



CEQA Referral Initial Study And Notice of Intent to Adopt a Mitigated Negative Declaration

Date: January 22, 2025

To: Distribution List (See Attachment A)

From: Kristen Anaya Senior Planner
Planning and Community Development

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

Comment Period: January 22, 2025 – February 26, 2025

Respond By: February 26, 2025

Public Hearing Date: Not yet scheduled. A separate notice will be sent to you when a hearing is scheduled.

You may have previously received an Early Consultation Notice regarding this project, and your comments, if provided, were incorporated into the Initial Study. Based on all comments received, Stanislaus County anticipates adopting a Mitigated Negative Declaration for this project. This referral provides notice of a 30-day comment period during which Responsible and Trustee Agencies and other interested parties may provide comments to this Department regarding our proposal to adopt the Mitigated Negative Declaration.

All applicable project documents are available for review at: Stanislaus County Department of Planning and Community Development, 1010 10th Street, Suite 3400, Modesto, CA 95354. Please provide any additional comments to the above address or call us at (209) 525-6330 if you have any questions. Thank you.

Applicant: Dave Zwald, Masroc Farms

Project Location: 616 North Hopper Road, on the southeast corner of Hopper Road and Creekside Lane, in the Modesto area.

APN: 009-016-024 and 009-016-025

Williamson Act Contract: N/A

General Plan: Agriculture

Current Zoning: General Agriculture (A-2-40)

Project Description: Request to expand and modify an existing almond hulling facility by adding shelling and fumigation 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.

Full document with attachments available for viewing at:
<http://www.stancounty.com/planning/pl/act-projects.shtm>

USE PERMIT APPLICATION NO. PLN2019-0075 – MASROC FARMS

Attachment A

Distribution List

X	CA DEPT OF CONSERVATION Land Resources		STAN CO ALUC
X	CA DEPT OF FISH & WILDLIFE		STAN CO ANIMAL SERVICES
	CA DEPT OF FORESTRY (CAL FIRE)	X	STAN CO BUILDING PERMITS DIVISION
X	CA DEPT OF TRANSPORTATION DIST 10	X	STAN CO CEO
X	CA OPR STATE CLEARINGHOUSE		STAN CO CSA
X	CA RWQCB CENTRAL VALLEY REGION	X	STAN CO DER
	CA STATE LANDS COMMISSION		STAN CO ERC
	CEMETERY DISTRICT		STAN CO FARM BUREAU
	CENTRAL VALLEY FLOOD PROTECTION	X	STAN CO HAZARDOUS MATERIALS
	CITY OF		STAN CO PARKS & RECREATION
	COMMUNITY SERVICES/SANITARY DIST	X	STAN CO PUBLIC WORKS
X	COOPERATIVE EXTENSION		STAN CO PUBLIC WORKS - SURVEY
	COUNTY OF:		STAN CO RISK MANAGEMENT
X	DER - GROUNDWATER RESOURCES DIVISION	X	STAN CO SHERIFF
X	FIRE PROTECTION DIST: STANISLAUS CONSOLIDATED	X	STAN CO SUPERVISOR DIST 1: B. CONDIT
X	GSA: STANISLAUS & TUOLUMNE RIVERS GROUNDWATER BASIN ASSOCIATION	X	STAN COUNTY COUNSEL
	HOSPITAL DIST:		StanCOG
X	IRRIGATION DIST: MODESTO	X	STANISLAUS FIRE PREVENTION BUREAU
X	MOSQUITO DIST: EASTSIDE	X	STANISLAUS LAFCO
X	STANISLAUS COUNTY EMERGENCY MEDICAL SERVICES	X	STATE OF CA SWRCB – DIV OF DRINKING WATER DIST. 10
	MUNICIPAL ADVISORY COUNCIL:	X	SURROUNDING LAND OWNERS
	PACIFIC GAS & ELECTRIC	X	INTERESTED PARTIES
	POSTMASTER:	X	TELEPHONE COMPANY: AT&T
	RAILROAD:		TRIBAL CONTACTS (CA Government Code §65352.3)
X	SAN JOAQUIN VALLEY APCD		US ARMY CORPS OF ENGINEERS
X	SCHOOL DIST 1: MODESTO CITY SCHOOLS	X	US FISH & WILDLIFE
X	SCHOOL DIST 2: EMPIRE UNION		US MILITARY (SB 1462)
	WORKFORCE DEVELOPMENT	X	USDA NRCS
X	STAN CO AG COMMISSIONER		WATER DIST:
	TUOLUMNE RIVER TRUST	X	DISPOSAL AGENCY: TURLOCK SCAVENGER



