucks with double trailers	470	varies from 1-2 to 12 trips/day	mid-August to late-October
Outbound meats & in-shell	semi-trucks either flatbed or double trailer	170	1-2/day	mid-August to November
Outbound shells	semi-truck w/belt drive trailer	132	1 or 2/day	mid-August to mid-January at latest
Outbound hulls	semi-truck w/belt drive trailer	200	varies	mid-August to June
As-needed trash	10-wheeler dump trucks	85	spread over one or two days	January or February
As-needed other	various	very few	occasional	varies

Customer trips are from eastern Stanislaus County. There are no longer-range regional trips.

Other Services

No other services currently are provided to outside orchards. Masroc Farms previously engaged in various off-site services but discontinued sweeping 7 – 8 years ago, harvesting 5 - 6 years ago, and shaking last year for outside orchards.

February 24, 2025

Kristen Anaya, Senior Planner
Stanislaus County Planning and Community Development
1010 Tenth Street, Suite 3400
Modesto, CA 95354

SUBJECT: PLN 2019-0075 Masroc Farms – Initial Study

Dear Ms. Anaya:

Thank you for giving us this opportunity to comment on the proposed expansion of the hulling operation located at 616 N. Hopper Rd.

We have lived on Hopper Road for more than 26 years. We are very familiar with the operation of the previous nonconforming use operated by Duane Modean. For 19 of those years, we lived comfortably and without complaint even when the hulling facility operated 24 hours a day. The hulling facility typically ran from mid-August to the end of October, scaling back operation from 24 hours a day to daytime only by the middle of October. Truck traffic consisted largely of individual panel trucks and almond carts pulled by passenger trucks. The rest of the year, the property owner cultivated his large almond orchard. During that time, we had no complaints about traffic or noise. Although we never measured the noise levels using a sound meter, the noise was acceptable for residential purposes and did not disturb our inside or outside activities appreciably.

We are the original complainants who raised concerns to the County Planning Department beginning December 2018 due to the extremely high level of noise (a whining/cranking sound measuring roughly 62-65 dBA), banging on trailers, and backup beepers throughout the night. The sound was high enough to cause vibrations in the walls of our home and could be heard and felt in rooms fully enclosed by walls with no windows or outside access. Needless to say, this disturbed our sleep patterns and caused us a great amount of stress. It was also a violation of the County's Noise Ordinance. If not for that noise, it is unlikely the County would have ever heard of this project and this process would never have been started.

Over a three-year period prior to our complaint, we noticed a steady increase in the length of time the huller ran from the end of October to the first week of January. We also saw almond trees removed to create a stockpile area, parking of numerous large truck/trailer combinations on the site, and the construction of an elevated auger line to a new stockpile area. We conducted research with County staff and found that the expansion we were seeing was expressly prohibited by a prior County land use permit issued at the Staff Approval level. We also learned from County staff that many physical changes, including the construction of the elevated auger line and the conversion of a number of existing buildings to alternative uses, did not obtain building permits from the County. Later, County staff let us know that the noise we were hearing was generated by improperly maintained wood bearings.

It has taken us over six (6) years to get to this point. Some of our concerns about noise have been addressed by the operator in consultation with Bollard Acoustical Consultants. (The noise study does not address the noise generated by banging on the side of the trailers or the backup beepers.) But this has not occurred without great cost to us personally. We spent more than $8,000 obtaining a study from an independent noise consultant, Saxelby Acoustics, and buying sound measuring equipment to satisfy County staff's demands for accurate measurement. Our consultant's report is referred to in those prepared by Bollard Acoustical Consultants and is attached herein for inclusion, in its entirety, into the public record.

As local residents who receive no financial benefit from this project, we continue to be disappointed that we have had to spend so much money performing the County's mandated duties. The County, not local residents, should be responsible for ensuring compliance with the County's laws and code, including purchasing the necessary equipment and spending the time necessary to determine if noise violates the Noise Ordinance.

That being said, over the past two (2) years, the operator has been generally operating at the levels reported in the latest report by Bollard Acoustical (47 dBA), with the exception of one four-day period in 2023 and occasionally when the machinery starts up (usually less than 30 minutes). Although this level does, in fact, exceed the Noise Ordinance standards, we are able to sleep at night and conduct outside activities in our backyard. My concern is that someone reviewing this report might think that 47 dBA is being approved through the issuance of this permit. It should be made clear that it is not. What the study says is that the consultant was unable to extract sounds like dog barking, the humming of mosquitos, and other noises in their sound measurements. In our own measurements, we have removed these sounds when we have taken measurements and the noise generated by the facility averages 45 dBA. During the times the facility is not operating, evening sounds typically average 33 dBA. In other words, the County noise ordinance allows the huller to operate at more than twice the sound level of our typical evening ambient noise. We make this point because there seems to be a tendency among noise consultants to discount one (1) or two (2) dBA differences as insignificant. We believe you have to draw a line somewhere. A standard is a standard. The County's Noise Ordinance is very clear and establishes that line. It is 45 dBA averaged over <u>any</u> one-hour period- not over the entire night and not for a number of days. For higher noise levels, the time allowed is shorter.

Traffic impacts have also been a concern for us. We continue to believe the County's Public Works Department is focusing too much on traffic volume and not considering traffic safety when evaluating this project. The use of large trucks and trailer combinations is new to this use and directly related to its expansion. Although we are zoned A-2, this is a relatively densely populated area. Many parcels along Hopper Rd., Creekside Lane, and Georgia Rd. are three (3) to ten (10) acres in size.

Attached are our more detailed comments on the Initial Study. We make these comments in the spirit of avoiding future complaints. This facility could change hands in the future, so we want to avoid spending more time and money to protect our way of life and our home. It is our desire and preference never to have to complain about how this facility is running ever again. We hope the County will give thoughtful consideration to our comments.

Thank you again for the opportunity to comment on this proposal. You can reach me or my wife at (209) 522-7711 or (209) 409-4912.

Sincerely,

[redacted]

Thomas J. Douglas and Debra Whitmore
548 N. Hopper Rd.
Modesto, CA 95357-1818

Attachment 1: Detailed comments on the Initial Study

Attachment 2: Noise measurements and observations of Masroc Farms hulling noise by Saxelby Acoustics

ATTACHMENT 1 – DETAILED COMMENTS ON THE INITIAL STUDY

1. PROJECT DESCRIPTION:

First, the project description is vague on which and how much hulling and shelling activities occur during the peak and off-peak season. Continuous operation of the hulling facility in both the peak- and off-season would have a very different and disruptive impact on the neighborhood than operating the facility during the peak season alone. The project description explains how many employees will be on site during each period but does not go into much detail about what they are doing and whether the facility is operating or not. We believe it is the County's assumption that hulling and shelling occur only during the peak season, but this is not clearly established in the project description. We would like to see a more precise definition of what is occurring during these operational periods. Should hulling and shelling operations be allowed to occur in the off-peak season (in other words, throughout the entire year), we would want to have the opportunity to provide additional comments as this would be a significant change in the project compared to its historical operation.

Second, it is important that industrial use of the hulling facility be prohibited. In the past, the operator has processed "hash" causing them to operate well beyond the traditional hulling season. In the "Agriculture and Forest Resources" section of the Initial Study, County staff state:

> *"No processing (e.g., "value-adding" activities such as roasting, flavoring, slicing, or otherwise combining with other ingredients) of any kind takes place on-site, nor does pasteurization or creation of "hash"."*

This restriction should be included in the project description. A condition of approval for the project should also be added to prohibit these activities.

2. NOISE:

Our primary concern here is the lack of an immediate enforcement action by the County to address nuisance noise. The County has been aware that the operation has not been complying with the Noise Ordinance since 2018. We provided noise readings from a calibrated noise meter but County staff were not willing to accept our data as documentation. After several months of complaining, County staff verified our noise complaint by visiting the site. The facility hired Bollard Acoustical Consultants to prepare a noise analysis which showed the facility to be in compliance (see the April 2020 report), so we had an independent study conducted in November 2020, during the hulling season, documenting the noise violations. In 2021, Bollard Acoustical Consultants prepared two additional studies which concluded the facility was not meeting the County's nighttime standard and recommended the operation be restricted to daytime hours. Yet, the huller continued to operate 24 hours a day for three more seasons. It wasn't until October 2024, when Bollard Acoustical Consultants conducted a

new noise study, that the County learned the facility was operating "generally" in compliance with the Noise Ordinance (i.e., two (2) dBA over the 45 dBA noise limit).

While we do agree that the facility has operated much better over the past two (2) years allowing us to live our lives in relative comfort, we are concerned about the potential for future noise violations as the equipment ages and/or personnel changes result in a lack of maintenance. Although the current facility can comply with the County's Noise Standards, there is no guarantee that it will continue to be. Much depends on the operator maintaining a commitment to operate the facility in accordance with this permit and make ongoing modifications as necessary should noise levels rise for whatever reason.

CEQA requires mitigation to a less than significant level to adopt a Mitigated Negative Declaration for a project. In this case, compliance with the County's noise standards is required to achieve a level of insignificance. Mitigation measures are intended to ensure such compliance on an ongoing basis. Given the ongoing issues of compliance with this operator, the County has added mitigation measure 3 to allow neighbors the opportunity to identify noise violations; however, this measure is quite vague on how the County will achieve immediate and sufficient mitigation. It also does not guarantee the County will do anything at all as it states the County "may" require a new noise analysis but that is all. In its current form, this mitigation measure does not trigger any specific action to achieve compliance with the County's noise standards and thereby achieve adequate mitigation. A mitigation measure requiring more study doesn't accomplish mitigation. It simply establishes yet another process much like this one- a process that has lasted more than six (6) years.

The 2021 study by Bollard establishes the appropriate remedy for these violations- namely, limiting the operation to daytime hours only. Mitigation measure 3 should be written in such a manner that any documented violation triggers this remedy. As currently written, the measure gives the County great latitude in deciding whether or not it will respond to a documented noise violation and contains no specific remedy to achieve adequate mitigation. Limiting the facility's hours of operation to daytime hours until the source of the violation can be identified and corrected is required. The fact that the noise violation has stopped is not an adequate response to periodic noise violations. The source of these periodic noise violations needs to be identified and a plan developed to correct it. In these cases, the County should not allow the facility to operate at nighttime hours until the source of the problem is identified and a plan adopted to ensure it is corrected. We would suggest the County require either a short-term plan to address maintenance or personnel issues or a long-term study to identify physical or procedural changes at the site. Meanwhile, the facility would be required to operate during the daytime hours only. If a short-term plan is approved, but later proves ineffective (a new noise violation), a long-term noise analysis needs to be prepared to determine how to avoid noise impacts to neighboring properties. Allowing the facility to continue operating at night during such investigations does not provide mitigation.

While we continue to have trouble with the idea that mitigation measure 3 places a tremendous burden on neighbors to identify noise violations, we believe that such documentation should be sufficient for the County to require the facility to immediately cease nighttime activities. Mitigation measure 3 as written doesn't trigger an action once a neighbor has submitted a documented noise violation. In fact, it establishes not just one hoop (the neighbors' readings), but two (a new noise study), before the County would potentially require changes to be made to the operation. All the while the facility may or may not be continuing to violate the County's noise ordinance. Mitigation measure 3 needs to be written to accept a documented noise violation by a neighbor or by County staff as evidence of a violation and take a specific action (limiting operation to nighttime activity) until it can be determined a method or corrective action will ensure that future violations do not occur through either the approval and implementation of a short-term plan or a long-term noise study.

Furthermore, mitigation measure 3 does not actually require the County to require a new noise study. The measure states the County "may" require a new noise analysis. To ensure adequate mitigation, the measure should establish a specific and nondiscretionary action by the County to achieve mitigation of the environmental impact. This can be corrected by requiring the County to immediately limit the operator to daytime activities until a plan or new study can be performed and its recommendations implemented.

3. NOISE:

The noise analysis prepared by Bollard Acoustical Consultants never evaluated two noise sources that can be particularly disturbing – banging on trailers and backup beepers. For the Sierra Grain project on Geer Road, the County required the operator to install sensors on their back up beepers so they only emitted sound if a person or object was near the vehicle emitting the sound. This minimizes the number of times the beeper goes off. Banging on trailers can probably be addressed by locating the trailers in such a manner that buildings or other barriers block sound transmission to our home. These noise sources should at least be addressed in the conditions of approval for the project.

4. TRANSPORTATION:

We continue to be concerned about traffic safety given the large double truck-trailer combinations used by the facility. We noted several potential solutions in our November 2019 response to the Early Consultation notice. Based on the discussion in this Initial Study, it is apparent County Public Works will not require the operator to make any improvements, instead focusing on traffic volume, not the road geometrics of our street. Their response ignores the fact that young children are present and require our protection. One of our neighbors has even erected a sign asking drivers to slow down for children. We suggest the following be added to the project so that the unthinkable does not occur- namely the severe death or injury of a child or adult.

First, the speeds of the large trucks should be limited to a maximum of 25 miles per hour. North Hopper Road has no posted speed limit; therefore, vehicles are permitted to travel 55 miles per hour. While many of the truck drivers going to and from the site travel at lower speeds, we have seen some take the lack of a speed limit to mean they can travel at much higher speeds. Stopping distances for these vehicles are quite long relative to a passenger car or pickup truck. In fact, empty truck-trailer combinations (which often travel faster on our street) have longer stopping distances than loaded ones. In an abundance of caution, we request the County post a 25 mile per hour speed limit sign that applies to these large vehicles.

Second, we believe the intersection of Highway 132 and North Hopper Road needs to be widened to accommodate the large truck-trailer combinations operated by the huller. We have provided the County with several pictures illustrating what we see on the road quite frequently- trucks turning into opposing traffic lanes. Traffic on Highway 132 is increasing every day, making it harder for even passenger vehicles to make left or right turns onto or out of North Hopper Road. In the past year, we witnessed an accident between a far smaller truck that turned onto Roscoe Road hitting an oncoming car approaching the intersection. The visibility at the Roscoe intersection was limited by trees which we believe contributed to the accident. North Hopper Road has similar visibility issues as new almond trees grow to maturity. If the County will not require the huller facility to make this improvement, we urge the County to widen the North Hopper Road intersection to improve the radius of the intersection to STAA standards to accommodate the large truck-trailer combinations being operated by the huller facility.

November 4, 2020

Debbie Whitmore
548 N Hopper Rd.
Modesto, CA 95350

Subject: **Noise measurements and observations of Masrock Farms hulling noise**

Dear Ms. Whitmore:

The following is our review of noise levels associated with he Masrock Farms hulling operations, as collected on your property. This letter is based upon our site visit conducted on September 24, 2020 and continuous noise measurement data collected from September 24 to October 6, 2020.

ACOUSTIC FUNDAMENTALS AND TERMINOLOGY

Fundamentals of Acoustics

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. C-weighted (dBC) noise levels are also commonly used for monitoring noise from music as the C-weighting is more sensitive to low-frequency noise (a.k.a. bass).

The decibel scale is logarithmic, not linear. In other words, two sound levels 10-dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10-dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound, and twice as loud as a 60 dBA sound.

(916) 760-8821
www.SaxNoise.com | Luke@SaxNoise.com
915 Highland Pointe Drive, Suite 250
Roseville, CA 95678

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn}, and shows very good correlation with community response to noise.

The day/night average level (DNL or L_{dn}) is based upon the average noise level over a 24-hour day, with a +10-decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

Table 1 lists several examples of the noise levels associated with common situations. **Appendix A** provides a summary of acoustical terms used in this report.

TABLE 1: TYPICAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft.)	--100--	
Gas Lawn Mower at 1 m (3 ft.)	--90--	
Diesel Truck at 15 m (50 ft.), at 80 km/hr. (50 mph)	--80--	Food Blender at 1 m (3 ft.) Garbage Disposal at 1 m (3 ft.)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft.)	--70--	Vacuum Cleaner at 3 m (10 ft.)
Commercial Area Heavy Traffic at 90 m (300 ft.)	--60--	Normal Speech at 1 m (3 ft.)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

Source: Caltrans, Technical Noise Supplement, Traffic Noise Analysis Protocol. September, 2013.

Effects of Noise on People

The effects of noise on people can be placed in three categories:

Subjective effects of annoyance, nuisance, and dissatisfaction

Interference with activities such as speech, sleep, and learning

Physiological effects such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

With regard to increases in A-weighted noise level, the following relationships occur:

Except in carefully controlled laboratory experiments, a change of 1-dBA cannot be perceived;

Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;

A change in level of at least 5-dBA is required before any noticeable change in human response would be expected; and

A 10-dBA change is subjectively heard as approximately a doubling in loudness and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6-dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

Applicable Standards

Stanislaus County General Plan

The Stanislaus County General Plan Noise Element establishes acceptable noise level limits for both transportation and non-transportation noise sources. The primary objective of the Noise Element is to prescribe policies that lead to the preservation and enhancement of the quality of life for the residents of Stanislaus County by securing and maintaining an environment free from excessive noise.

For stationary noise sources, such as hulling operations, Stanislaus County regulates the level of noise that may impact adjacent noise-sensitive uses. The County's General noise exposure limits applicable to this operation are summarized in **Table 2**.

TABLE 2: MAXIMUM ALLOWABLE NOISE EXPOSURE FOR STATIONARY NOISE SOURCES

Stanislaus County Noise Element of the General Plan		
Descriptor	**Daytime (7:00 a.m. to 10:00 p.m.)**	**Nighttime (10:00 p.m. to 7:00 a.m.)**
Hourly L_{eq}, dBA	55	45
Maximum Level (L_{max}), dBA	75	65

Notes:

[1] Each of the noise level standards specified in Table 2 shall be reduced by five (5) dBA for pure tone noises, noise consisting primarily of speech or music, or for recurring impulsive noises. The standards in Table 2 should be applied at a residential or other noise-sensitive land use and not on the property of a noise-generating land use. Where measured ambient noise levels exceed the standards, the standards shall be increased to the ambient levels.

Source: Stanislaus County Noise Element of the General Plan

Stanislaus County Noise Control Ordinance

The following are relevant sections from the County Noise Control Ordinance:

10.46.050 Exterior noise level standards.

A. It is unlawful for any person at any location within the unincorporated area of the county to create any noise or to allow the creation of any noise which causes the exterior noise level when measured at any property situated in either the incorporated or unincorporated area of the county to exceed the noise level standards as set forth below:

1. Unless otherwise provided herein, the following exterior noise level standards shall apply to all properties within the designated noise zone:

Table A
EXTERIOR NOISE LEVEL STANDARDS

Designated Noise Zone	Maximum A-Weighted Sound Level as Measured on a Sound Level Meter (LMAX)	
	7:00 a.m.—9:59 p.m.	10:00 p.m.—6:59 a.m.
Noise Sensitive	45	45
Residential	50	45
Commercial	60	55
Industrial	75	75

2. Exterior noise levels shall not exceed the following cumulative duration allowance standards:

Table B
CUMULATIVE DURATION
ALLOWANCE STANDARDS

Cumulative Duration	Allowance Decibels
Equal to or greater than 30 minutes per hour	Table A plus 0 dB
Equal to or greater than 15 minutes per hour	Table A plus 5 dB
Equal to or greater than 5 minutes per hour	Table A plus 10 dB
Equal to or greater than 1 minute per hour	Table A plus 15 dB
Less than 1 minute per hour	Table A plus 20 dB

3. Pure Tone Noise, Speech and Music. The exterior noise level standards set forth in Table A shall be reduced by five dB(A) for pure tone noises, noises consisting primarily of speech or music, or reoccurring impulsive noise.

4. In the event the measured ambient noise level exceeds the applicable noise level standard above, the ambient noise level shall become the applicable exterior noise level standard.

B. Noise Zones Defined.

1. Noise Sensitive. Any public or private school, hospital, church, convalescent home, cemetery, sensitive wildlife habitat, or public library regardless of its location within any land use zoning district.

2. Residential. All parcels located within a residential land use zoning district.

3. Commercial. All parcels located within a commercial or highway frontage land use zoning district.

4. Industrial. All parcels located within an industrial land use zoning district.

Noise Standard Summary

Based on the County General Plan standards, hourly noise limits are 45 dBA L_{eq} and 65 dBA L_{max} for nighttime (10:00 p.m. to 7:00 a.m.) hours and 55 dBA L_{eq} and 75 dBA L_{max} during daytime (7:00 a.m. to 10:00 p.m.) hours. If the noise source in is tonal or recurring impulsive a penalty would apply, reducing the standards by 5 dBA.

Under the County's noise ordinance, the residential noise standards would be 45 dBA L_{50} and 65 dBA L_{max} for nighttime (10:00 p.m. to 7:00 a.m.) hours and 50 dBA L_{50} and 70 dBA L_{max} during daytime (7:00 a.m. to 10:00 p.m.) hours, for continuous (more than 30 minutes per hour) noise sources. If the noise source is tonal or repetitive a penalty would also apply, reducing the standards by 5 dBA.

Noise Measurements

On September 24, 2020 Saxelby Acoustics measured noise levels at your residence, at the locations shown on **Figure 1**. In addition to short-term monitoring and observations, the monitor was left to collect unattended noise measurement data through October 6, 2020. **Table 3** summarizes the collected noise measurement data. **Appendix B** provides the complete results of the noise measurement survey.

The sound level meter was programmed to record the maximum, median, and average noise levels during the survey. The maximum value, denoted L_{max}, represents the highest noise level measured. The average value, denoted L_{eq}, represents the energy average of all the noise received by the sound level meter microphone during the monitoring period. The median value, denoted L_{50}, represents the sound level exceeded 50 percent of the time during the monitoring period.

A Larson Davis Laboratories (LDL) Model 831 precision integrating sound level meter was used for the noise level measurement survey. The meter was calibrated before and after use with a B&K Model 4230 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

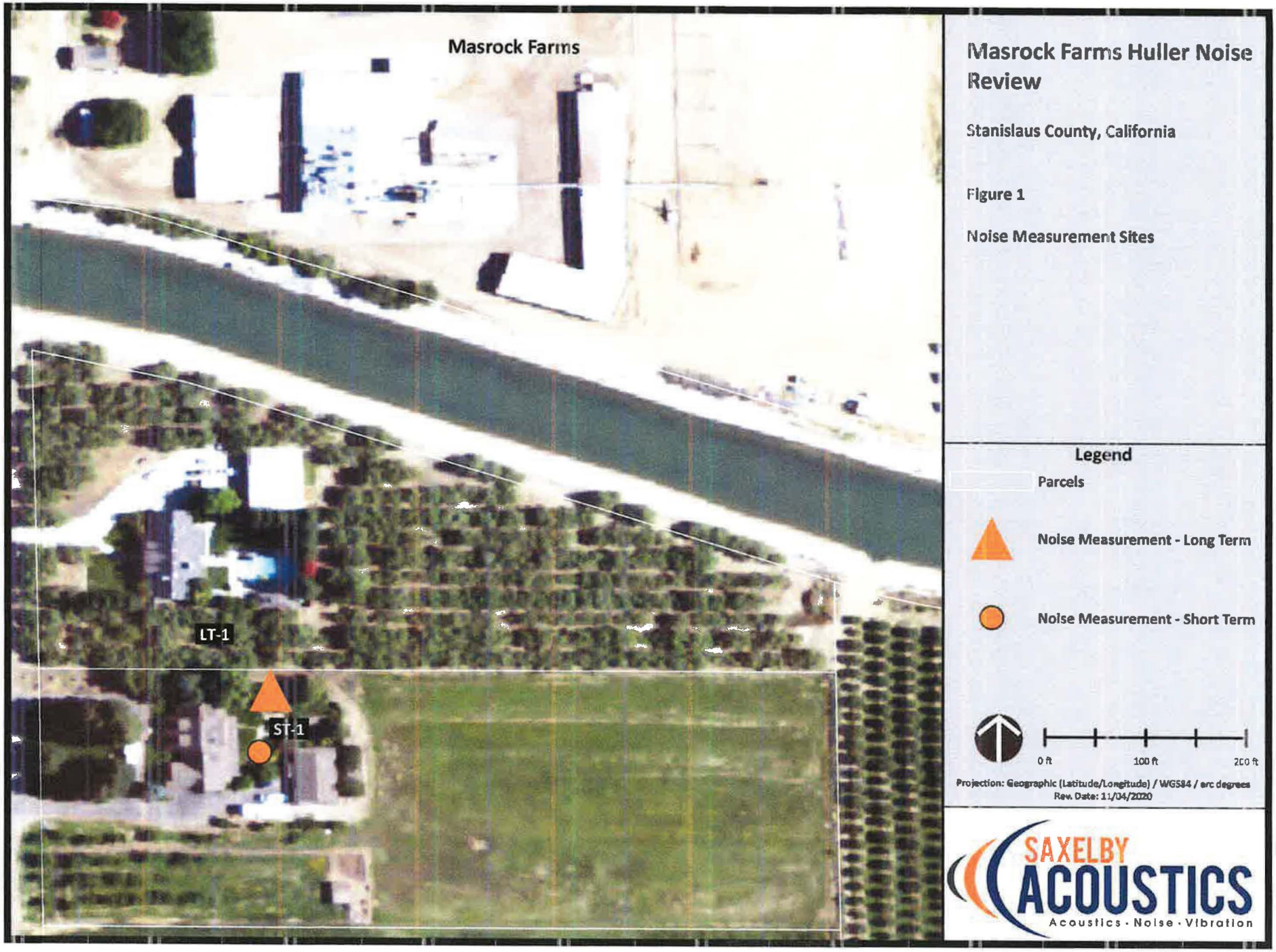
Masrock Farms
LT-1
ST-1
Masrock Farms Huller Noise Review
Stanislaus County, California
Figure 1
Noise Measurement Sites
Legend
Parcels
Noise Measurement - Long Term
Noise Measurement - Short Term
0 ft
100 ft
200 ft
Projection: Geographic (Latitude/Longitude) / WGS84 / arc degrees
Rev. Date: 11/04/2020
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TABLE 3: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA

Site	Location	Date	L_{dn}	Average Daytime L_{eq}	Average Daytime L_{50}	Average Daytime L_{max}	Average Nighttime L_{eq}	Average Nighttime L_{50}	Average Nighttime L_{max}
ST-1	Center of Backyard – Ambient noise, huller not running	9/24/20 – 9:07 a.m.	N/A	42 dBA	42 dBA	53 dBA	N/A	N/A	N/A
	Center of Backyard – Ambient noise and huller auger running	9/24/20 – 9:26 a.m.	N/A	48 dBA	50 dBA	60 dBA	N/A	N/A	N/A
LT-1	Property Line at Backyard	9/25/20 – 24 hrs.	56 dBA	50 dBA	49 dBA	67 dBA	**50 dBA**	**50 dBA**	60 dBA
		9/26/20 – 24 hrs.	57 dBA	53 dBA	50 dBA	69 dBA	**50 dBA**	**50 dBA**	60 dBA
		9/27/20 – 24 hrs.	60 dBA	**60 dBA**	49 dBA	69 dBA	**50 dBA**	**50 dBA**	61 dBA
		9/28/20 – 24 hrs.	56 dBA	52 dBA	49 dBA	70 dBA	**50 dBA**	**50 dBA**	60 dBA
		9/29/20 – 24 hrs.	57 dBA	50 dBA	49 dBA	69 dBA	**51 dBA**	**51 dBA**	63 dBA
		9/30/20 – 24 hrs.	65 dBA	**67 dBA**	50 dBA	**72 dBA**	**51 dBA**	**50 dBA**	59 dBA
		10/1/20 – 24 hrs.	57 dBA	51 dBA	49 dBA	69 dBA	**51 dBA**	**51 dBA**	59 dBA
		10/2/20 – 24 hrs.	61 dBA	**60 dBA**	**51 dBA**	**73 dBA**	**52 dBA**	**52 dBA**	62 dBA
		10/3/20 – 24 hrs.	60 dBA	**59 dBA**	50 dBA	**78 dBA**	**51 dBA**	**51 dBA**	61 dBA
		10/4/20 – 24 hrs.	58 dBA	**56 dBA**	50 dBA	69 dBA	**51 dBA**	**51 dBA**	60 dBA
		10/5/20 – 24 hrs.	62 dBA	51 dBA	50 dBA	66 dBA	**56 dBA**	**52 dBA**	64 dBA

Notes:

- All values shown in dBA
- Daytime hours: 7:00 a.m. to 10:00 p.m.
- Nighttime Hours: 10:00 p.m. to 7:00 a.m.
- Bold indicates a noise level exceeding either the County General Plan or County Noise Control Ordinance Standards.

Source: *Saxelby Acoustics, 2020.*

As indicated in **Table 3,** the noise monitoring data indicate that noise levels occasionally exceeded the County's daytime noise standards of 55 dBA L_{eq} (general plan standard), 50 dBA L_{50} (noise ordinance) and 70 dBA L_{max} (noise ordinance) and routinely exceed the County's 45 dBA L_{eq} and 45 dBA L_{50} nighttime noise standards.

Based on notes provided to us, and our own observations, typical daytime noise included various noise sources not related to Masrock Farms (traffic, dogs barking, planes, etc.). These types of intermittent noise sources are likely to contribute to the exceedance of the County's 55 dBA L_{eq} and 70 dBA L_{max} daytime noise standards. However, the L_{50} noise ordinance standard is less affected by intermittent noise sources and is most likely driven by continuous noise from the hulling operation. The **Table 3** data indicate that daytime noise levels of 49-51 dBA L_{50} were measured at your property. This correlates closely to the observed level of 50 dBA L_{50} measured by us at Site ST-1 during operation of the huller auger line.

Based upon our observations, and review of the 24-hour noise data, it appears that the hulling operation typically produces similar nighttime noise levels in the range of 49-53 dBA L_{50}. This exceeds the County's nighttime noise standards of 45 dBA L_{eq} (general plan) and 45 dBA L_{50} (noise ordinance) during most hours of the night.

Ambient Noise Increases

Based upon the notes you provided to us, the hulling operation was not operating at 8:00 a.m. on the morning of September 27. During this hour, background L_{50} values were measured to be 41 dBA L_{50}. This is close to the ambient noise reading of 42 dBA L_{50} measured by us at ST-1 on September 24 at 9:07 a.m. It is likely that nighttime ambient noise without the hulling operation would be even lower than 41-42 dBA L_{50}.

When compared to the measured ambient noise level of 41 dBA L_{50} (ST-1), it appears that the hulling facility is causing daytime ambient noise to increase by approximately 8-10 dBA and nighttime noise levels to increase by 8-12 dBA.

Conclusions

Based upon our observations and noise monitoring, the adjacent hulling operation appears to consistently exceed the County's nighttime noise standards of 45 dBA L_{eq} (general plan) and 45 dBA L_{50} (noise ordinance) during most hours of the night. The operation appears to be routinely causing noise levels which exceed background ambient noise by up to 10 dBA during daytime hours and up to 12 dBA during nighttime hours.

Sincerely,

Saxelby Acoustics LLC

[redacted]

Luke Saxelby, INCE Bd. Cert.
Principal Consultant
Board Certified, Institute of Noise Control Engineering

Appendix A: Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
ASTC	Apparent Sound Transmission Class. Similar to STC but includes sound from flanking paths and correct for room reverberation. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by +5 dBA and nighttime hours weighted by +10 dBA.
DNL	See definition of Ldn.
IIC	Impact Insulation Class. An integer-number rating of how well a building floor attenuates impact sounds, such as footsteps. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz (Hz).
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
L(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50% of the time during the one-hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
NIC	Noise Isolation Class. A rating of the noise reduction between two spaces. Similar to STC but includes sound from flanking paths and no correction for room reverberation.
NNIC	Normalized Noise Isolation Class. Similar to NIC but includes a correction for room reverberation.
Noise	Unwanted sound.
NRC	Noise Reduction Coefficient. NRC is a single-number rating of the sound-absorption of a material equal to the arithmetic mean of the sound-absorption coefficients in the 250, 500, 1000, and 2,000 Hz octave frequency bands rounded to the nearest multiple of 0.05. It is a representation of the amount of sound energy absorbed upon striking a particular surface. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption.
RT60	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 Sabin.
SEL	Sound Exposure Level. SEL is a rating, in decibels, of a discrete event, such as an aircraft flyover or train pass by, that compresses the total sound energy into a one-second event.
SPC	Speech Privacy Class. SPC is a method of rating speech privacy in buildings. It is designed to measure the degree of speech privacy provided by a closed room, indicating the degree to which conversations occurring within are kept private from listeners outside the room.
STC	Sound Transmission Class. STC is an integer rating of how well a building partition attenuates airborne sound. It is widely used to rate interior partitions, ceilings/floors, doors, windows and exterior wall configurations. The STC rating is typically used to rate the sound transmission of a specific building element when tested in laboratory conditions where flanking paths around the assembly don't exist. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
Simple Tone	Any sound which can be judged as audible as a single pitch or set of single pitches.

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Appendix B: Continuous and Short-Term Ambient Noise Measurement Results

Appendix B1: Continuous Noise Monitoring Results

Site: LT-1

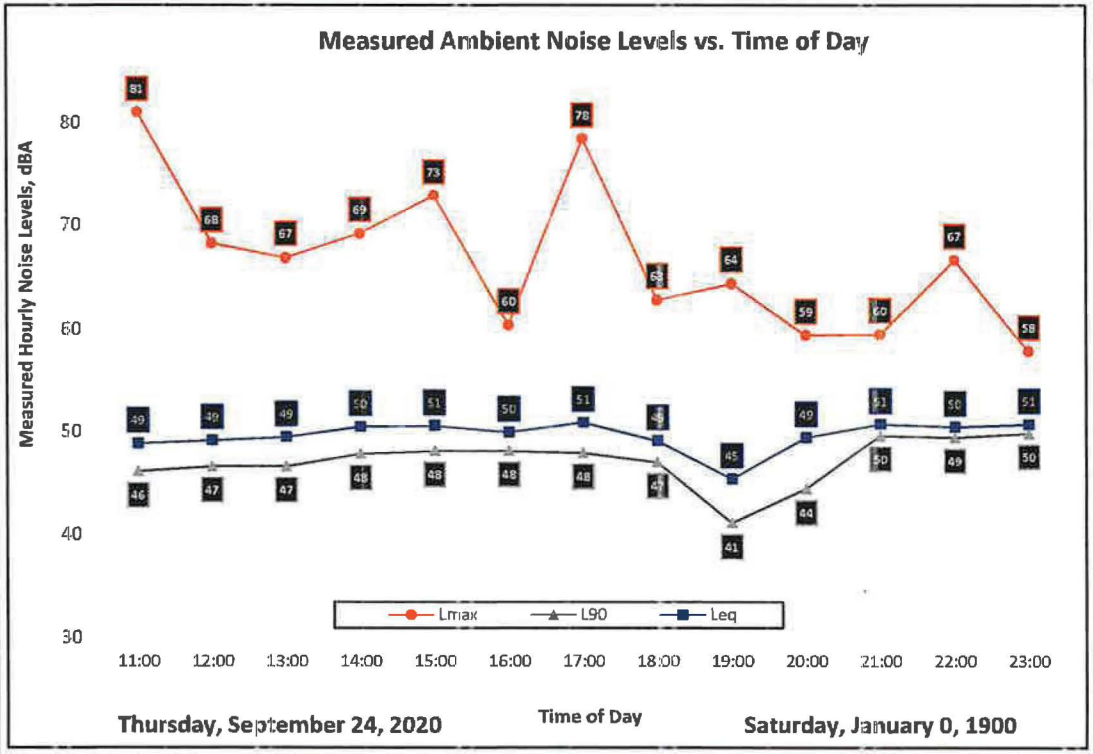
Project: Masrock Farms Huller Noise Evaluation Meter: LDL 831-2

Location: Masrock Farms Calibrator: CAL200

Coordinates: 37.645534°, -120.828754°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Thursday, September 24, 2020	11:00	49	81	48	46
Thursday, September 24, 2020	12:00	49	68	48	47
Thursday, September 24, 2020	13:00	49	67	48	47
Thursday, September 24, 2020	14:00	50	69	49	48
Thursday, September 24, 2020	15:00	51	73	50	48
Thursday, September 24, 2020	16:00	50	60	50	48
Thursday, September 24, 2020	17:00	51	78	49	48
Thursday, September 24, 2020	18:00	49	63	49	47
Thursday, September 24, 2020	19:00	45	64	44	41
Thursday, September 24, 2020	20:00	49	59	50	44
Thursday, September 24, 2020	21:00	51	60	51	50
Thursday, September 24, 2020	22:00	50	67	50	49
Thursday, September 24, 2020	23:00	51	58	51	50

Statistics	Leq	Lmax	L50	L90
Day Average	50	68	49	47
Night Average	43	10	8	8
Day Low	45	59	44	41
Day High	51	81	51	50
Night Low	0	0	0	0
Night High	51	67	51	50
Ldn	51.4	Day %		82
CNEL	52	Night %		18

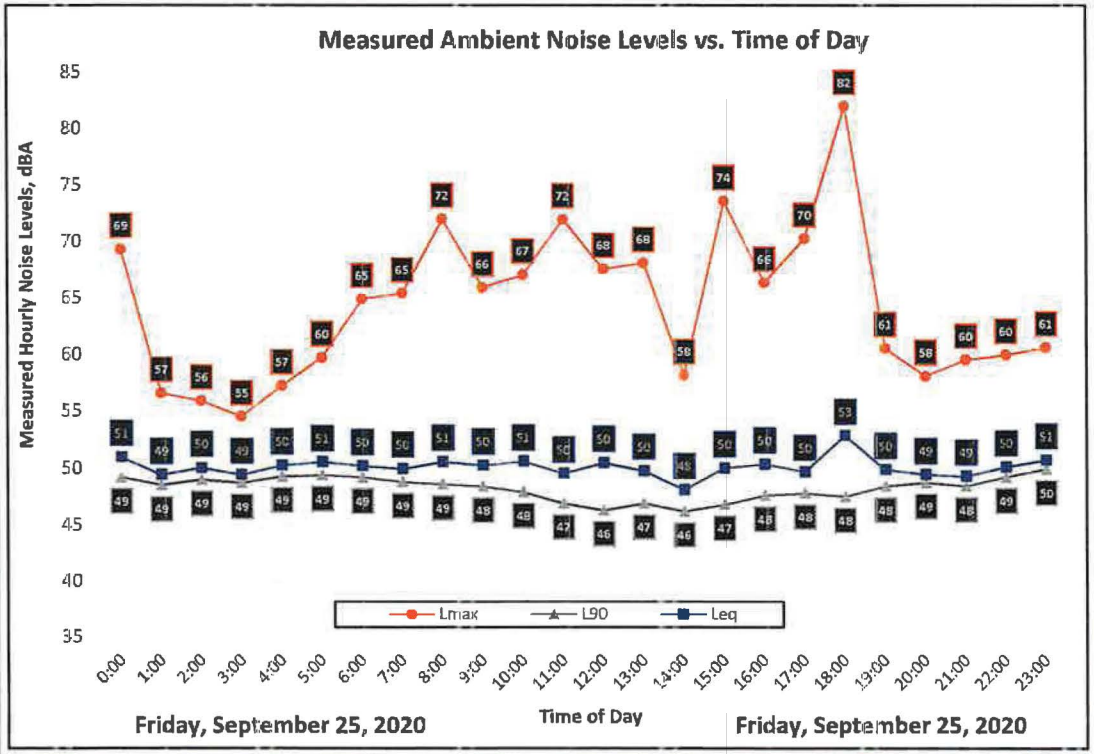


Appendix B2: Continuous Noise Monitoring Results

Site: LT-1
Project: Masrock Farms Huller Noise Evaluation
Location: Masrock Farms
Coordinates: 37.645534°, -120.828754°
Meter: LDL 831-2
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Friday, September 25, 2020	0:00	51	69	50	49
Friday, September 25, 2020	1:00	49	57	49	49
Friday, September 25, 2020	2:00	50	56	50	49
Friday, September 25, 2020	3:00	49	55	49	49
Friday, September 25, 2020	4:00	50	57	50	49
Friday, September 25, 2020	5:00	51	60	50	49
Friday, September 25, 2020	6:00	50	65	50	49
Friday, September 25, 2020	7:00	50	65	50	49
Friday, September 25, 2020	8:00	51	72	50	49
Friday, September 25, 2020	9:00	50	66	50	48
Friday, September 25, 2020	10:00	51	67	50	48
Friday, September 25, 2020	11:00	50	72	49	47
Friday, September 25, 2020	12:00	50	68	48	46
Friday, September 25, 2020	13:00	50	68	49	47
Friday, September 25, 2020	14:00	48	58	48	46
Friday, September 25, 2020	15:00	50	74	49	47
Friday, September 25, 2020	16:00	50	66	49	48
Friday, September 25, 2020	17:00	50	70	49	48
Friday, September 25, 2020	18:00	53	82	48	48
Friday, September 25, 2020	19:00	50	61	50	48
Friday, September 25, 2020	20:00	49	58	49	49
Friday, September 25, 2020	21:00	49	60	49	48
Friday, September 25, 2020	22:00	50	60	50	49
Friday, September 25, 2020	23:00	51	61	51	50