STANISLAUS COUNTY CEQA REFERRAL RESPONSE FORM

TO: Stanislaus County Planning & Community Development
1010 10th Street, Suite 3400
Modesto, CA 95354

FROM: _____

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

Based on this agency's particular field(s) of expertise, it is our position the above described project:

- _____ Will not have a significant effect on the environment.
_____ May have a significant effect on the environment.
_____ No Comments.

Listed below are specific impacts which support our determination (e.g., traffic general, carrying capacity, soil types, air quality, etc.) – (attach additional sheet if necessary)

- 1.
- 2.
- 3.
- 4.

Listed below are possible mitigation measures for the above-listed impacts: *PLEASE BE SURE TO INCLUDE WHEN THE MITIGATION OR CONDITION NEEDS TO BE IMPLEMENTED (PRIOR TO RECORDING A MAP, PRIOR TO ISSUANCE OF A BUILDING PERMIT, ETC.):*

- 1.
- 2.
- 3.
- 4.

In addition, our agency has the following comments (attach additional sheets if necessary).

Response prepared by:

Name	Title	Date
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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

CEQA INITIAL STUDY

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 as a biproduct 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

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.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture & Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input type="checkbox"/> Geology / Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials |
| <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources |
| <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Wildfire | <input type="checkbox"/> 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.

Prepared by Kristen Anaya, Senior Planner

January 22, 2025

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 Documentation¹.

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 as a byproduct 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 Documentation¹.

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 PM_{2.5} (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 SJVAPCD:

- 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 Documentation¹.

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, ruffle 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 Documentation¹.

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 Documentation¹.

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 Documentation¹.

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 Documentation¹.

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 Documentation¹.

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 Documentation¹.

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 Documentation¹.

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 Documentation¹.

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 Documentation¹.

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 it 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 L₅₀ 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 L₅₀ 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 L₅₀ 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 L₅₀ 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. 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: multiple complaints received during a 24-hour period from more than one property owner and/or resident of the surrounding area; or, receipt of noise measurements showing exceeded noise standards from a noise consultant determined by the County Planning Director to be qualified; or 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 may require additional noise analysis to be conducted, at the operator's/property owner's cost, in order to determine if noise standards may have been exceeded.

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.

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 Documentation¹.

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 Documentation¹.

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 Documentation¹.

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 Documentation¹.

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 Documentation¹.

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 Documentation¹.

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 Documentation¹.

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 Documentation¹.

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 Documentation¹.

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

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

Mitigation Monitoring and Reporting Program

Adapted from CEQA Guidelines sec. 15097 Final Text, October 26, 1998

January 22, 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: multiple complaints received during a 24-hour period from more than one property owner and/or resident of the surrounding area; or, receipt of noise measurements showing exceeded noise standards from a noise consultant determined by the County Planning Director to be qualified; or 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.

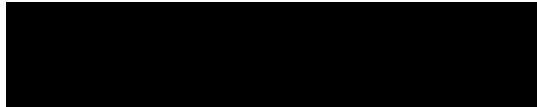
Upon receipt of a documented noise complaint, the County may require additional noise analysis to be conducted, at the operator's/property owner's cost, in order to determine if noise standards may have been exceeded.

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.