Statistics	Leq	Lmax	L50	L90
Day Average	50	67	49	48
Night Average	50	60	50	49
Day Low	48	58	48	46
Day High	53	82	50	49
Night Low	49	55	49	49
Night High	51	69	51	50
Ldn	56.2	Day %		65
CNEL	56	Night %		35



Appendix B3: Continuous Noise Monitoring Results

Site: LT-1

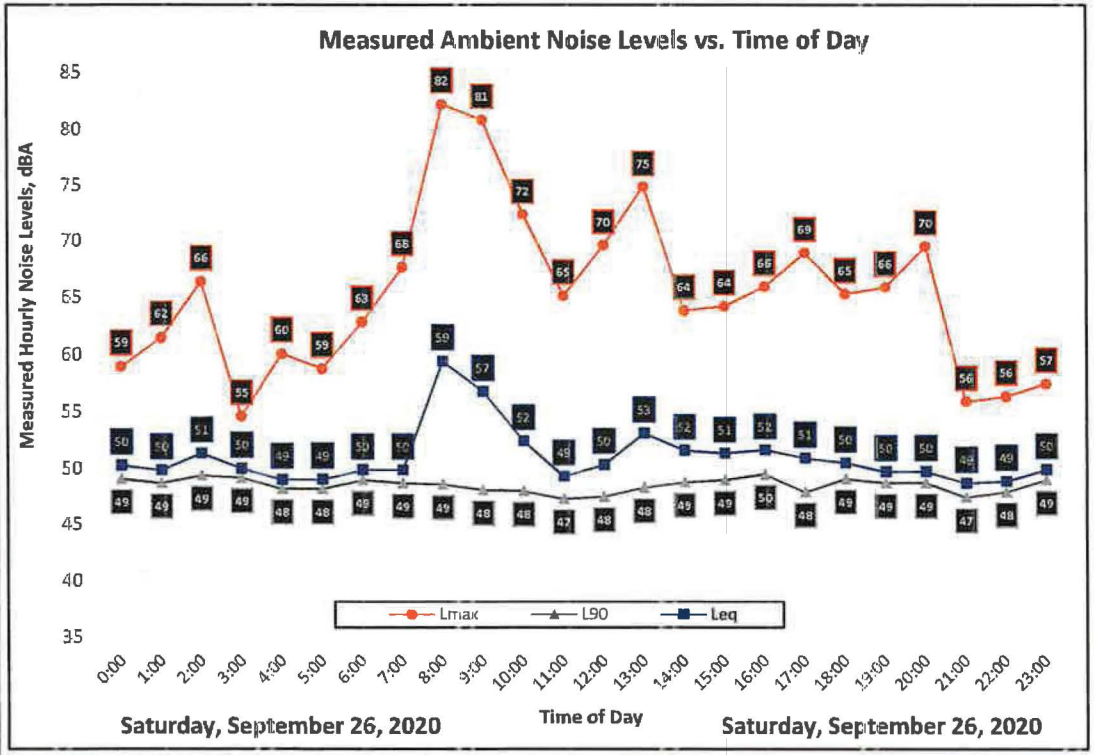
Project: Masrock Farms Huller Noise Evaluation Meter: LDL 831-2

Location: Masrock Farms Calibrator: CAL200

Coordinates: 37.645534°, -120.828754°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Saturday, September 26, 2020	0:00	50	59	50	49
Saturday, September 26, 2020	1:00	50	62	50	49
Saturday, September 26, 2020	2:00	51	66	51	49
Saturday, September 26, 2020	3:00	50	55	50	49
Saturday, September 26, 2020	4:00	49	60	49	48
Saturday, September 26, 2020	5:00	49	59	49	48
Saturday, September 26, 2020	6:00	50	63	50	49
Saturday, September 26, 2020	7:00	50	68	50	49
Saturday, September 26, 2020	8:00	59	82	50	49
Saturday, September 26, 2020	9:00	57	81	50	48
Saturday, September 26, 2020	10:00	52	72	50	48
Saturday, September 26, 2020	11:00	49	65	49	47
Saturday, September 26, 2020	12:00	50	70	49	48
Saturday, September 26, 2020	13:00	53	75	51	48
Saturday, September 26, 2020	14:00	52	64	51	49
Saturday, September 26, 2020	15:00	51	64	51	49
Saturday, September 26, 2020	16:00	52	66	51	50
Saturday, September 26, 2020	17:00	51	69	50	48
Saturday, September 26, 2020	18:00	50	65	50	49
Saturday, September 26, 2020	19:00	50	66	50	49
Saturday, September 26, 2020	20:00	50	70	50	49
Saturday, September 26, 2020	21:00	49	56	49	47
Saturday, September 26, 2020	22:00	49	56	49	48
Saturday, September 26, 2020	23:00	50	57	50	49

Statistics	Leq	Lmax	L50	L90
Day Average	53	69	50	48
Night Average	50	60	50	49
Day Low	49	56	49	47
Day High	59	82	51	50
Night Low	49	55	49	48
Night High	51	66	51	49
Ldn	56.6	Day %		79
CNEL	57	Night %		21



Appendix B4: Continuous Noise Monitoring Results

Site: LT-1

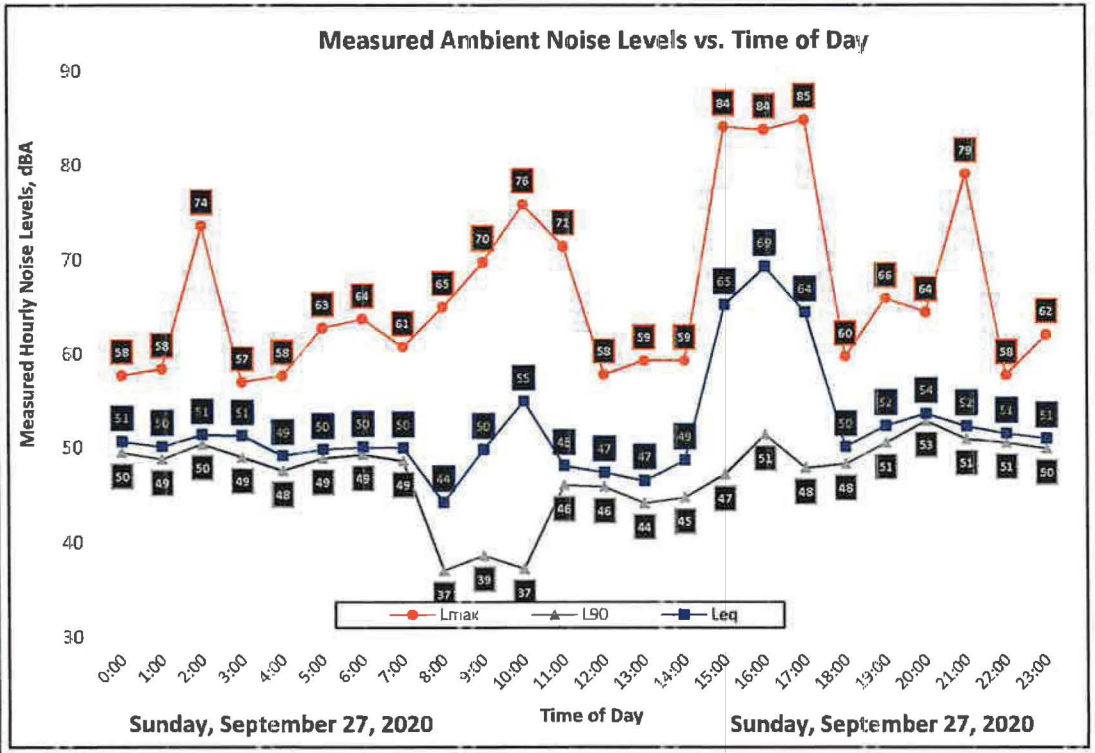
Project: Masrock Farms Huller Noise Evaluation Meter: LDL 831-2

Location: Masrock Farms Calibrator: CAL200

Coordinates: 37.645534°, -120.828754°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Sunday, September 27, 2020	0:00	51	58	51	50
Sunday, September 27, 2020	1:00	50	58	50	49
Sunday, September 27, 2020	2:00	51	74	51	50
Sunday, September 27, 2020	3:00	51	57	51	49
Sunday, September 27, 2020	4:00	49	58	49	48
Sunday, September 27, 2020	5:00	50	63	50	49
Sunday, September 27, 2020	6:00	50	64	50	49
Sunday, September 27, 2020	7:00	50	61	50	49
Sunday, September 27, 2020	8:00	44	65	41	37
Sunday, September 27, 2020	9:00	50	70	48	39
Sunday, September 27, 2020	10:00	55	76	44	37
Sunday, September 27, 2020	11:00	48	71	48	46
Sunday, September 27, 2020	12:00	47	58	47	46
Sunday, September 27, 2020	13:00	47	59	46	44
Sunday, September 27, 2020	14:00	49	59	47	45
Sunday, September 27, 2020	15:00	65	84	49	47
Sunday, September 27, 2020	16:00	69	84	60	51
Sunday, September 27, 2020	17:00	64	85	49	48
Sunday, September 27, 2020	18:00	50	60	50	48
Sunday, September 27, 2020	19:00	52	66	52	51
Sunday, September 27, 2020	20:00	54	64	54	53
Sunday, September 27, 2020	21:00	52	79	52	51
Sunday, September 27, 2020	22:00	51	58	51	51
Sunday, September 27, 2020	23:00	51	62	51	50

Statistics	Leq	Lmax	L50	L90
Day Average	60	69	49	46
Night Average	50	61	50	49
Day Low	44	58	41	37
Day High	69	85	60	53
Night Low	49	57	49	48
Night High	51	74	51	51
Ldn	60.2	Day %		95
CNEL	60	Night %		5

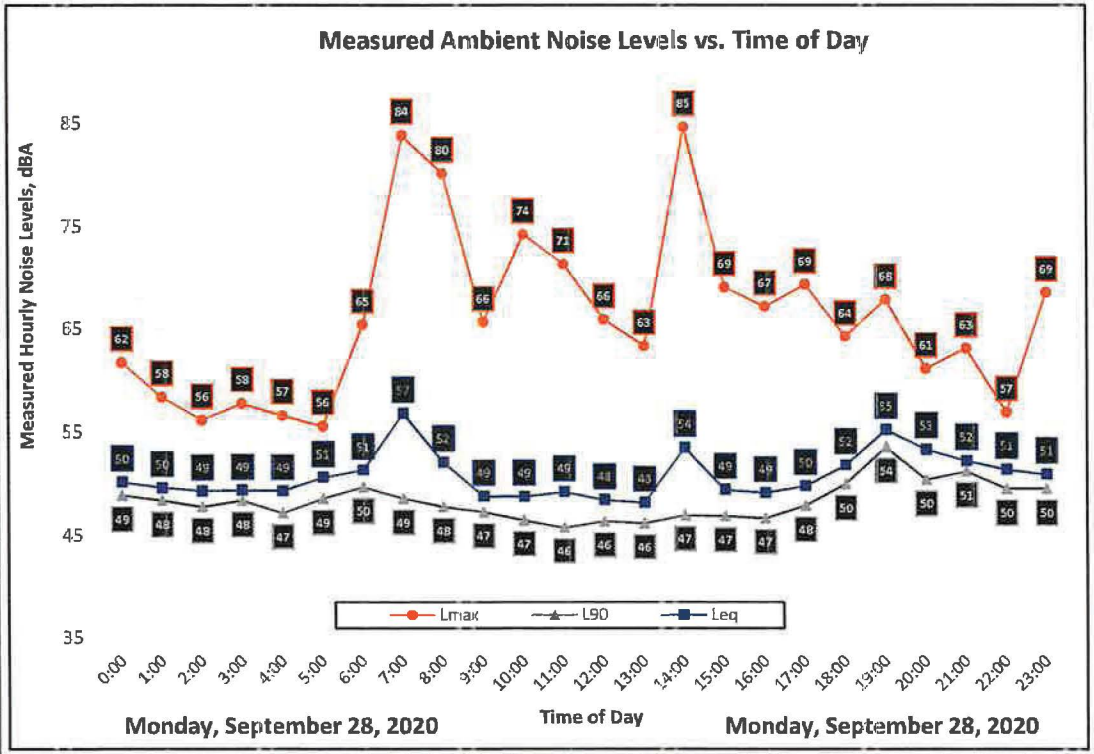


Appendix B5: Continuous Noise Monitoring Results

Site: LT-1
Project: Masrock Farms Huller Noise Evaluation
Meter: LDL 831-2
Location: Masrock Farms
Calibrator: CAL200
Coordinates: 37.645534°, -120.828754°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Monday, September 28, 2020	0:00	50	62	50	49
Monday, September 28, 2020	1:00	50	58	49	48
Monday, September 28, 2020	2:00	49	56	49	48
Monday, September 28, 2020	3:00	49	58	49	48
Monday, September 28, 2020	4:00	49	57	50	47
Monday, September 28, 2020	5:00	51	56	51	49
Monday, September 28, 2020	6:00	51	65	51	50
Monday, September 28, 2020	7:00	57	84	50	49
Monday, September 28, 2020	8:00	52	80	49	48
Monday, September 28, 2020	9:00	49	66	48	47
Monday, September 28, 2020	10:00	49	74	48	47
Monday, September 28, 2020	11:00	49	71	47	46
Monday, September 28, 2020	12:00	48	66	48	46
Monday, September 28, 2020	13:00	48	63	47	46
Monday, September 28, 2020	14:00	54	85	48	47
Monday, September 28, 2020	15:00	49	69	48	47
Monday, September 28, 2020	16:00	49	67	48	47
Monday, September 28, 2020	17:00	50	69	49	48
Monday, September 28, 2020	18:00	52	64	51	50
Monday, September 28, 2020	19:00	55	68	55	54
Monday, September 28, 2020	20:00	53	61	52	50
Monday, September 28, 2020	21:00	52	63	52	51
Monday, September 28, 2020	22:00	51	57	51	50
Monday, September 28, 2020	23:00	51	69	51	50

Statistics	Leq	Lmax	L50	L90
Day Average	52	70	49	48
Night Average	50	60	50	49
Day Low	48	61	47	46
Day High	57	85	55	54
Night Low	49	56	49	47
Night High	51	69	51	50
Ldn	56.5	Day %		74
CNEL	57	Night %		26

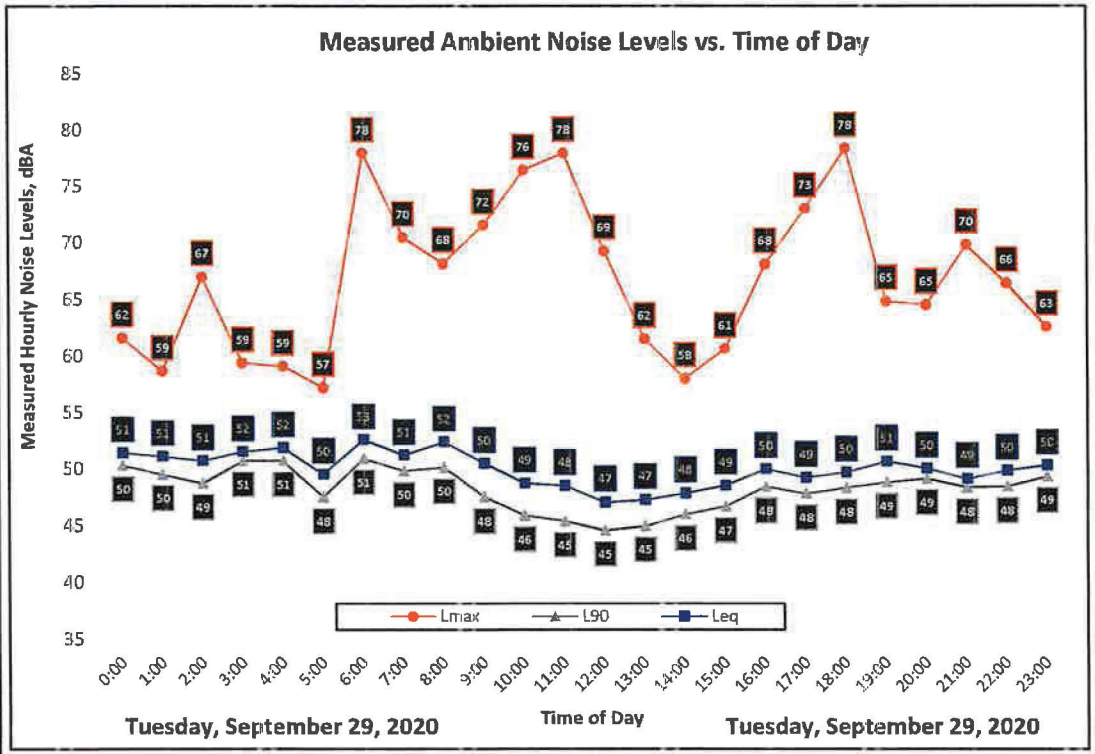


Appendix B6: Continuous Noise Monitoring Results

Site: LT-1
Project: Masrock Farms Huller Noise Evaluation
Meter: LDL 831-2
Location: Masrock Farms
Calibrator: CAL200
Coordinates: 37.645534°, -120.828754°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Tuesday, September 29, 2020	0:00	51	62	52	50
Tuesday, September 29, 2020	1:00	51	59	51	50
Tuesday, September 29, 2020	2:00	51	67	50	49
Tuesday, September 29, 2020	3:00	52	59	52	51
Tuesday, September 29, 2020	4:00	52	59	52	51
Tuesday, September 29, 2020	5:00	50	57	49	48
Tuesday, September 29, 2020	6:00	53	78	52	51
Tuesday, September 29, 2020	7:00	51	70	51	50
Tuesday, September 29, 2020	8:00	52	68	51	50
Tuesday, September 29, 2020	9:00	50	72	49	48
Tuesday, September 29, 2020	10:00	49	76	47	46
Tuesday, September 29, 2020	11:00	48	78	46	45
Tuesday, September 29, 2020	12:00	47	69	46	45
Tuesday, September 29, 2020	13:00	47	62	47	45
Tuesday, September 29, 2020	14:00	48	58	48	46
Tuesday, September 29, 2020	15:00	49	61	48	47
Tuesday, September 29, 2020	16:00	50	68	49	48
Tuesday, September 29, 2020	17:00	49	73	49	48
Tuesday, September 29, 2020	18:00	50	78	49	48
Tuesday, September 29, 2020	19:00	51	65	50	49
Tuesday, September 29, 2020	20:00	50	65	50	49
Tuesday, September 29, 2020	21:00	49	70	49	48
Tuesday, September 29, 2020	22:00	50	66	49	48
Tuesday, September 29, 2020	23:00	50	63	50	49

Statistics	Leq	Lmax	L50	L90
Day Average	50	69	49	47
Night Average	51	63	51	50
Day Low	47	58	46	45
Day High	52	78	51	50
Night Low	50	57	49	48
Night High	53	78	52	51
Ldn	57.0	Day %		56
CNEL	57	Night %		44



Appendix B7: Continuous Noise Monitoring Results

Site: LT-1

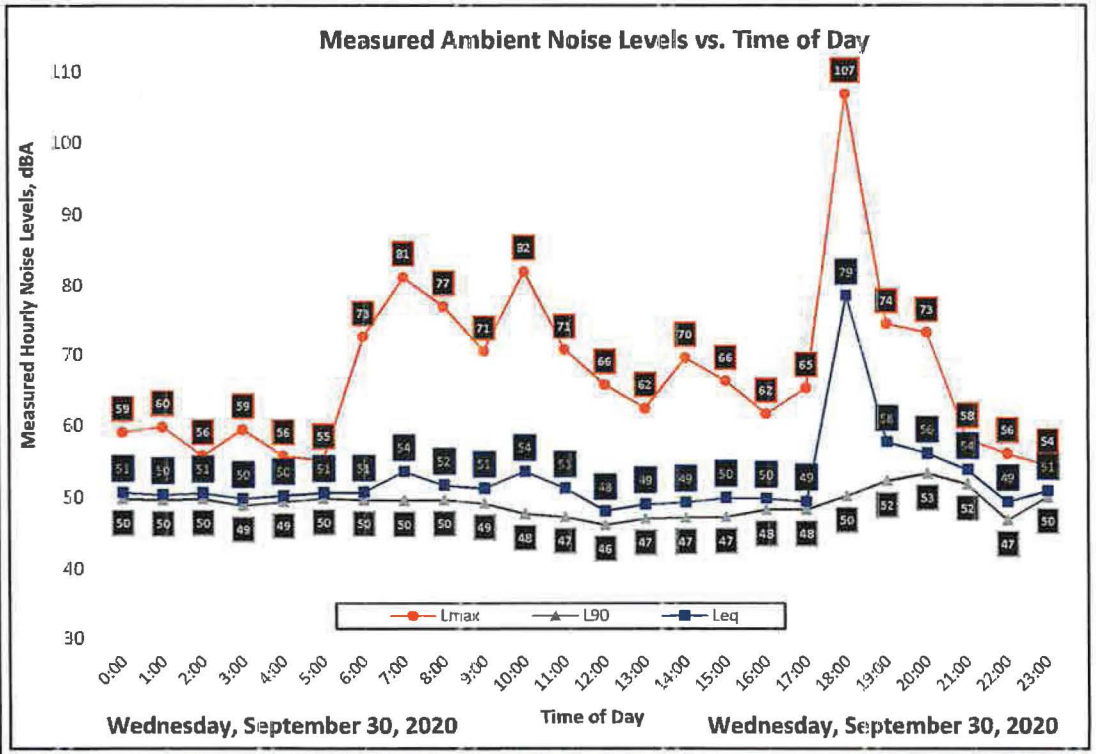
Project: Masrock Farms Huller Noise Evaluation Meter: LDL 831-2

Location: Masrock Farms Calibrator: CAL200

Coordinates: 37.645534°, -120.828754°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Wednesday, September 30, 2020	0:00	51	59	51	50
Wednesday, September 30, 2020	1:00	50	60	50	50
Wednesday, September 30, 2020	2:00	51	56	51	50
Wednesday, September 30, 2020	3:00	50	59	50	49
Wednesday, September 30, 2020	4:00	50	56	50	49
Wednesday, September 30, 2020	5:00	51	55	51	50
Wednesday, September 30, 2020	6:00	51	73	50	50
Wednesday, September 30, 2020	7:00	54	81	50	50
Wednesday, September 30, 2020	8:00	52	77	51	50
Wednesday, September 30, 2020	9:00	51	71	50	49
Wednesday, September 30, 2020	10:00	54	82	49	48
Wednesday, September 30, 2020	11:00	51	71	49	47
Wednesday, September 30, 2020	12:00	48	66	48	46
Wednesday, September 30, 2020	13:00	49	62	48	47
Wednesday, September 30, 2020	14:00	49	70	49	47
Wednesday, September 30, 2020	15:00	50	66	49	47
Wednesday, September 30, 2020	16:00	50	62	49	48
Wednesday, September 30, 2020	17:00	49	65	49	48
Wednesday, September 30, 2020	18:00	79	107	52	50
Wednesday, September 30, 2020	19:00	58	74	54	52
Wednesday, September 30, 2020	20:00	56	73	56	53
Wednesday, September 30, 2020	21:00	54	58	54	52
Wednesday, September 30, 2020	22:00	49	56	49	47
Wednesday, September 30, 2020	23:00	51	54	51	50

Statistics	Leq	Lmax	L50	L90
Day Average	67	72	50	49
Night Average	51	59	50	49
Day Low	48	58	48	46
Day High	79	107	56	53
Night Low	50	54	49	47
Night High	51	73	51	50
Ldn	65.4	Day %		99
CNEL	66	Night %		1

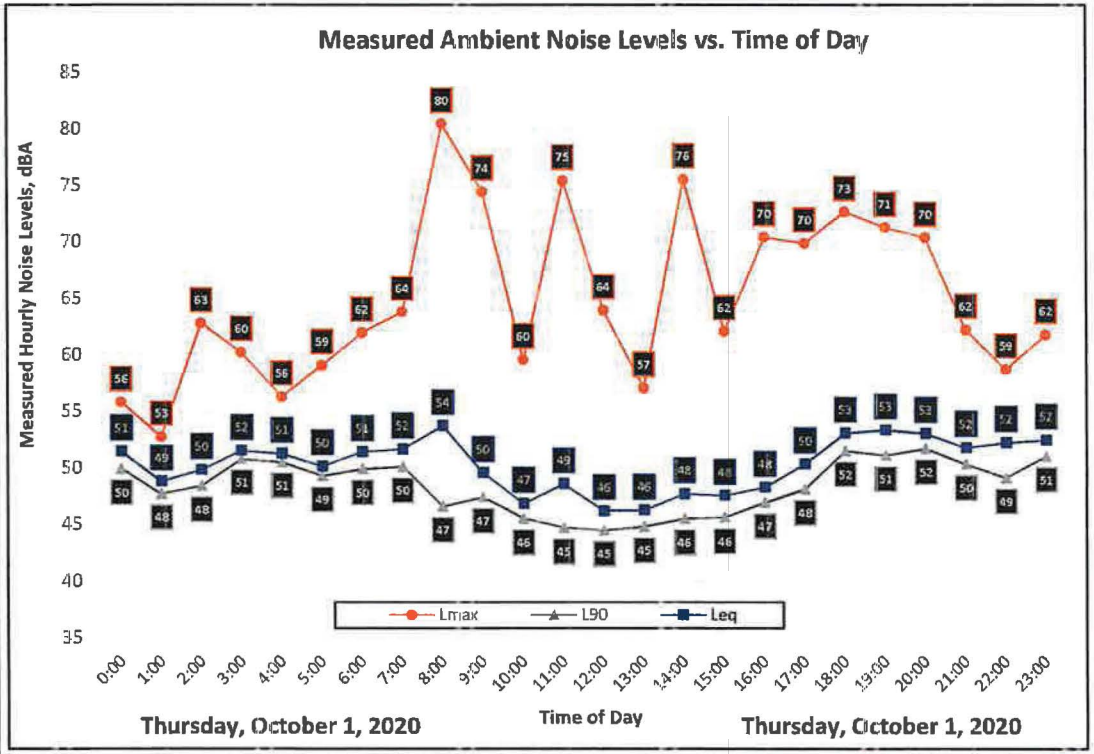


Appendix B8: Continuous Noise Monitoring Results

Site: LT-1
Project: Masrock Farms Huller Noise Evaluation
Location: Masrock Farms
Coordinates: 37.645534°, -120.828754°
Meter: LDL 831-2
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Thursday, October 1, 2020	0:00	51	56	51	50
Thursday, October 1, 2020	1:00	49	53	49	48
Thursday, October 1, 2020	2:00	50	63	50	48
Thursday, October 1, 2020	3:00	52	60	52	51
Thursday, October 1, 2020	4:00	51	56	51	51
Thursday, October 1, 2020	5:00	50	59	50	49
Thursday, October 1, 2020	6:00	51	62	51	50
Thursday, October 1, 2020	7:00	52	64	51	50
Thursday, October 1, 2020	8:00	54	80	50	47
Thursday, October 1, 2020	9:00	50	74	49	47
Thursday, October 1, 2020	10:00	47	60	46	46
Thursday, October 1, 2020	11:00	49	75	46	45
Thursday, October 1, 2020	12:00	46	64	46	45
Thursday, October 1, 2020	13:00	46	57	46	45
Thursday, October 1, 2020	14:00	48	76	47	46
Thursday, October 1, 2020	15:00	48	62	47	46
Thursday, October 1, 2020	16:00	48	70	48	47
Thursday, October 1, 2020	17:00	50	70	50	48
Thursday, October 1, 2020	18:00	53	73	52	52
Thursday, October 1, 2020	19:00	53	71	53	51
Thursday, October 1, 2020	20:00	53	70	53	52
Thursday, October 1, 2020	21:00	52	62	52	50
Thursday, October 1, 2020	22:00	52	59	52	49
Thursday, October 1, 2020	23:00	52	62	52	51

Statistics	Leq	Lmax	L50	L90
Day Average	51	69	49	48
Night Average	51	59	51	50
Day Low	46	57	46	45
Day High	54	80	53	52
Night Low	49	53	49	48
Night High	52	63	52	51
Ldn	56.9	Day %		63
CNEL	57	Night %		37



Appendix B9: Continuous Noise Monitoring Results

Site: LT-1

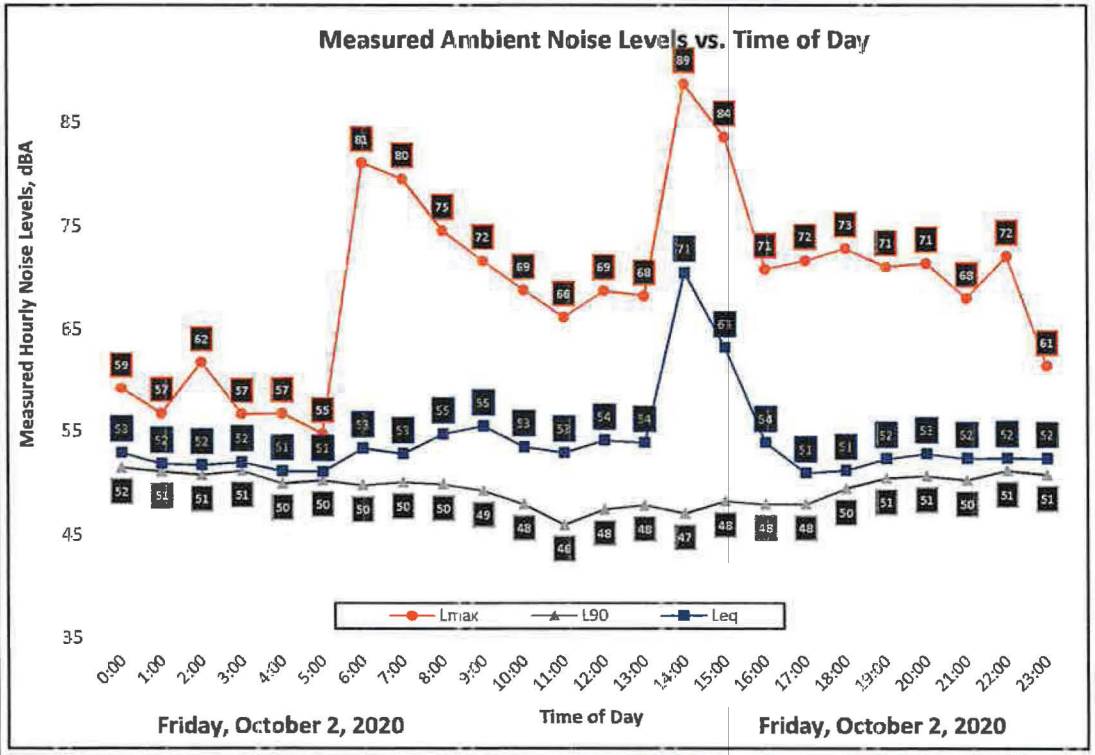
Project: Masrock Farms Huller Noise Evaluation Meter: LDL 831-2

Location: Masrock Farms Calibrator: CAL200

Coordinates: 37.645534°, -120.828754°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Friday, October 2, 2020	0:00	53	59	53	52
Friday, October 2, 2020	1:00	52	57	52	51
Friday, October 2, 2020	2:00	52	62	52	51
Friday, October 2, 2020	3:00	52	57	52	51
Friday, October 2, 2020	4:00	51	57	51	50
Friday, October 2, 2020	5:00	51	55	51	50
Friday, October 2, 2020	6:00	53	81	51	50
Friday, October 2, 2020	7:00	53	80	51	50
Friday, October 2, 2020	8:00	55	75	52	50
Friday, October 2, 2020	9:00	55	72	54	49
Friday, October 2, 2020	10:00	53	69	49	48
Friday, October 2, 2020	11:00	53	66	48	46
Friday, October 2, 2020	12:00	54	69	50	48
Friday, October 2, 2020	13:00	54	68	51	48
Friday, October 2, 2020	14:00	71	89	50	47
Friday, October 2, 2020	15:00	63	84	50	48
Friday, October 2, 2020	16:00	54	71	49	48
Friday, October 2, 2020	17:00	51	72	49	48
Friday, October 2, 2020	18:00	51	73	50	50
Friday, October 2, 2020	19:00	52	71	52	51
Friday, October 2, 2020	20:00	53	71	51	51
Friday, October 2, 2020	21:00	52	68	52	50
Friday, October 2, 2020	22:00	52	72	52	51
Friday, October 2, 2020	23:00	52	61	52	51

Statistics	Leq	Lmax	L50	L90
Day Average	60	73	51	49
Night Average	52	62	52	51
Day Low	51	66	48	46
Day High	71	89	54	51
Night Low	51	55	51	50
Night High	53	81	53	52
Ldn	60.9	Day %		93
CNEL	61	Night %		7



Appendix B10: Continuous Noise Monitoring Results

Site: LT-1

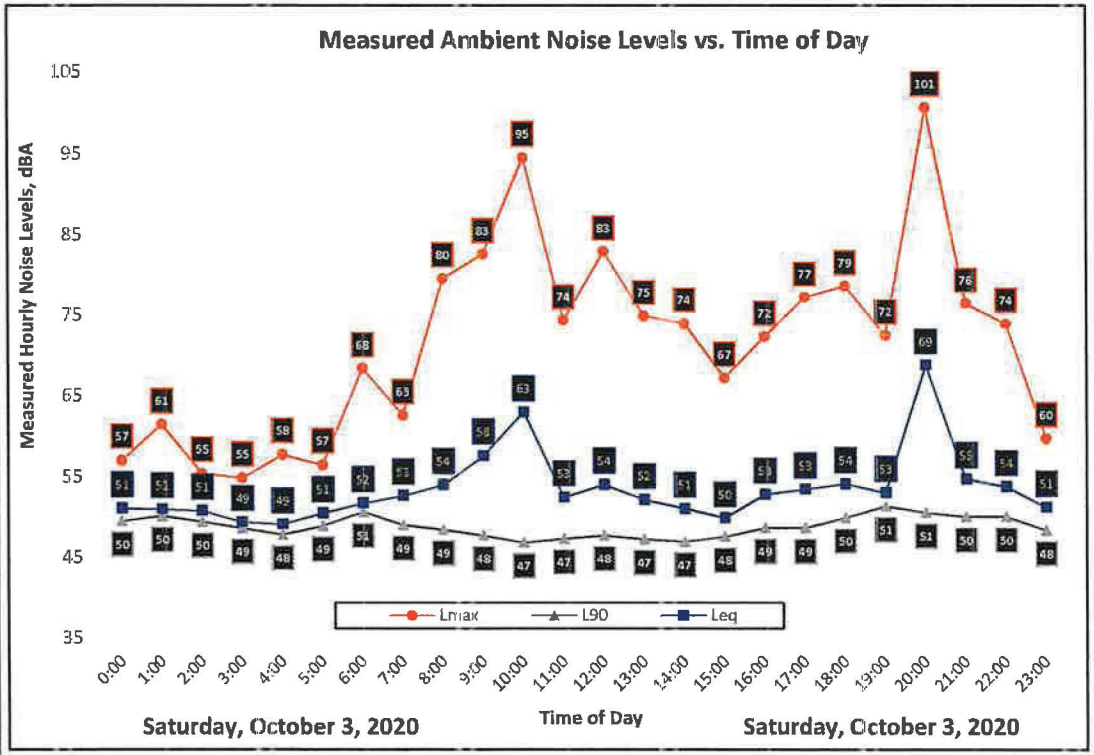
Project: Masrock Farms Huller Noise Evaluation Meter: LDL 831-2

Location: Masrock Farms Calibrator: CAL200

Coordinates: 37.645534°, -120.828754°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Saturday, October 3, 2020	0:00	51	57	51	50
Saturday, October 3, 2020	1:00	51	61	51	50
Saturday, October 3, 2020	2:00	51	55	51	50
Saturday, October 3, 2020	3:00	49	55	49	49
Saturday, October 3, 2020	4:00	49	58	49	48
Saturday, October 3, 2020	5:00	51	57	51	49
Saturday, October 3, 2020	6:00	52	68	52	51
Saturday, October 3, 2020	7:00	53	63	52	49
Saturday, October 3, 2020	8:00	54	80	50	49
Saturday, October 3, 2020	9:00	58	83	49	48
Saturday, October 3, 2020	10:00	63	95	48	47
Saturday, October 3, 2020	11:00	53	74	49	47
Saturday, October 3, 2020	12:00	54	83	49	48
Saturday, October 3, 2020	13:00	52	75	49	47
Saturday, October 3, 2020	14:00	51	74	49	47
Saturday, October 3, 2020	15:00	50	67	49	48
Saturday, October 3, 2020	16:00	53	72	50	49
Saturday, October 3, 2020	17:00	53	77	50	49
Saturday, October 3, 2020	18:00	54	79	51	50
Saturday, October 3, 2020	19:00	53	72	53	51
Saturday, October 3, 2020	20:00	69	101	53	51
Saturday, October 3, 2020	21:00	55	76	52	50
Saturday, October 3, 2020	22:00	54	74	52	50
Saturday, October 3, 2020	23:00	51	60	50	48

Statistics	Leq	Lmax	L50	L90
Day Average	59	78	50	49
Night Average	51	61	51	49
Day Low	50	63	48	47
Day High	69	101	53	51
Night Low	49	55	49	48
Night High	52	74	52	51
Ldn	59.6	Day %		93
CNEL	62	Night %		7

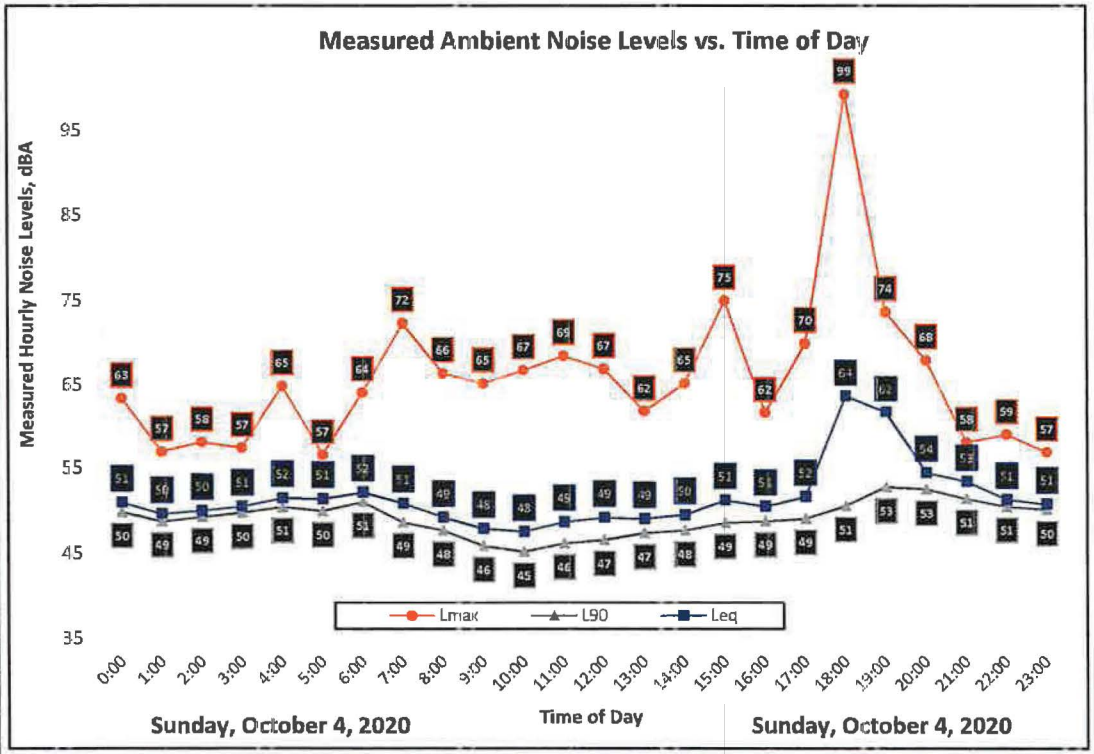


Appendix B11: Continuous Noise Monitoring Results

Site: LT-1
Project: Masrock Farms Huller Noise Evaluation
Meter: LDL 831-2
Location: Masrock Farms
Calibrator: CAL200
Coordinates: 37.645534°, -120.828754°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Sunday, October 4, 2020	0:00	51	63	51	50
Sunday, October 4, 2020	1:00	50	57	50	49
Sunday, October 4, 2020	2:00	50	58	50	49
Sunday, October 4, 2020	3:00	51	57	51	50
Sunday, October 4, 2020	4:00	52	65	51	51
Sunday, October 4, 2020	5:00	51	57	51	50
Sunday, October 4, 2020	6:00	52	64	52	51
Sunday, October 4, 2020	7:00	51	72	50	49
Sunday, October 4, 2020	8:00	49	66	49	48
Sunday, October 4, 2020	9:00	48	65	47	46
Sunday, October 4, 2020	10:00	48	67	47	45
Sunday, October 4, 2020	11:00	49	69	48	46
Sunday, October 4, 2020	12:00	49	67	48	47
Sunday, October 4, 2020	13:00	49	62	49	47
Sunday, October 4, 2020	14:00	50	65	49	48
Sunday, October 4, 2020	15:00	51	75	50	49
Sunday, October 4, 2020	16:00	51	62	50	49
Sunday, October 4, 2020	17:00	52	70	50	49
Sunday, October 4, 2020	18:00	64	99	53	51
Sunday, October 4, 2020	19:00	62	74	54	53
Sunday, October 4, 2020	20:00	54	68	54	53
Sunday, October 4, 2020	21:00	53	58	53	51
Sunday, October 4, 2020	22:00	51	59	51	51
Sunday, October 4, 2020	23:00	51	57	51	50