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






1-21-25

Date

MASROC FARMS
UP
PLN2019-0075

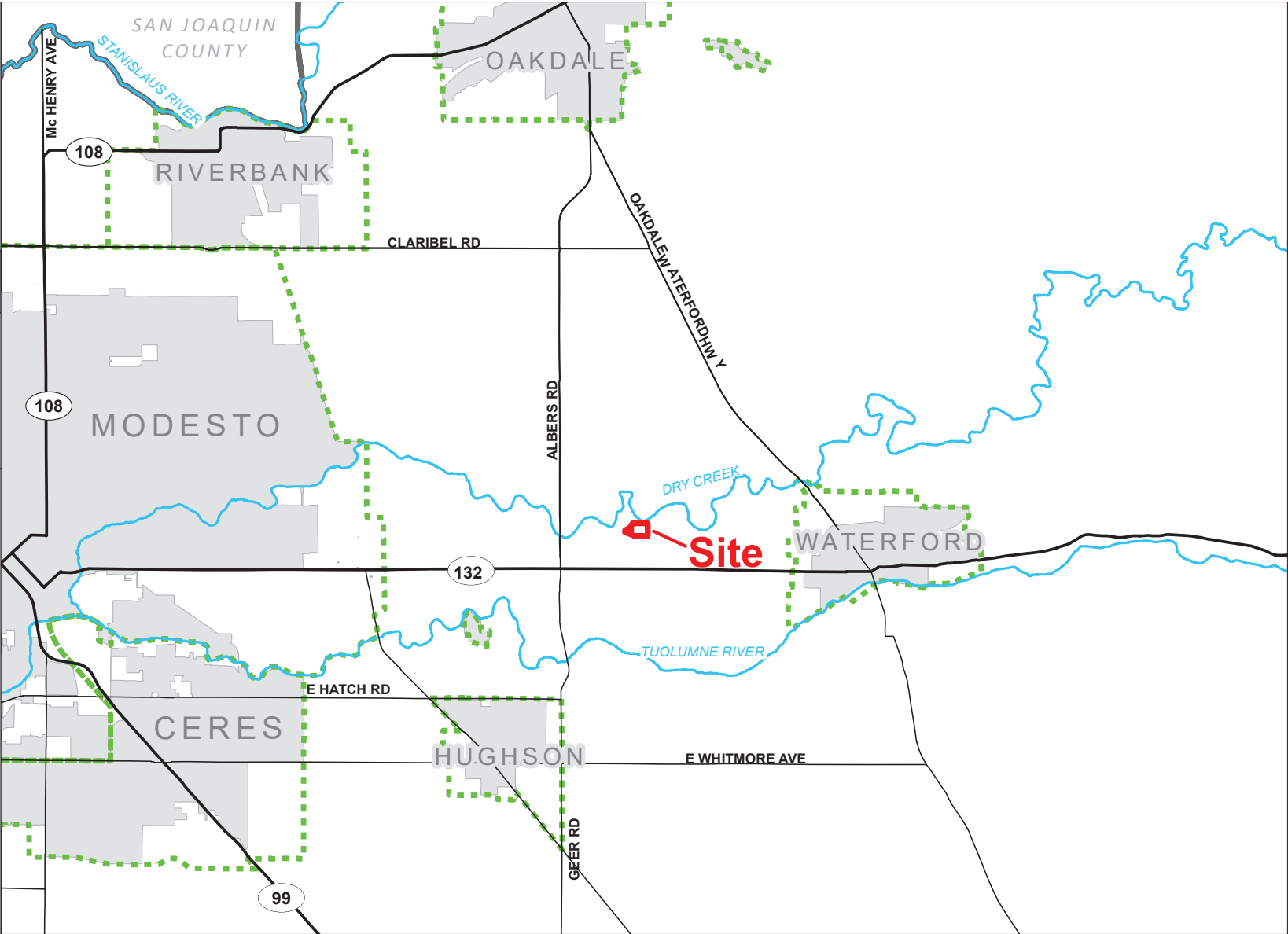
AREA MAP

LEGEND

-  Project Site
-  Sphere of Influence
-  City
-  Road
-  River



Source: Planning Department GIS Date: 8/26/2019