Statistics	Leq	Lmax	L50	L90
Day Average	56	69	50	49
Night Average	51	60	51	50
Day Low	48	58	47	45
Day High	64	99	54	53
Night Low	50	57	50	49
Night High	52	65	52	51
Ldn	58.1	Day %		84
CNEL	59	Night %		16

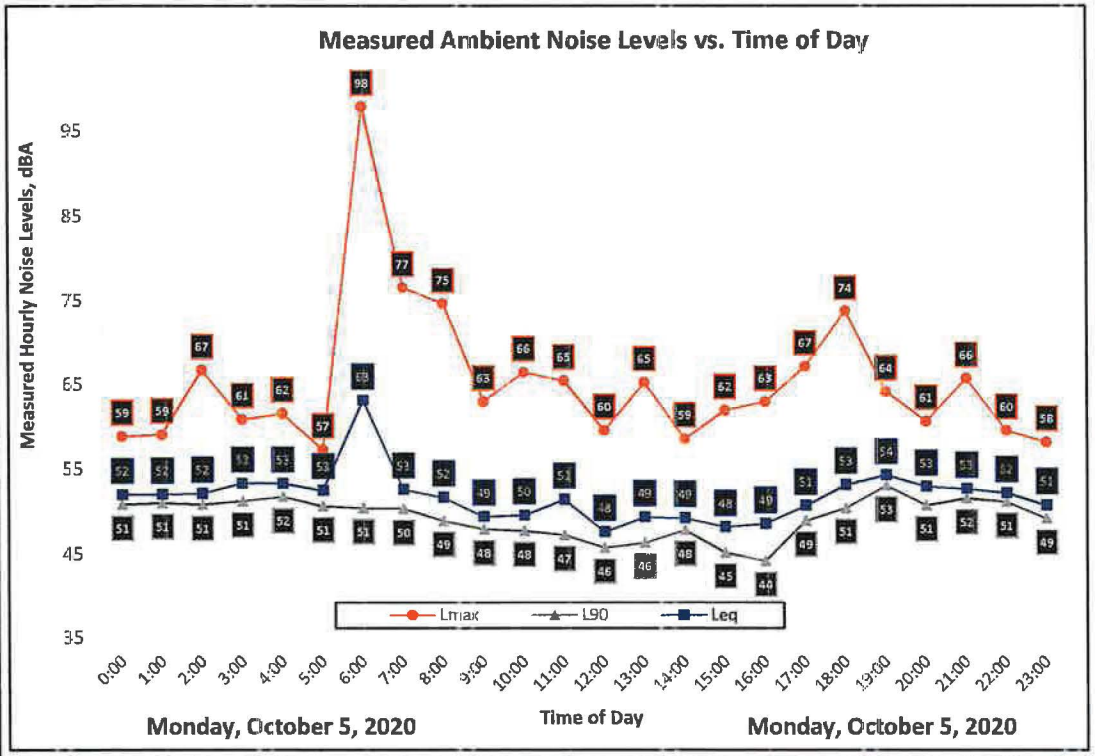


Appendix B12: Continuous Noise Monitoring Results

Site: LT-1
Project: Masrock Farms Huller Noise Evaluation
Location: Masrock Farms
Coordinates: 37.645534°, -120.828754°
Meter: LDL 831-2
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Monday, October 5, 2020	0:00	52	59	52	51
Monday, October 5, 2020	1:00	52	59	52	51
Monday, October 5, 2020	2:00	52	67	52	51
Monday, October 5, 2020	3:00	53	61	53	51
Monday, October 5, 2020	4:00	53	62	53	52
Monday, October 5, 2020	5:00	53	57	53	51
Monday, October 5, 2020	6:00	63	98	51	51
Monday, October 5, 2020	7:00	53	77	51	50
Monday, October 5, 2020	8:00	52	75	50	49
Monday, October 5, 2020	9:00	49	63	49	48
Monday, October 5, 2020	10:00	50	66	49	48
Monday, October 5, 2020	11:00	51	65	50	47
Monday, October 5, 2020	12:00	48	60	47	46
Monday, October 5, 2020	13:00	49	65	49	46
Monday, October 5, 2020	14:00	49	59	49	48
Monday, October 5, 2020	15:00	48	62	48	45
Monday, October 5, 2020	16:00	49	63	49	44
Monday, October 5, 2020	17:00	51	67	50	49
Monday, October 5, 2020	18:00	53	74	52	51
Monday, October 5, 2020	19:00	54	64	54	53
Monday, October 5, 2020	20:00	53	61	52	51
Monday, October 5, 2020	21:00	53	66	53	52
Monday, October 5, 2020	22:00	52	60	52	51
Monday, October 5, 2020	23:00	51	58	51	49

Statistics	Leq	Lmax	L50	L90
Day Average	51	66	50	48
Night Average	56	64	52	51
Day Low	48	59	47	44
Day High	54	77	54	53
Night Low	51	57	51	49
Night High	63	98	53	52
Ldn	61.6	Day %		38
CNEL	62	Night %		62



Appendix B13: Continuous Noise Monitoring Results

Site: LT-1

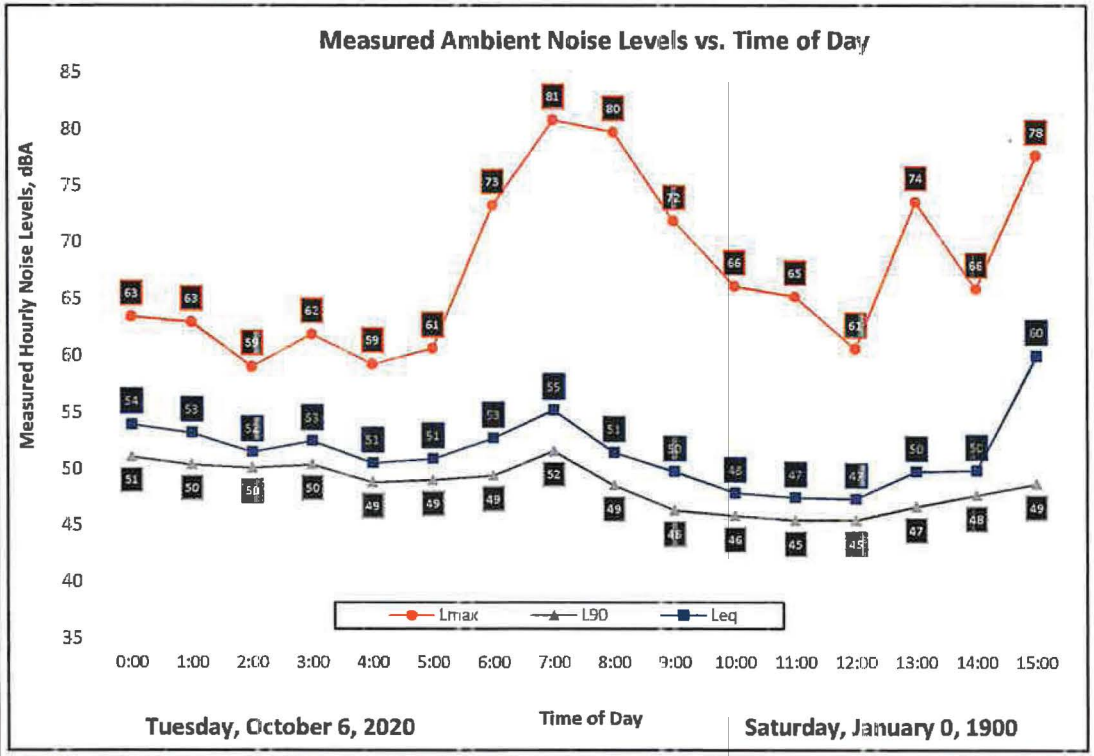
Project: Masrock Farms Huller Noise Evaluation Meter: LDL 831-2

Location: Masrock Farms Calibrator: CAL200

Coordinates: 37.645534°, -120.828754°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Tuesday, October 6, 2020	0:00	54	63	54	51
Tuesday, October 6, 2020	1:00	53	63	53	50
Tuesday, October 6, 2020	2:00	52	59	51	50
Tuesday, October 6, 2020	3:00	53	62	52	50
Tuesday, October 6, 2020	4:00	51	59	50	49
Tuesday, October 6, 2020	5:00	51	61	51	49
Tuesday, October 6, 2020	6:00	53	73	51	49
Tuesday, October 6, 2020	7:00	55	81	53	52
Tuesday, October 6, 2020	8:00	51	80	50	49
Tuesday, October 6, 2020	9:00	50	72	48	46
Tuesday, October 6, 2020	10:00	48	66	47	46
Tuesday, October 6, 2020	11:00	47	65	47	45
Tuesday, October 6, 2020	12:00	47	61	47	45
Tuesday, October 6, 2020	13:00	50	74	49	47
Tuesday, October 6, 2020	14:00	50	66	49	48
Tuesday, October 6, 2020	15:00	60	78	51	49

Statistics	Leq	Lmax	L50	L90
Day Average	53	71	49	47
Night Average	49	29	24	23
Day Low	47	61	47	45
Day High	60	81	53	52
Night Low	0	0	0	0
Night High	54	73	54	51
Ldn	57.7	Day %		61
CNEL	58	Night %		39



Appendix B14 : Short Term Noise Monitoring Results

Site: ST-1
Project: Masrock Farms Huller Noise Evaluation
Meter: LDL 831-3
Location: Center of Backyard
Calibrator: CAL200
Coordinates: 37.645364°, -120.828784°

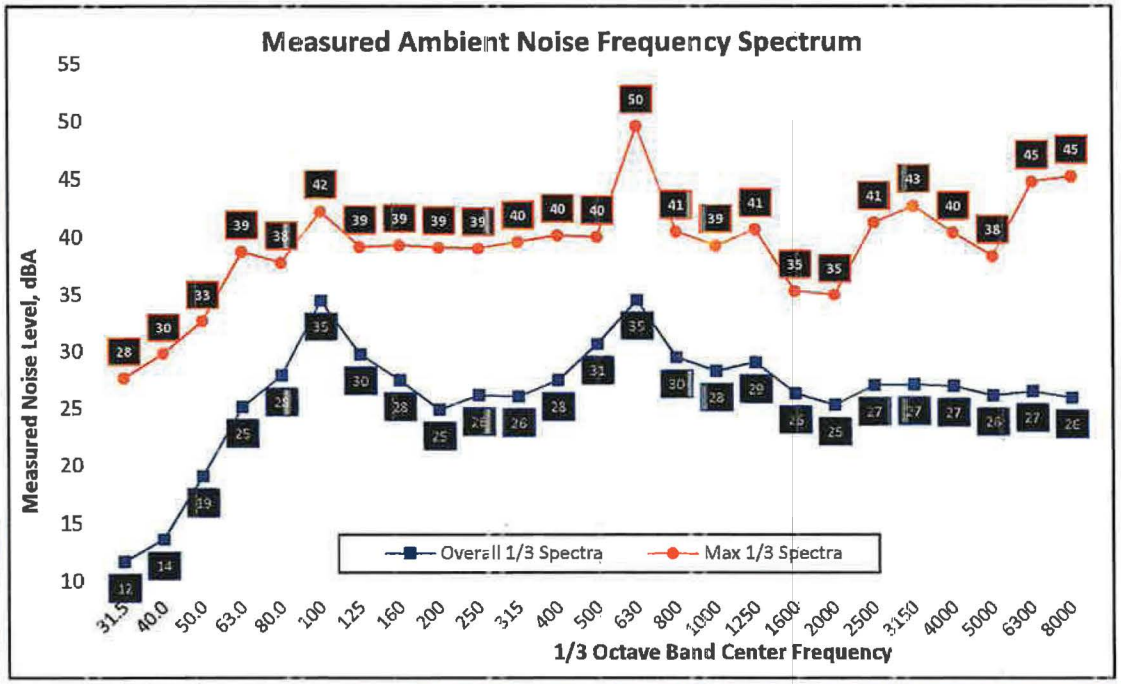
Start: 2020-09-24 09:07:12
Stop: 2020-09-24 09:17:30
SLM: Model 831
Serial: 1329

Measurement Results, dBA

Duration:	0:10
L_{eq}:	42
L_{max}:	53
L_{min}:	36
L_{50}:	42
L_{90}:	38

Notes

Primary noise sources are landscaping equipment and trucks at huller. Secondary noise sources are birds and aircraft flyover.



Appendix B15 : Short Term Noise Monitoring Results

Site: ST-1
Project: Masrock Farms Huller Noise Evaluation
Meter: LDL 831-3
Location: Center of Backyard
Calibrator: CAL200
Coordinates: 37.645364°, -120.828784°

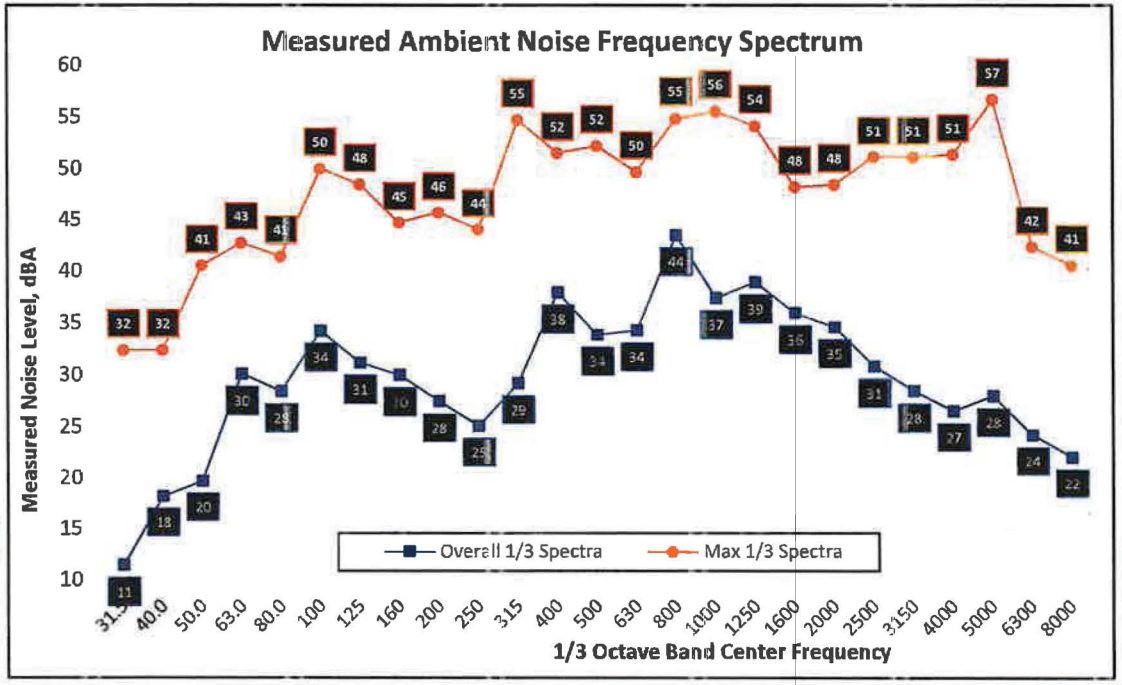
Start: 2020-09-24 09:26:24
Stop: 2020-09-24 09:32:08
SLM: Model 831
Serial: 1329

Measurement Results, dBA

Duration:	0:05
L_{eq}:	48
L_{max}:	60
L_{min}:	40
L_{50}:	50
L_{90}:	47

Notes

Primary noise sources are landscaping equipment and trucks at huller. Secondary noisesources are birds and aircraft flyover. Addition of a running auger, creating a pulsing sound.



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Roseville, CA 95678 US
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admin@saxnoise.com
www.saxnoise.com

INVOICE

BILL TO
Debbie Whitmore
548 N. Hopper Road
Modesto, CA 95350

INVOICE # 1274
DATE 11/05/2020
DUE DATE 12/05/2020
TERMS Net 30

DATE	ACTIVITY	DESCRIPTION	QTY	RATE	AMOUNT
	Acoustic/Noise/Vibration Consulting	Task 1A- Noise Measurements and Data Collection	1	350.00	350.00
	Acoustic/Noise/Vibration Consulting	Task 1B-Continuous Noise Measurements	1	995.75	995.75
	Acoustic/Noise/Vibration Consulting	Task 2-Report Preparation	1	875.00	875.00

PAID

PAYMENT 2,220.75
BALANCE DUE **$0.00**

Tom & Karen Weimer

9161 Creekside Lane

Modesto, Calif. 95357

RECEIVED
FEB 24 2025
STANISLAUS CO. PLANNING & COMMUNITY DEVELOPMENT DEPT.

February 24, 2025

Stanislaus County

Department of Planning and Community Development

1010 10th Street, Suite 3400

Modesto, Calif. 95354

Re: MASROC FARMS: NOTICE OF INTENT TO ADOPT A CEQA MITIGATED NEGATIVE DECLARATON

USE PERMIT APPLICATION NO. PLN2019-0075

Attn: Angela Freitas, Director

We contacted you on September 15, 2021 with our concerns about the expansion of an almond hulling operation on North Hopper Road. I have attached a copy of our letter sent at that time. I have also attached a 10/31/21 letter from our neighbors, Doug and Debbie Whitmore. We have not changed our position since those letters were written.

We are opposed to any CEQA Mitigated expansion of the hulling operation and in particular any fumigation of Almonds on the site. My property is adjacent to and downwind from the Huller.

Masroc is already in violation of the existing permit. The activity at the huller has been increasing ever since the property was purchased. There is no reason to allow an increase in this operation. This is an industrial use, not a farm operation. There are 37 homes nearby. Zoning laws and California Environmental Quality Act Laws must be complied with.

Sincerely,

[redacted]

Thomas R. Weimer

Tom & Karen Weimer

9161 Creekside Lane

Modesto, Calif 95357

September 15, 2021

Stanislaus County

Planning & Community Development Department

1010 10th Street, Suite 3400

Modesto, Calif. 95354

Re: MASROC FARMS: STANISLAUS COUNTY PLANNING PERMIT APPLICATION

2019-0075

Attn: Angela Freitas, Director

We are concerned about the above referenced application to expand an almond hulling operation on Hopper Road. We moved to our home on Creekside Lane about 30 years ago. When we bought our property we were made aware that we had to expect dust, noise, flies etc. from any normal farm operation. A farmer named Duane Modean operated a small huller nearby without a conditional use permit. We were OK with that.

The MASROC permit application we are looking at now describes what we consider to be an industrial processing business. They are not planning to farm, they are planning to process nuts from all over the surrounding area. They want to run 24/7 for six months and 12 hours per day for the remaining 6 months. This has a direct negative impact on our quality of life and property value. There are 37 homes in the adjacent area. MASROC has continued to expand their operation without a permit or CEQA evaluation.

MASROC has more than doubled the amount of trucks. The MID canal bridge is too small for these double trailer trucks. Hopper Road is too narrow and

the intersection of 132 and Hopper is not appropriate for that type of traffic. They have a large loader that runs day and night with a very loud backup alarm. They have an engine driven stacker with open exhaust that runs intermittently. The huller grinds away creating noise and dust 24/7.

We don't think the use for the MASROC property is right for this location and their future activity needs to be limited and harmful effects to neighboring properties need to be mitigated.

Yours Truly,

Thomas R. Weimer

Encl. Aerial photo of 37 homes around huller

Cc: Tim Douglas and Debbie Whitmore

October 31, 2021

Krisitin Anaya, Planner
Stanislaus County Planning and Community Development
1010 Tenth Street, Suite 3400
Modesto, CA 95354

SUBJECT: PLN 2019-0075 Masroc Farms Revised Project Description

Dear Ms. Anaya:

We appreciate you giving us an opportunity to preview the revised project description for this planning permit. It is very important to get the project description right so that the public and agencies understands what is being authorized by this use permit and how it compares with the previous nonconforming use.

One of the complicating factors of this permit application is the applicant has made changes to the site and its operation that were not authorized by a land use permit. At our request, County staff provided us copies of all the available land use and building permits for this property several years ago including SAA 1992-03, SAA 2007-83, and SAA 2017-36. SAA 2007-83 contained the following statement:

> TYPE OF PROPERTY USE: 5400 SQUARE FOOT STORAGE BUILDING FOR ALMOND HULLING MACHINERY, ALMOND HULLER AND ACCESSORY STRUCTURES ARE LNC. PROPERTY IS AT THEIR 25% ADDITIONAL BUILD LIMIT UNDER STANISLAUS COUNTY CODE SECTION 21.20.080.

Masroc Farms has stated they acquired the property in 2011. In 2017, a land use permit was issued for a ground-mounted solar system on an adjacent parcel. In response to our Public Records Act request, the County also provided us with building permit records that did not include any of the buildings and structures shown on the 2017 site plan that were not depicted in SAA 2007-83. While the site plan for this permit includes additional buildings and structures not shown on SAA 2007-83, the project description for the 2017 permit made no references to those buildings or structures. Therefore, SAA 2007-83 is the last land use permit for the huller operation and clearly states that the facility had reached its 25% expansion threshold pursuant to Section 21.10.050 (Uses requiring Staff Approval), and that approval of a conditional use permit pursuant to Section 21.80 (Nonconforming Uses) was required prior to any additional expansion.

Our overall reaction to the project description is that it appears to be constructed to give the reader the impression that changes the applicant has made since they acquired the huller in 2011- uses, buildings, vehicular traffic, operating hours, and footprint- were, in fact, already authorized in accordance with the County Code (for an example, refer to the Caltrans response to the early consultation project description). It diminishes the scope and extent of the changes between Duane Modean's operation and this proposal, downplaying the potential environmental effects of the project that is being reviewed. Based upon the land use permitting

history for the property and our personal knowledge of Duane Modean's operation, the revised project description fails to accurately describe the legal nonconforming use and does not clearly identify those changes in use that are requested by the applicant. Our comments are made with this background in mind.

Historic Use:

This section does not accurately describe the uses and operating characteristics of the legal nonconforming use operated by Duane Modean. It is unclear who provided the information contained in this section, but several statements made in this section are known to be incorrect, and we have several neighbors that will corroborate these facts.

The facility was operated on a single property. This property was created by two separate land use permits. In 2007, a parcel map was approved (Parcel Map 40-PM-32) dividing the property into two lots. In 2008, the boundaries were modified by Lot Line Adjustment 2008-05. At the time of the lot line adjustment, the remainder parcel was used exclusively for agricultural purposes – the growing of almond trees. It appears the purpose of the lot line adjustment was to distinguish the area of the hulling operation from the agricultural use, although that cannot be confirmed.

Since 1968 (and in 2007) the huller was operated as a family business and only hulled almonds directly from the field. Nuts were not stored on site. Unhulled nuts were directly unloaded into the pit and were processed in a just in time manner. You could not deliver your almonds to him until he had available space and he required the almonds be thoroughly dry before you could deliver them. Incoming product included only unhulled almonds. Outgoing product included nuts in shell, hulls, and hash (to be processed off-site).

Based on conversations we had with Duane Modean, his facility did not produce the level of meat pounds described in this section. As the operation produced nuts in shell and delivered those to the sheller of the customer's choice for further processing, it would be difficult to collect the information necessary to support the estimate provided here of 3 to 3.5 million meat pounds. According to some reports about the amount of hash generated by his operation, the estimated meat pound could be as low at one million meat pounds.

Modean's huller operated from mid-August to mid-October. The huller ran 24 hours a day during this time. Hulls were removed by the end of October. We can remember only one season when hulls continued to be removed through the first week of November. During hull removal, the facility operated during daylight hours only.

Modean processed nuts for himself and for other small orchards. We agree that the primary method of transportation was 30-foot bobtail dump trucks; however, many individual farmers brought their produce by pickup truck with a trailer (also dump style vehicles). No traffic studies were conducted during the time he operated the facility that would support the assertion that 1,000 vehicle trips from the field were generated by his operation.

The number of people employed by Duane Modean was typically two or three employees plus himself. He was the owner, operator, and primary manager of the operation.

In conclusion, we believe the information provided in this section should be supported by evidence, not by hearsay. If it cannot be supported by evidence, this section should include only the information described in SAA 2007-83 which was the last land use approval by the County addressing the operation of the huller.

Proposed Expansion:

The remaining five sections of the draft revised project description portray aspects of the facility and its operation as it exists today with references to a few future facilities. The applicant appears to be presenting the case that only future improvements are subject to this approval. Although the term "expansion" is not clearly defined in County Code, it is clear the County intended SAA 2007-83 to be the final land use approval that would be allowed by staff approval permit and that a conditional use permit would be required for any additional improvements. No conditional use permit was provided in response to our Public Records Act request. Therefore, we believe any improvements related to the operation of the huller, made after this permit was issued, should have been subject to approval of a conditional use permit.

Numerous modifications have been made to the footprint, the processing methods (such as adding shelling), the equipment used, transportation methods, and the duration of operation by Masroc Farms since SAA 2007-83 was issued. These modifications have had serious adverse environmental effects on the surrounding neighborhood including noise, dust, traffic, aesthetics, safety, and health. The current operation has also had negative impacts on the roadway quality on Hopper Road and the intersection at Hopper and Highway 132. To properly analyze these environmental impacts, a complete and thorough description of the site modifications, buildings, internal and external operations, on-site vehicles, equipment, and the activities associated with them, and the business activities conducted by Masroc Farms, is necessary.

Changes made to the operation since 2007, and particularly since Masroc Farms took over its operation in 2011, that we know have created environmental impacts include:

- the construction of a significantly larger stockpile area on the adjacent parcel that has created new sources of noise, dust, and unsightly views as large tractor/trailer vehicles and other on-site loading and unloading vehicles now to circulate in this area;
- the removal of many rows of almond trees on the rear parcel that had formerly acted as visual and dust buffers to residential uses;
- the construction of the existing elevator and auger line across the two parcels that extends above the roof of the equipment shed to large hull, shell and maybe hash piles located in the stockpile area which creates a new source of noise and dust;
- the construction of a drainage basin;

- the construction of new buildings and the conversion of portions of other buildings to more intense uses such as the office in the building formerly identified as storage;
- an increase in the number of weeks the huller machinery is operated that creates new sources of noise, traffic and dust;
- an expansion of the time the facility operates for 24 hours a day that creates new sources of noise, traffic and dust;
- the expansion of the time the facility operates from three months to year-round that creates new sources of traffic, noise and dust;
- the storage of nuts and shells on site throughout the year creating new sources of traffic and dust;
- the changes in the type of trucks and trailers used to and from the site creating a new source of dust, traffic, and noise and contributing to unsafe traffic conditions;
- the changes in the number, type and use of loaders and elevators to move nuts, shells, hash and other by products around the site creating new sources of noise, dust and traffic;
- the warning and banging sounds generated by machinery and vehicles that creates a new source of noise;
- the changes in processing methods that involve new equipment that create new sources of noise, dust, and traffic;
- the fumigation of almonds in various forms due to storage of nuts, shells, hulls, and hash on site that has the potential to create adverse health impacts to adjacent neighbors; and
- the burning of hulls on site.

These changes have had significant environmental effects on the surrounding neighborhood and any future changes to these characteristics could create additional adverse impacts that are subject to CEQA review.

The scope of the expansion the applicant is requesting needs to include all changes and improvements to the property, the buildings, and the operation that have been made since the approval of SAA 2007-83, and any anticipated changes in these areas that are likely to occur in the future. The description should represent the maximum level of activity or modifications that would be authorized by the permit to ensure that the full environmental effects of the project are properly evaluated and mitigated. What is unclear about the current description is how operating conditions we witness this year compare to the operating conditions of the last several years when the facility operated. Under Masroc Farms ownership, the huller has operated as long as five months of the year (from the beginning of August to the first week of January). Hulls, shells and hash were stored and removed throughout the entire year. Agricultural services appear to have also been offered from the site. The applicant states the hulling operation will cease at the end of November (roughly two and a half months). We ask the County to make sure this operating period corresponds with the maximum production level of 7.0 million meat pounds and all of the ancillary processes the applicant is requesting.

Aspects of the operation that need to be clearly described and linked to the maximum level of production of 7.0 million meat pounds:

- The types of products that will be processed on site (shelling has been added and the description states no hash will be processed on site);
- The number of months the huller/sheller will be operated;
- The number of hours a day the site will be used for various activities and what those activities will include (such as the use of loaders and elevators, and the sounds and levels produced by those vehicles);
- A description of the vehicles that will be operated on site, including but not limited to truck, trailers, loaders, and elevators;
- The maximum amount of product to be processed;
- The processing methods and methods of storing and moving products located on site;
- The amount of traffic generated for the maximum level of production;
- The full extent of the site modifications that will be allowed to occur to the site;
- Both the existing and future auger lines, type of equipment used, and the characteristics (such as noise levels and chemical use) associated with that equipment;
- The location of fumigation activities, the maximum quantity of fumigants that would be applied, the method of application, and the safety measures used in case of an accident or incorrect application of fumigants;
- The type of on-site and off-site drive and road materials that will be used to reduce dust and noise;
- The type of visual and dust barriers that will be used to reduce impacts on adjacent properties;
- The conversion of buildings to uses not listed on the site plan for SAA 2007-83; and
- Changes in the duration of hull/nut removal and other activities on the site.

It is important these details be fully articulated to determine if and when the business has expanded beyond these parameters and should apply for a modification to the conditional use permit.

In addition to this more general statement, we have comments on specific aspects of the revised draft project description below:

The table of existing buildings and their uses should be modified to show those approved under the prior staff approval permits, and those existing and future uses subject to the conditional use permit approval.

Terms are unclear and ill-defined. For example, terms like "season," "off-peak season," and "peak season" are used interchangeably throughout the project description. In one paragraph, the applicant defines the peak and off-peak seasons as related to its hours of operation, but then later refers to a "season" which averages 12 to 15 weeks which may or may not be the same as the "off-peak" or "peak" season.

No clear linkage is demonstrated between the level of meat pound production, the amount of traffic generated by the facility, and the length of time the huller machinery operates, and the effect this has on traffic and other effects generated. While the applicant states the huller/sheller will not operate past the end of November, it is unclear if this operating period is associated with the 7.0 million meat pound maximum production level, the average, or the lowest production year. Last year, the huller/sheller was operated from August to November, as stated in this draft. Traffic counts were taken at that time. Was this a high year, a low year, or an average production year? And if it was anything but the high year, what is the level of traffic associated with the highest level of production and how long would the huller machinery need to operate to accommodate that level of production. To evaluate the maximum impact of the project on traffic, noise, and dust, these details are important and necessary to satisfy CEQA. The project description needs to be internally consistent and represent the maximum level of production being requested.

Hulls and shells are to be stored on site the entire year awaiting transportation to a buyer. These materials have been stored in the stockpile area shown in the site plan. When the applicant says the stockpiles only last the length of a season which averages 12 to 15 weeks, we are not exactly sure to what this refers. It does not correlate to either the peak or off-peak season. This statement appears to contradict information provided later in the project description under "Vehicle Trips," which states that outbound truck trips for shells will last until January and hulls throughout the year. Also, there is no description of the activities that occur on site during the period when the huller/sheller machinery ceases to operate and the hulls/shells/hash are being removed.

The applicant states affirmatively that no reprocessing of hash is done on site. This is an important point as hash processing can be done year-round and could potentially involve the year-round operation of the huller machinery. There is a vague reference to the huller machinery not being operated except during the peak season, but this detail is not included in the section describing the peak and off-peak seasons, and there is no description of when and how long the machinery will be tested during the off-peak season.

The description states the off-peak season would be from Monday through Friday or Saturday. Of course, we would prefer they operate only Monday through Friday during the off-peak season, but if the maximum is until Saturday, that needs to be explicit. The activities that occur on the site during the off-season are not described. There appears to be some vague references to services as well as the transportation of hull and shell product to farms, but it is unclear if this facility will be used as the primary hub of agricultural services offered to their customers.

We ask the County staff to carefully check the numbers in the Vehicle Trips section against the counts that have been taken over the past couple of years and to link the traffic counts to the maximum level of production being requested by the applicant. Are the numbers presented in the project description reasonable in terms of the maximum level of production and are they the maximum number of trips that can be expected for the project? For example, it seems a

little odd to us that there are only two employee trips daily from mid-August to November when the applicant states there could be as many as seven (or even a couple more) employees on site. Since the County did not conduct traffic counts during the entire operating season, the accuracy of the information in this section relies on the information provided by the applicant. And these numbers are significantly different than the initial numbers provided by the applicant in the Early Consultation project description. Without accurate information, it would be impossible to evaluate the full traffic impacts of the project.

We have major concerns about traffic, traffic safety, entrained dust, dust from trucks that are not properly covered, and the roadway condition of Hopper Road. The size of the truck/trailer combinations that are used in the Masroc Farms operation create unsafe conditions for other motorized and non-motorized travelers at the intersection with Highway 132, along the entire length of Hopper Road, across the narrow MID canal bridge, and when entering and exiting the facility. Neighbors have witnessed trucks leaving Creekside without stopping for oncoming traffic, blocking oncoming traffic at the bridge, speeding down Hopper Road, and making unsafe and wide turns at the intersection with Highway 132. Trucks of this size and weight will result in the accelerated deterioration of roadway condition and, when operated at high speeds, the trucks sound like thunder as they travel down a very bumpy Hopper Road and over the canal bridge to the site. The section on vehicle trips does not tell us anything about the length and weight of the vehicles described.

The applicant includes a vague statement about where their customer trips are coming from but does not discuss whether the business is planning any expansion of its customers, and if so, how much additional product that would yield and where they might come from.

This section on "Other Services" is quite perplexing. It isn't clear whether the applicant is saying they used to operate agricultural services from this site and have now stopped, or they are still providing these services only to customers? We have seen large equipment moving in and out of the site throughout the year. What is the difference between an "outside" customer and their customers? What services are offered to their customers from this site that are different from the ones they had been providing to outside orchards? What is the traffic related to those services? Where are their customers located and how might a change in their customers' locations affect traffic levels and patterns?

No improvements are shown to address concerns about the visual blight associated with expanding the stockpile area, such as landscaping, or dust reduction measures, such as paving of driveways for heavy trucks, trailers, and bag houses.

One last concern we have is the potential for expansion beyond the scope provided in this project description. The applicant has undertaken major improvements after they were notified of the planning permit requirements, knowing they did not have the proper permits to do so. Under the County's current code, the applicant can request the approval for a 25% expansion of this business through a staff approval application. Such expansions could include additional on-site storage, methods of treating products stored on site, pasteurization of almonds, clearing of

trees, etc. While these types of improvements may or may not increase production levels, these changes can have significant environmental effects that would not have been evaluated under this permit.

Typically, staff approval applications are not circulated to the adjoining neighborhood. Since it is unclear how the County has defined the term expansion, it needs to be made clear that any change in the operation not included in the project description, including changes to the machinery, are subject to review to avoid piecemealing of the project and its environmental effects. Some improvements, such as solar power, enjoy certain rights under State and federal law that would be exempt from such restrictions; however, all other aspects of changes in the operation or site need to be subject to a permit and additional environmental review. For example, a 25% expansion of the stockpile area would create significantly more dust and noise. The addition of equipment or machinery that would allow more product to be processed in the same amount of time could lead to an increase in truck trips, noise, and dust. The addition of more on-site motorized vehicles and the sounds associated with them would create new sources of dust and noise. The replacement or addition of roof-mounted or internal machinery could result in an increase in the noise levels. Any future expansion should be subject to a modification of the conditional use permit, public input, and additional environmental review.

We believe more work needs to be done to rectify these deficiencies in the project description so we all understand what is proposed to ensure the full environmental effects of the project are being analyzed.

Thank you for your consideration of these comments.

Sincerely,

Tim Douglas and Debra Whitmore
Tom and Karen Weimer

SUMMARY OF RESPONSES FOR ENVIRONMENTAL REVIEW REFERRALS

PROJECT: USE PERMIT APPLICATION NO. PLN2019-0075 - MASROC FARMS

REFERRED TO:				RESPONDED		RESPONSE			MITIGATION MEASURES		CONDITIONS	
	2 WK	30 DAY	PUBLIC HEARING NOTICE	YES	NO	WILL NOT HAVE SIGNIFICANT IMPACT	MAY HAVE SIGNIFICANT IMPACT	NO COMMENT NON CEQA	YES	NO	YES	NO
CA DEPT OF CONSERVATION: Land Resources / Mine Reclamation		X	X		X							
CA DEPT OF FISH & WILDLIFE	X	X	X		X							
CA DEPT OF TRANSPORTATION DIST 10	X	X	X	X				X		X		X
CA RWQCB CENTRAL VALLEY REGION	X	X	X		X							
COOPERATIVE EXTENSION	X	X	X		X							
DISPOSAL DIST: TURLOCK SCAVENGER		X	X		X							
FIRE PROTECTION DIST: STAN CONSOLIDATED	X	X	X		X							
GSA: STAN & TUOLUMNE RIVERS GBGSA		X	X		X							
IRRIGATION DISTRICT: MODESTO	X	X	X	X				X		X	X	
MOSQUITO DISTRICT: EASTSIDE	X	X	X		X							
MT VALLEY EMERGENCY MEDICAL	X	X	X		X							
SAN JOAQUIN VALLEY APCD	X	X	X	X		X				X	X	
SCHOOL DISTRICT 1: MODESTO CITY SCHOOLS	X	X	X		X							
SCHOOL DISTRICT 2: EMPIRE UNION	X	X	X		X							
STAN CO AG COMMISSIONER	X	X	X	X				X		X	X	
STAN CO BUILDING PERMITS DIVISION	X	X	X		X							
STAN CO CEO	X	X	X		X							
STAN CO DER	X	X	X	X		X				X	X	
STAN CO DER GROUNDWATER		X	X		X							
STAN CO ERC	X	X	X	X			X			X		X
STAN CO FARM BUREAU	X	X	X		X							
STAN CO HAZARDOUS MATERIALS	X	X	X	X		X				X	X	
STAN CO PUBLIC WORKS	X	X	X	X				X		X	X	
STAN CO SHERIFF	X	X	X		X							
STAN CO SUPERVISOR DIST 1: B. CONDIT	X	X	X		X							
STAN COUNTY COUNSEL	X	X	X		X							
STANISLAUS FIRE PREVENTION BUREAU	X	X	X		X							
STANISLAUS LAFCO	X	X	X		X							
INTERESTED PARTIES	X	X	X	X				X		X		X
SURROUNDING LAND OWNERS		X	X	X				X		X		X
TELEPHONE COMPANY: AT&T	X	X	X		X							
US FISH & WILDLIFE		X	X		X							
USDA NRCS	X	X	X		X							

I:\Planning\Staff Reports\UP\2019\PLN2019-0075 - Masroc Farms\Planning Commission\March 20, 2025\Staff Report\Exhibit I - Summary of Responses - Environmental Review Referrals.xls

COUNTY OF STANISLAUS CAMPAIGN CONTRIBUTION DISCLOSURE FORM
PLANNING & COMMUNITY DEVELOPMENT DEPARTMENT

Application Number: PLN 2019 - 0075
Application Title: MASROC FARMS
Application Address: 619 N. HOPPER ROAD
Application APN: 009-016-024 & 025

Was a campaign contribution, regardless of the dollar amount, made to any member of a decision-making body involved in making a determination regarding the above application (i.e. Stanislaus County Board of Supervisors, Planning Commission, Airport Land Use Commission, or Building Code Appeals Board), hereinafter referred to as Member, during the 12-month period preceding the filing of the application, by the applicant, property owner, or, if applicable, any of the applicant's proposed subcontractors or the applicant's agent or lobbyist?