MASROC FARMS



**UP
PLN2019-0075**

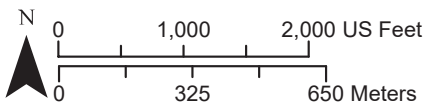
GENERAL PLAN MAP

LEGEND

-  Project Site
-  Parcel
-  Highway
-  Street
-  Canal
-  River

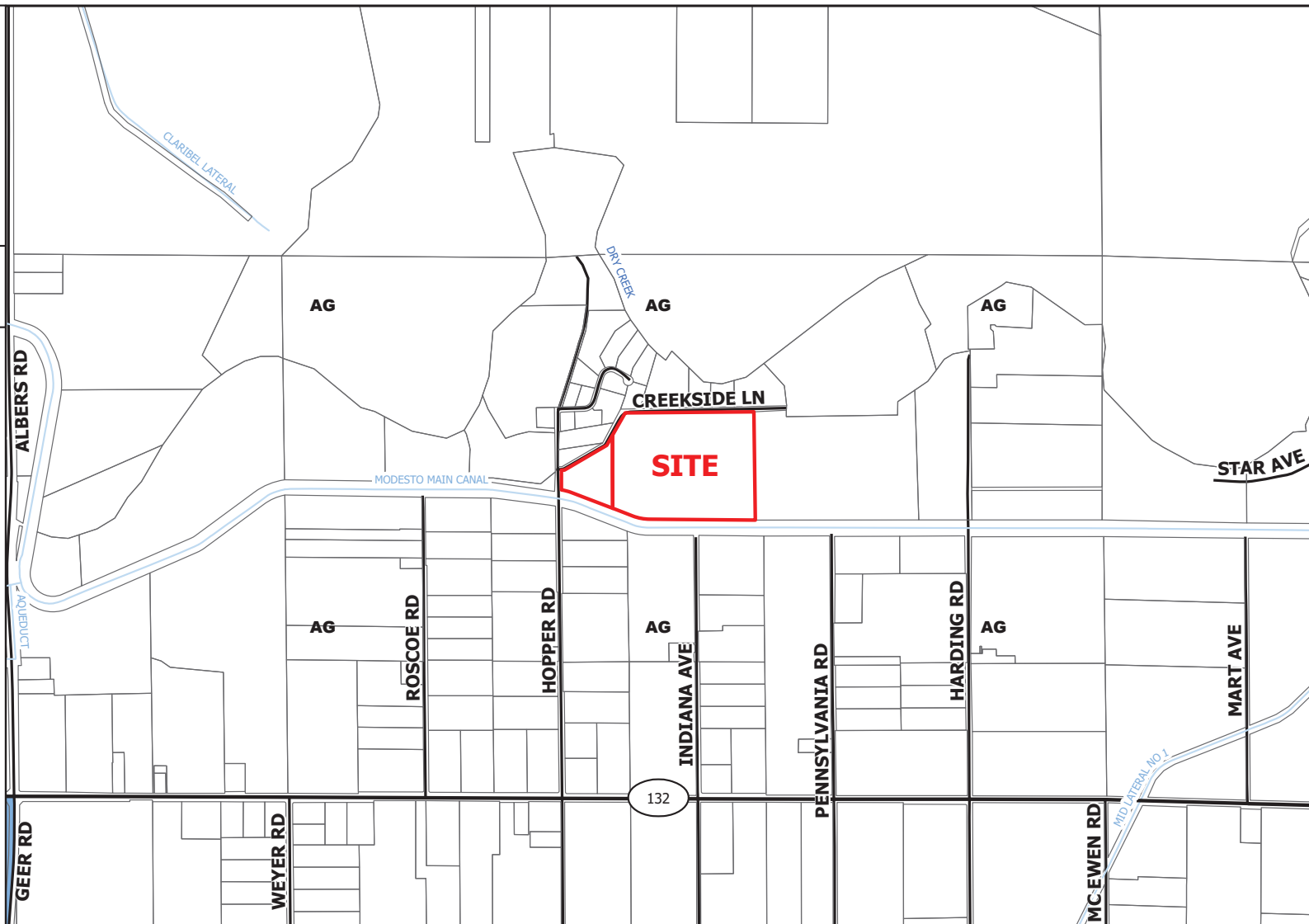
General Plan

-  Agriculture (AG)
-  Planned Development (PD)