Yes ☐ No ☒

If no, please sign and date below.

If yes, please provide the following information:

Applicant's Name: _____

Contributor or Contributor Firm's Name: _____

Contributor or Contributor Firm's Address: _____

Is the Contributor:

The Applicant	Yes ☐ No ☐
The Property Owner	Yes ☐ No ☐
The Subcontractor	Yes ☐ No ☐
The Applicant's Agent/ Lobbyist	Yes ☐ No ☐

Note: Under California law as implemented by the Fair Political Practices Commission, campaign contributions made by the Applicant and the Applicant's agent/lobbyist who is representing the Applicant in this application or solicitation must be aggregated together to determine the total campaign contribution made by the Applicant.

Identify the Member(s) to whom you, the property owner, your subcontractors, and/or agent/lobbyist made campaign contributions during the 12-month period preceding the filing of the application, the name of the contributor, the dates of contribution(s) and dollar amount of the contribution. Each date must include the exact month, day, and year of the contribution.

Name of Member: _____

Name of Contributor: _____

Date(s) of Contribution(s): _____

Amount(s): _____

(Please add an additional sheet(s) to identify additional Member(s) to whom you, the property owner, your subconsultants, and/or agent/lobbyist made campaign contributions)

By signing below, I certify that the statements made herein are true and correct. I also agree to disclose to the County any future contributions made to Member(s) by the applicant, property owner, or, if applicable, any of the applicant's proposed subcontractors or the applicant's agent or lobbyist after the date of signing this disclosure form, and within 12 months following the approval, renewal, or extension of the requested license, permit, or entitlement to use.

3-13-25
Date

[redacted]
Signature of ~~Applicant~~ Agent

PETRULAKIS LAW & ADVOCACY, APC
Print Firm Name if applicable

GEORGE A. PETRULAKIS
Print Name of ~~Applicant~~ Agent

EXHIBIT J

COUNTY OF STANISLAUS CAMPAIGN CONTRIBUTION DISCLOSURE FORM
PLANNING & COMMUNITY DEVELOPMENT DEPARTMENT

RECEIVED
MAR 19 2025
STANISLAUS CO. PLANNING & COMMUNITY DEVELOPMENT DEPT.

Application Number: PLN 2019-0075
Application Title: Masiol Farms
Application Address: 616 N. Hopper Road
Application APN: 009-016-024 & 025

Was a campaign contribution, regardless of the dollar amount, made to any member of a decision-making body involved in making a determination regarding the above application (i.e. Stanislaus County Board of Supervisors, Planning Commission, Airport Land Use Commission, or Building Code Appeals Board), hereinafter referred to as Member, during the 12-month period preceding the filing of the application, by the applicant, property owner, or, if applicable, any of the applicant's proposed subcontractors or the applicant's agent or lobbyist?

Yes ☐ No ☒

If no, please sign and date below.

If yes, please provide the following information:

Applicant's Name: _____

Contributor or Contributor Firm's Name: _____

Contributor or Contributor Firm's Address: _____

Is the Contributor:

The Applicant	Yes ☐ No ☐
The Property Owner	Yes ☐ No ☐
The Subcontractor	Yes ☐ No ☐
The Applicant's Agent/ Lobbyist	Yes ☐ No ☐

Note: Under California law as implemented by the Fair Political Practices Commission, campaign contributions made by the Applicant and the Applicant's agent/lobbyist who is representing the Applicant in this application or solicitation must be aggregated together to determine the total campaign contribution made by the Applicant.

Identify the Member(s) to whom you, the property owner, your subcontractors, and/or agent/lobbyist made campaign contributions during the 12-month period preceding the filing of the application, the name of the contributor, the dates of contribution(s) and dollar amount of the contribution. Each date must include the exact month, day, and year of the contribution.

Name of Member: _____

Name of Contributor: _____

Date(s) of Contribution(s): _____

Amount(s): _____

(Please add an additional sheet(s) to identify additional Member(s) to whom you, the property owner, your subconsultants, and/or agent/lobbyist made campaign contributions)

By signing below, I certify that the statements made herein are true and correct. I also agree to disclose to the County any future contributions made to Member(s) by the applicant, property owner, or, if applicable, any of the applicant's proposed subcontractors or the applicant's agent or lobbyist after the date of signing this disclosure form, and within 12 months following the approval, renewal, or extension of the requested license, permit, or entitlement to use.

3-19-25
Date

[redacted]
Signature of Applicant

_____
Print Firm Name if applicable

Scott Masellis
Print Name of Applicant

ATTACHMENT B

COUNTY OF STANISLAUS CAMPAIGN CONTRIBUTION DISCLOSURE FORM
PLANNING & COMMUNITY DEVELOPMENT DEPARTMENT

Application Number: PLN 2019 - 0075
Application Title: Mastos Farms
Application Address: 616 N. Hopper Road
Application APN: 009 - 016 - 024 & 025

Was a campaign contribution, regardless of the dollar amount, made to any member of a decision-making body involved in making a determination regarding the above application (i.e. Stanislaus County Board of Supervisors, Planning Commission, Airport Land Use Commission, or Building Code Appeals Board), hereinafter referred to as Member, during the 12-month period preceding the filing of the application, by the applicant, property owner, or, if applicable, any of the applicant's proposed subcontractors or the applicant's agent or lobbyist?

Yes ☐ No ☒

If no, please sign and date below.

If yes, please provide the following information:

Applicant's Name: _____

Contributor or Contributor Firm's Name: _____

Contributor or Contributor Firm's Address: _____

Is the Contributor:

The Applicant	Yes ☐ No ☐
The Property Owner	Yes ☐ No ☐
The Subcontractor	Yes ☐ No ☐
The Applicant's Agent/ Lobbyist	Yes ☐ No ☐

Note: Under California law as implemented by the Fair Political Practices Commission, campaign contributions made by the Applicant and the Applicant's agent/lobbyist who is representing the Applicant in this application or solicitation must be aggregated together to determine the total campaign contribution made by the Applicant.

Identify the Member(s) to whom you, the property owner, your subcontractors, and/or agent/lobbyist made campaign contributions during the 12-month period preceding the filing of the application, the name of the contributor, the dates of contribution(s) and dollar amount of the contribution. Each date must include the exact month, day, and year of the contribution.

Name of Member: _____

Name of Contributor: _____

Date(s) of Contribution(s): _____

Amount(s): _____

(Please add an additional sheet(s) to identify additional Member(s) to whom you, the property owner, your subconsultants, and/or agent/lobbyist made campaign contributions)

By signing below, I certify that the statements made herein are true and correct. I also agree to disclose to the County any future contributions made to Member(s) by the applicant, property owner, or, if applicable, any of the applicant's proposed subcontractors or the applicant's agent or lobbyist after the date of signing this disclosure form, and within 12 months following the approval, renewal, or extension of the requested license, permit, or entitlement to use.

3-19-25
Date

[redacted]
Signature of Applicant

Print Firm Name if applicable

David Zwald
Print Name of Applicant

COUNTY OF STANISLAUS CAMPAIGN CONTRIBUTION DISCLOSURE FORM
PLANNING & COMMUNITY DEVELOPMENT DEPARTMENT

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Yes ☐ No ☒

If no, please sign and date below

If yes, please provide the following information:

Applicant's Name _____

Contributor or Contributor Firm's Name _____

Contributor or Contributor Firm's Address _____

Is the Contributor

The Applicant	Yes ☐	No ☐
The Property Owner	Yes ☐	No ☐
The Subcontractor	Yes ☐	No ☐
The Applicant's Agent Lobbyist	Yes ☐	No ☐

Note: Under California law as implemented by the Fair Political Practices Commission, campaign contributions made by the Applicant and the Applicant's agent lobbyist who is representing the Applicant in this application or solicitation must be aggregated together to determine the total campaign contribution made by the Applicant.

Identify the Member(s) to whom you, the property owner, your subcontractors, and or agent lobbyist made campaign contributions during the 12-month period preceding the filing of the application, the name of the contributor, the dates of contribution(s) and dollar amount of the contribution. Each date must include the exact month, day, and year of the contribution.

Name of Member _____

Name of Contributor: _____

Date(s) of Contribution(s): _____

Amount(s): _____

(Please add an additional sheet(s) to identify additional Member(s) to whom you, the property owner, your subconsultants, and or agent lobbyist made campaign contributions)

By signing below, I certify that the statements made herein are true and correct. I also agree to disclose to the County any future contributions made to Member(s) by the applicant, property owner, or, if applicable, any of the applicant's proposed subcontractors or the applicant's agent or lobbyist after the date of signing this disclosure form, and within 12 months following the approval, renewal, or extension of the requested license, permit, or entitlement to use.

3-19-25
Date

[redacted]
Signature of Applicant

_____
Print Firm Name if applicable

Doug Rochz
Print Name of Applicant

Tom & Karen Weimer

9161 Creekside Lane

Modesto, Calif. 95357

RECEIVED
MAR 20 2025
STANISLAUS CO. PLANNING & COMMUNITY DEVELOPMENT DEPT.

Stanislaus County Planning Commission

RE: Legalize Expansion of Almond Huller

MASROC FARMS

March 20, 2025

FINAL LIST OF CONSIDERATIONS

1. Hullers start small and grow in size

2. Need to limit processed tonnage – was 3.5 million lbs. now they say it is 5. 0 to 5.5 – with a max 7.0 million lbs. (See page 299 of Staff Report, exhibit 1)

3. Example of expansion Verdegaal 18 million lbs. – huge operation with big mess. (see page 4 and 58 of Pacific Nut Producer magazine article, exhibit 2)

4. They occupy 4.6 acres and can expand to 36.84 acres (across street from my house – (see aerial photo, exhibit 3)

5. Permit aerial photos are misleading – no reference to actual 37 homes (see picture, exhibit 4) If you look all over the County you could not find a worse place to build an almond huller.

6. Buffer zone of orchard trees should be left along Creekside Lane

7. There will be a decrease in my property value

8. The Mitigated Negative Declaration says the project does not have the potential to degrade the quality of the environment and I disagree.

The machinery inside the huller building is not used during the off season although it might be turned on for maintenance on an occasional basis. Two (2) forklifts are used on the site intermittingly during the peak season to move bins. One (1) loader is used to collect and load both stockpiles and trash during the peak season. The loader is used during the off season to load trucks hauling away hulls until those are depleted.

Hash is separated during the hulling and shelling processes, so it is processed during the peak season. Once hulls and shells reach the outdoor piles, they are not brought back inside for additional machine processing. Water is not used in the processing. Fumigation of stockpiles occurs only during "bad worm" years under tarps which cover the stockpiles, and the fumigation is conducted by an outside licensed company.

The average tonnage that Masroc Farms hulls is 6 million meat pounds. It could be as low as 5.0 to 5.5 million meat pounds in low crop yield years. The maximum would be 7.0 million meat pounds.

{CONTINUED ON NEXT PAGE}

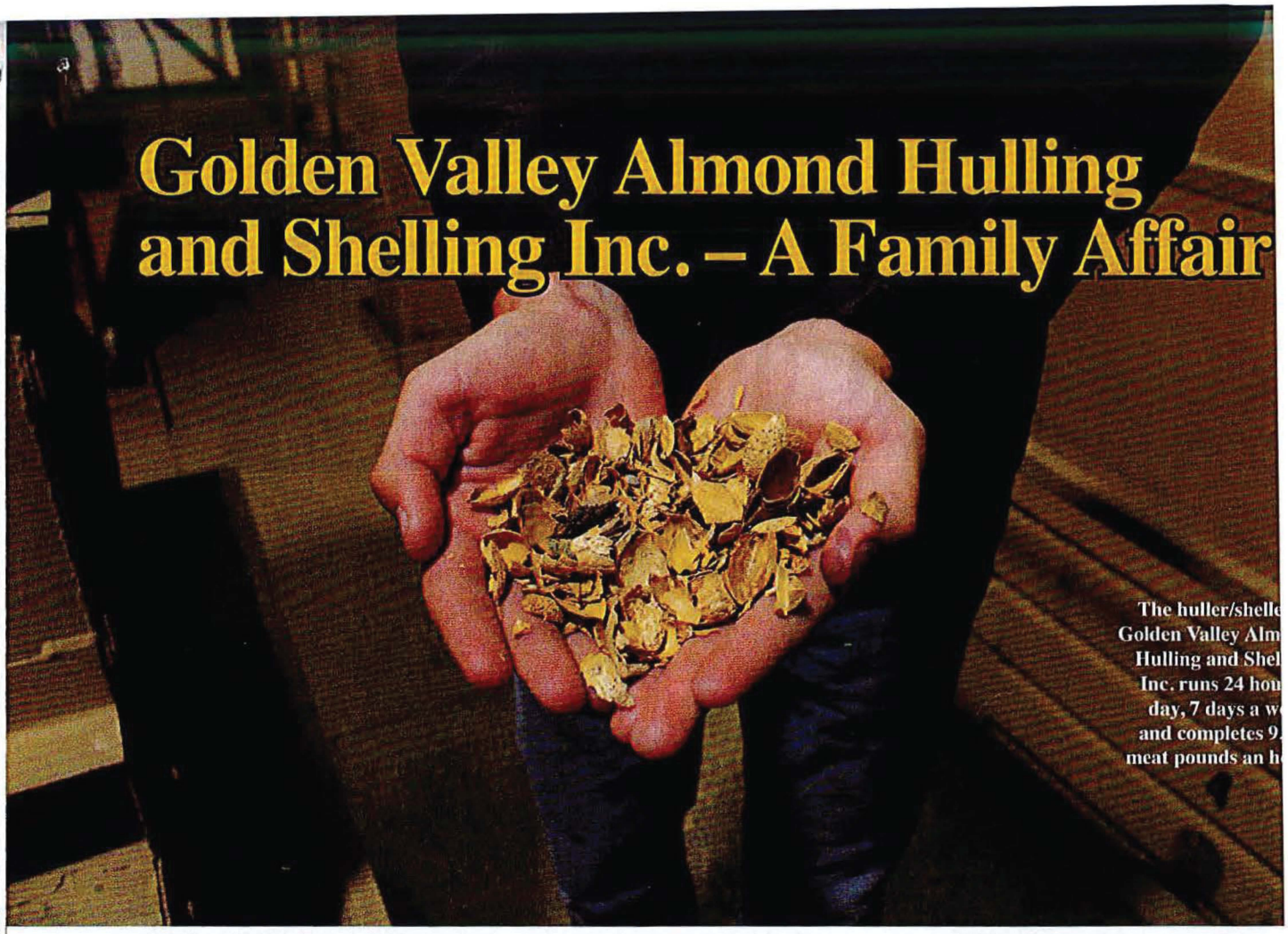
Peak v. Off-Peak Operation

Peak season runs from mid-August to November with the facility operating seven (7) days per week; twenty-four (24) hours per day. Employee count totals seven (7) with four (4) full-time and three (3) part-time employees. There are no current plans to have additional employees although there could be a need at some point for an additional employee or two.

Off-season runs from late-November to mid-August with the facility operating Monday through Friday or Saturday from 7 a.m. to 4 p.m. Employee count is four (4) full-time employees, however two (2) of these do work in the adjoining orchards so the actual employee count for the huller during the off-season is two (2) full-time employees.

{CONTINUED ON NEXT PAGE}

Golden Valley Almond Hulling and Shelling Inc. – A Family Affair



The huller/shelle
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Verdegaal Family Improves Huller/Sheller Efficiencies with a Fresh Set of Eyes

By Adriana Toste, Associate Editor

Unlike most 18-year-olds, David Verdegaal, owner of Golden Valley Almond Hulling and Shelling Inc., was determined to start his own business straight out of high school. Located on Crows Landing road, David's initial huller/sheller plant was far from state-of the-art.

The huller/sheller was a shed converted by David and his brother and they used single-trailer trucks for the loading and unloading process. At the beginning stages of his business, demand was low, so when trucks showed up, the almonds were ran directly through the huller; yet today, the Verdegaals almost can't keep up with demand.

"When David started in the hulling business in 1985, we were dating," said Ronda Verdegaal, David's wife and partner in Golden Valley Almond Hulling and Shelling Inc. "During the busy time, I would take him a plate of food, sit in the cab of the truck because there was no office, and watch the nuts fall while he took a power nap. My job was to wake him up if they quit falling," she recalled.

Little did they know that these early experiences would shape the future of their business.

A One-Man Show

That year, David and his brother did 600,000 meat pounds – a vast difference from last year's record numbers. Last year, the Verdegaals ran 16 million meat pounds and this year, they expect to hit a record year as well, with a predicted 18 million meat pounds to be completed by the end of harvest.

"Back then, I did everything," David explained. "I was running the pre-cleaner, the huller, and if a truck showed up, I had to load that too."

Since the beginning, David had a vision of turning his "one-man show" into a successful, long-term business. He continued to grow, slow but steady; and in 2004, he moved to the current location in Delhi and entered into a partnership with Gold Hills Nut Company.

"That first year after we moved, we hit 5 million meat pounds," he said. "After that, we started growing fast and we were running 9 - 10 million pounds each year."

The almond industry began to become more prevalent in the central valley, so clientele picked up, and

(continued on page 6)

(continued from page 7)

of eyes and he's got the planning down to a science," Ronda said.

Along with the grid system, Clay has mapped out what their schedule will look like one week ahead of time based on last year's program. In doing so, they have been better able to plan how many bins they will need and can provide growers with an expected wait time.

With years in the hulling and shelling business, David and Ronda have seen an uncountable number of nuts run through the huller, but this year's crop looks much different than years previous. Effects from the drought have finally caught up with yield size and quality. The moisture that should be in an almond is lacking, causing the nuts to be extra crunchy. Premium varieties are also looking smaller, like lower-quality varieties, and crops with navel orangeworm seem to be more common this year, David added.

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Demand for almond hulling and shelling is at an all-time high, and the Verdegaals are working hard to keep up. Lined along the driveway of their plant are stockpiles of almonds waiting to be ran through the huller, as seen in the drone photo taken by Clay Verdegaal.

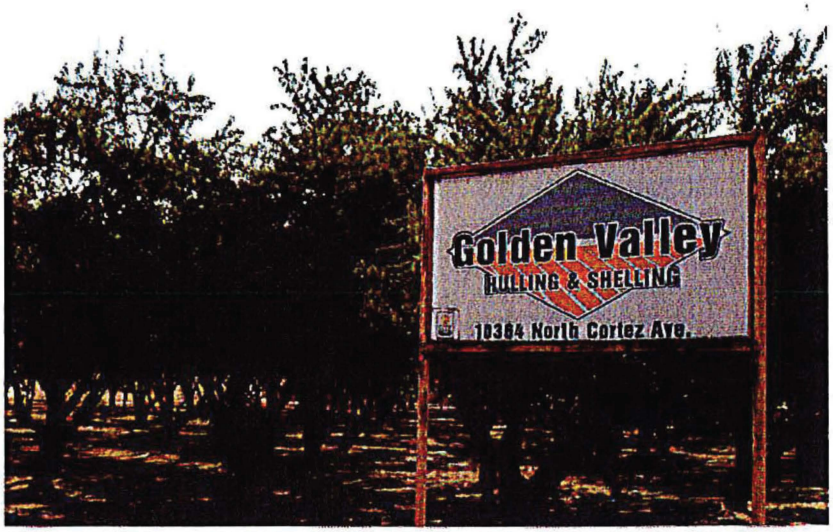
The Verdegaals understand the challenges of navel orangeworm and the drought, as they also have some almond acreage of their own in Oakdale that keeps them busy anytime they're away from the huller.

Family Pride

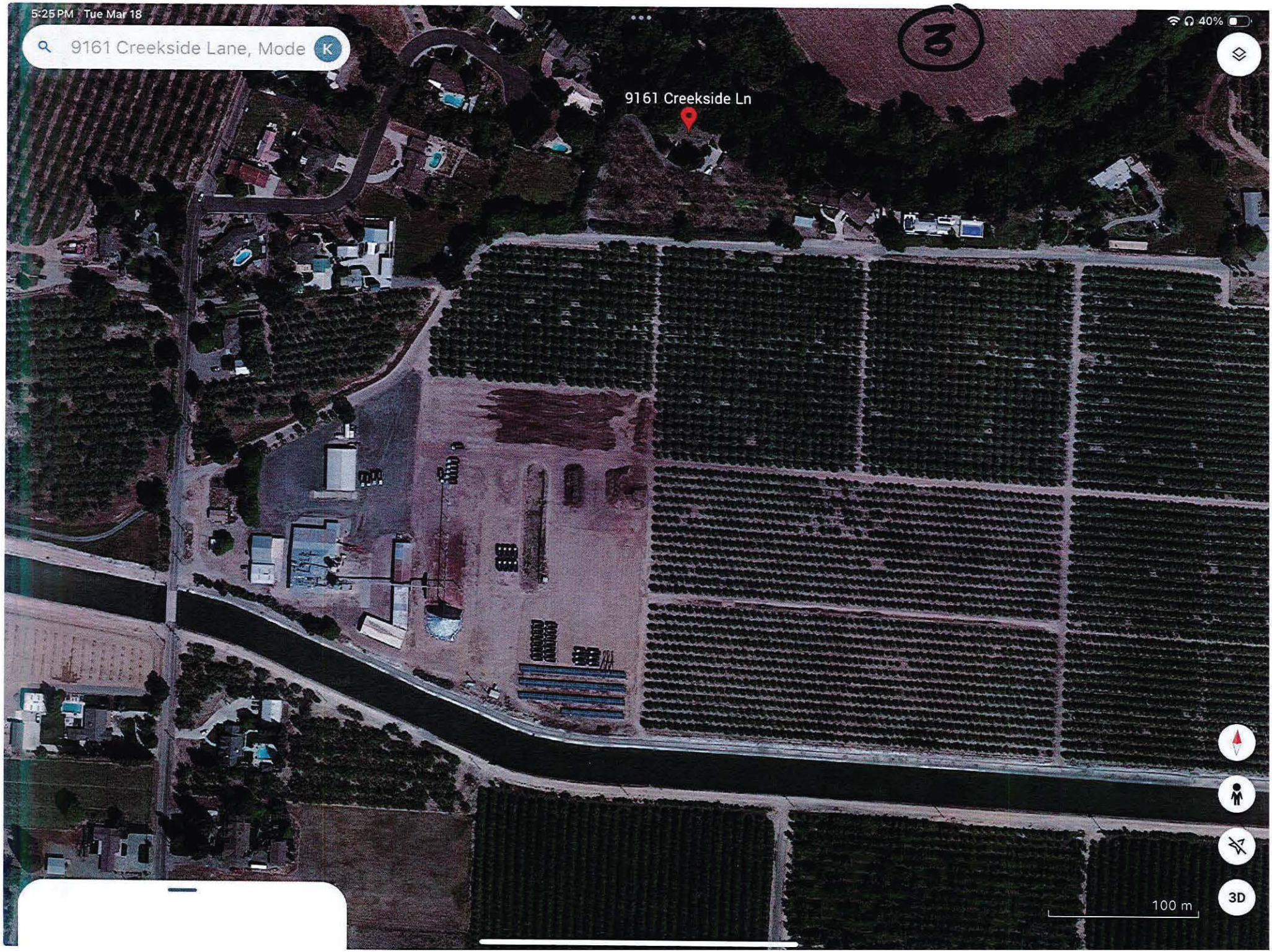
For David and Ronda, there is a sense of pride that comes with seeing Clay take to the family business, and they feel better equipped to keep up with the growing demands now with the help of Clay's knowledge and modern insight. "This was David's dream and it's been an adventure, but here we all are because of it," Ronda said.

David jokingly added, "Clay's talked about next year, so that's a good sign."

Clay, too, has voiced satisfaction in seeing his potential impact for future years sharing, "It's only my first year here, but it's been great to see how I can make things better than the year before." PNP



Golden Valley Almond Hulling and Shelling Inc. is located in Delhi, California. Their plant services growers as north as Farmington and as south as Chowchilla.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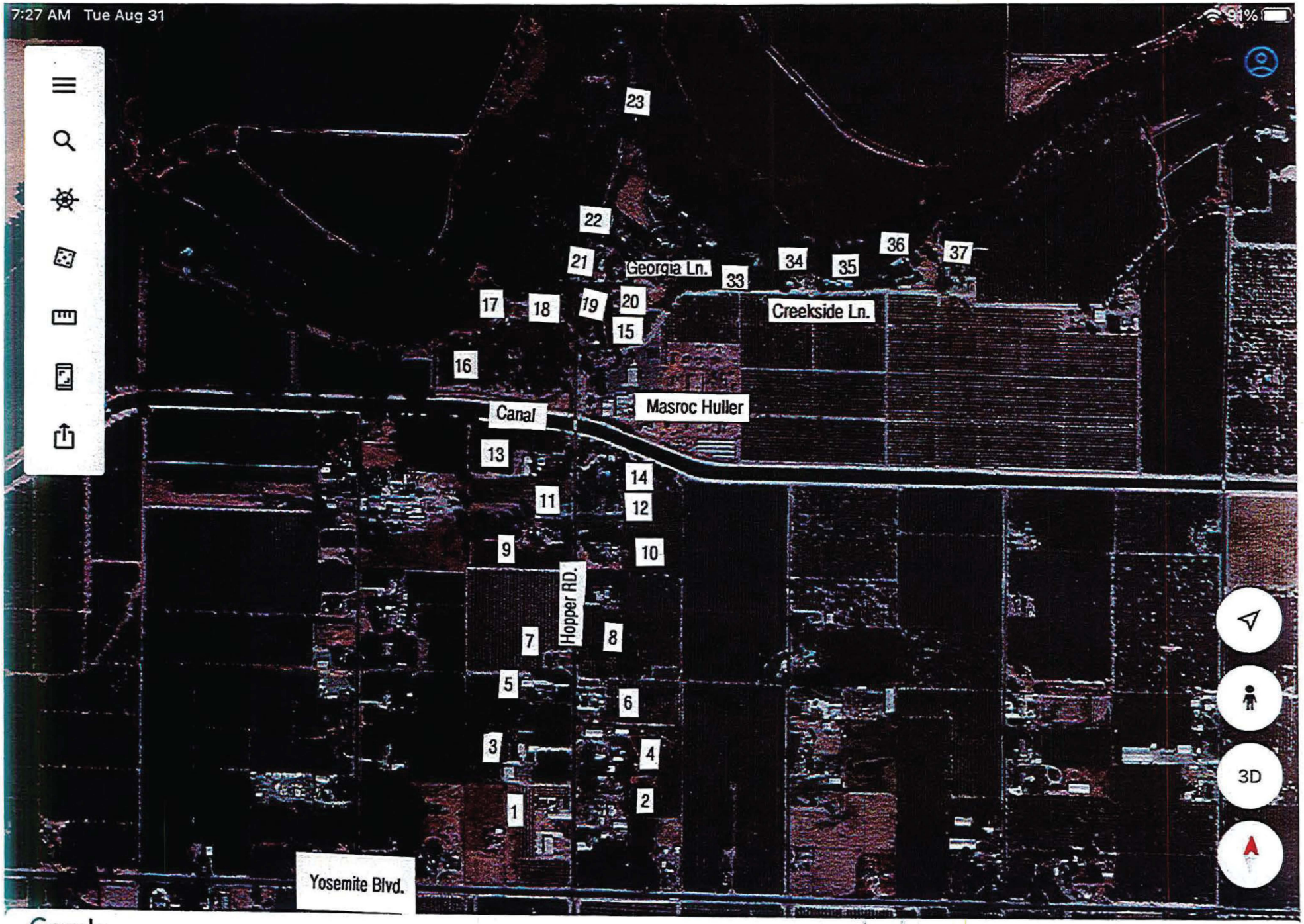
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DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
1010 10TH Street, Suite 3400, Modesto, CA 95354
Planning Phone: (209) 525-6330 Fax: (209) 525-5911
Building Phone: (209) 525-6557 Fax: (209) 525-7759

March 20, 2025

MEMO TO: Stanislaus County Planning Commission

FROM: Department of Planning and Community Development

SUBJECT: USE PERMIT APPLICATION NO. PLN2019-0075 – MASROC FARMS

The applicant is requesting that the subject application be continued to the April 17, 2025 Planning Commission meeting to allow additional time for the applicant to work with the neighbors on project requirements.

RECOMMENDATION

Staff recommends the Planning Commission approve a continuance of Use Permit Application No. PLN2019-0075 – Masroc Farms, to the April 17, 2025 Planning Commission meeting.

March 17, 2025

Department of Planning and Community Development
1010 10th Street, Suite 3400
Modesto, CA 95354

Re: Use Permit Application No. PLN2019-0075 – Masroc Farms

Dear Stanislaus County Planning Commission,

We are unable to attend the public meeting on Thursday, March 20, but have the following concerns:

Please note that we are very supportive of local businesses and in particular those in which our neighbors engage. We want our neighbors to be successful. Expanding the outdoor storage and permitting the existing 2500 square-foot office do not raise any issues for us. Our concerns lie with the expansion plans of Masroc's hulling operation to include shelling and fumigation activities on-site and include

1. **Traffic and road damage** – the increase in hulling and shelling will bring with it a significant increase in the large trucks delivering product to and from the operation. This happened after the previous expansion of Masroc's enterprise. Our Hopper Road is a country road and is not equipped at all to handle these heavy trucks. Hopper is the only ingress and egress to the Masroc operation as well as the residences on Hopper, Georgia and Creekside. The road develops significant potholes and is worn down every season with the traffic of large trucks. We would ask that Masroc and/or the County commit to resurfacing Hopper Road on a routine basis so to maintain its integrity.
2. **Speed Controls and Neighborhood Risk** – The neighborhoods impacted by Masroc's expansion are entirely residential. There is much pedestrian traffic on Hopper Road as well as the presence of our family pets. There are safety concerns with additional trucks on the road as pedestrians try to share the space with commercial vehicles on a small country road. We ask that important safeguards be installed for our safety. For instance, speed limit signs and speed bumps could go a long way to increase our safety without a significant financial burden on the County or on Masroc.
3. **Dust and noise** – With business expansion, their will inevitably be more dust in the air and machinery operating for a longer period of time. We ask that the maximum effort be imposed to eliminate the interruption of the quiet enjoyment of our neighborhood. Would it be possible for cypress trees or other dust/noise catching vegetation be planted on the south side of the property to help with this issue?
4. **Ground Water Concerns** – ~~Two~~ Three neighbor's wells were recently depleted causing tens of thousands of dollars to drill new wells. With an expansion of Masroc's operations, we are concerned our ground water reservoirs will be negatively impacted. We strongly request that no excess pumping be done which could jeopardize the ground water reserves Masroc shares with its residential neighbors.

Thank you for your attention to these concerns and we thank you in advance for addressing them.

Sincerely,

Wendy and John Warwick 9019 Georgia Lane John & Wendy Warwick
9101 Georgia Michelle Montgomery
Lois Montgomery
9011 Georgia Steph W Shea
6681 N. Hopper Rd Mary & Bonnie Thiele

Kristen Anaya

From:
Sent: Thursday, April 17, 2025 5:02 PM
To: Planning
Subject: Request to expand MASROC Farms operation

*** **WARNING:** This message originated from outside of **Stanislaus County. DO NOT** click links or open attachments unless you recognize the sender and know the content is safe ***

From:

My family has resided on Georgia Lane, a cul-de-sac off Hopper Road, since 1966. For many years, this area has been prized for its tranquil atmosphere, attracting residents seeking respite from urban pressures. The natural beauty, including the creek and abundant wildlife, has been a defining feature of our community. This peaceful environment has been central to the quality of life for long-term residents, fostering a strong sense of community.

Mr. Modean's previous business operated with consideration for our established lifestyle, maintaining limited hours and seasonal operations. However, since Masroc's acquisition, concerns have arisen regarding the increased operational scope and its potential impact on our neighborhood. We are particularly troubled by the significantly increased noise levels, particularly at night, disrupting sleep and affecting overall well-being. The elevated levels of dust and particulate matter are also a cause for serious concern regarding both aesthetics and, more importantly, the potential health consequences for residents.

The fumigation and storage processes raise further questions regarding the specific chemicals used, the safety protocols implemented to protect residents from exposure, and the methods for containing and removing hazardous materials. We require comprehensive information on these aspects to adequately assess the potential risks.

Another critical concern is the potential strain on our water resources. Several homes in the area have recently experienced well depletion, necessitating costly and disruptive re-drilling. Given that Masroc owns a drilling company, we are apprehensive about a conflict of interest and the potential for further exploitation of this resource, leaving residents to bear the financial burden. The pre-existing effects of agricultural runoff have already resulted in a severely polluted air quality rating for our area (10/10). The additional pollution from Masroc's expanded operations could exacerbate this issue dramatically.

We understand the need for economic activity, but believe it must be balanced with the preservation of our residential environment. The expansion of this business poses significant challenges to our quality of life, impacting our health, well-being, and property values. We are unconvinced that this industrial-scale operation is appropriate for a residential neighborhood dedicated to preserving its peaceful character and environmental integrity. We strongly urge a thorough review of the proposed expansion and a commitment to mitigating these concerns before proceeding.

Thank you for your time and consideration regarding this important matter.

ATTACHMENT C

Michelle & Lois Montgomery
Sent from Yahoo Mail for iPhone

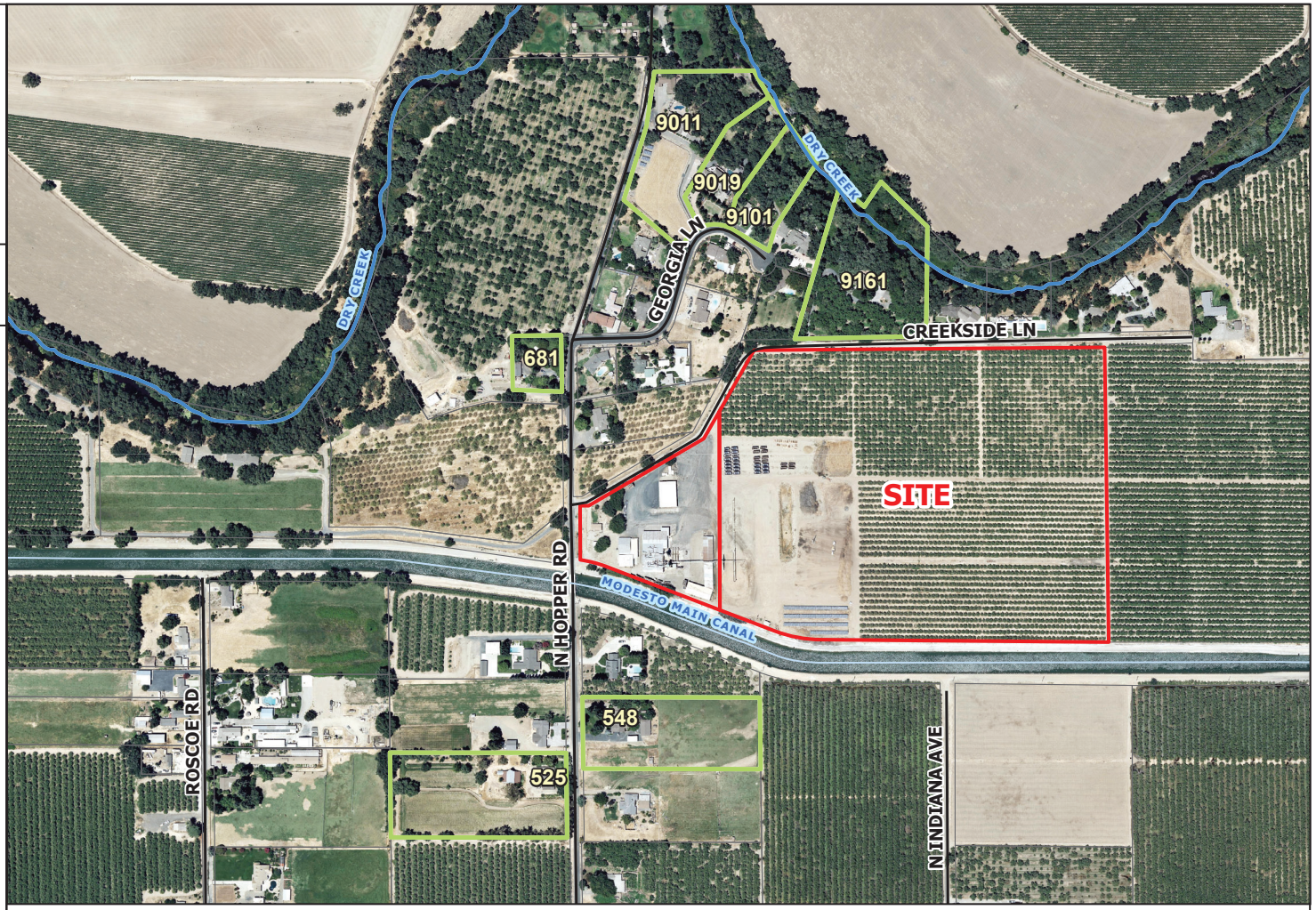
MASROC FARMS

UP PLN2019-0075

CONCERNED RESIDENTS

LEGEND

- Highway
- Canal
- Street
- River
- Concerned Residents
- Project Site
- Parcel



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Source: Planning Department GIS Date Exported: 7/30/2026

ATTACHMENT D

Kristen Anaya

From:
Sent: Friday, August 7, 2026 11:36 AM
To: Planning
Subject: PLN2019-0075 – Masroc Farms.

You don't often get email from Learn why this is important

*** **WARNING:** This message originated from outside of **Stanislaus County. DO NOT** click links or open attachments unless you recognize the sender and know the content is safe ***

Good Afternoon,

I am contacting you in response to the Masroc Farms request to further expand operations at 610/616 N. Hopper Rd.

This is a quiet country residential neighborhood, not an industrial park. Families chose to live here because of the rural setting: clean country air, birds in the trees, quiet roads where children can ride bicycles and neighbors can walk their dogs, and homes where people can sit outside or use their pools without fear of industrial dust, noise, truck traffic, chemical exposure, or impacts to private drinking-water wells.

We understand that agriculture is part of Stanislaus County. But the proposed expansion is not simply ordinary farming. It would expand an almond hulling facility into additional shelling, building conversion, office space, and expanded outdoor storage—activities that may intensify truck trips, machinery, dust, noise, chemical handling, and demand on groundwater.

The applicant's desire for a more convenient or larger processing operation must not be achieved by shifting the inconvenience and risk onto nearby residents. Our private residential street should not become an industrial access route, and our homes should not become the buffer zone for particulate emissions, possible fumigants, outdoor storage, noise, or groundwater impacts.

The County should require a current, complete environmental analysis before approving this use permit. At minimum, that analysis should disclose expected truck volumes and routes; operating hours; PM10 and PM2.5 emissions; dust-control equipment and enforcement; noise levels at nearby homes; every chemical and fumigant proposed; water source and projected use; and protections for private wells and groundwater.

If approval is considered, it should include enforceable conditions: limits on hours, truck routing and trips, restrictions on outdoor storage and dusty operations, effective filtration and monitoring, no on-site fumigation unless specifically reviewed and permitted, and baseline private-well testing with a clear response process if water quality or quantity is affected.

This neighborhood deserves the same protection that would be expected if this expansion were proposed next to any residential community. Please do not approve a project that changes the character, safety, air, water, and peace of this rural residential area without proving that those impacts will be avoided or meaningfully controlled.

The facility was originally understood by nearby residents as a family-owned, small-capacity seasonal hulling operation with limited operating hours. This was done with respect to property owners on Hopper

ATTACHMENT 2

Road, Creekside Lane, and Georgia Lane. When Masroc acquired the property, its size and range of operations have greatly expanded, and the current proposal would further intensify that change.

A use may be agricultural in name, but when its scale and operations resemble industrial processing—with expanded machinery, storage, truck traffic, dust, and potential chemical handling—the County must evaluate its real-world effect on the residents who live beside it. How long until another property owner decides to promote his trade on-site and further expand his capabilities and production?

In closing, this is a neighborhood. It's our home. A place to gather, raise families, and retire away from distractions, traffic, noise, and pollutants. There are virtually no benefits (save discounted nut processing for some), to our quality of life, property value, or environment by further expansion of Masroc Farms. Expansion and production can be relocated to a property designated for such. A home cannot.

Sincerely,

Lois & Michelle Montgomery
Homeowner since 1966 - present

Sent from Yahoo Mail for iPhone