Source: Planning Department GIS

Date Exported: 1/15/2025









MASROC FARMS



UP
PLN2019-0075

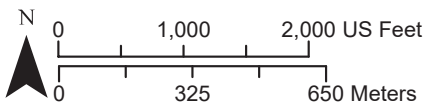
ZONING MAP

LEGEND

-  Project Site
-  Parcel
-  Highway
-  Street
-  Canal
-  River

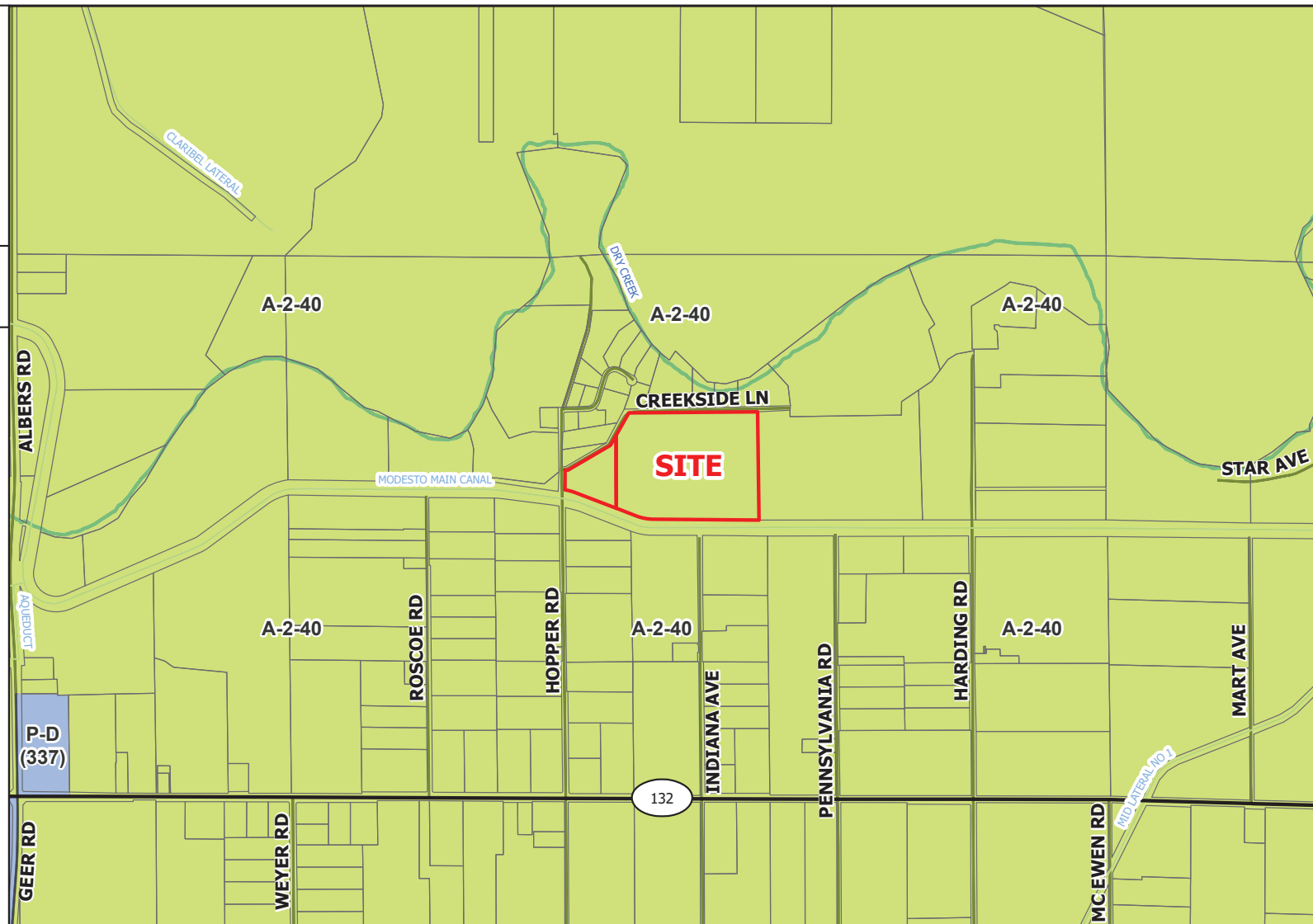
Zoning Designation

-  General AG 40 Acre (A-2-40)
-  Planned Development (P-D)



Source: Planning Department GIS

Date Exported: 1/15/2025








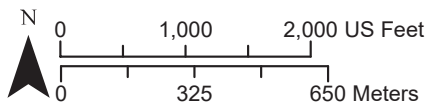
MASROC FARMS

UP
PLN2019-0075

2023 AERIAL AREA MAP

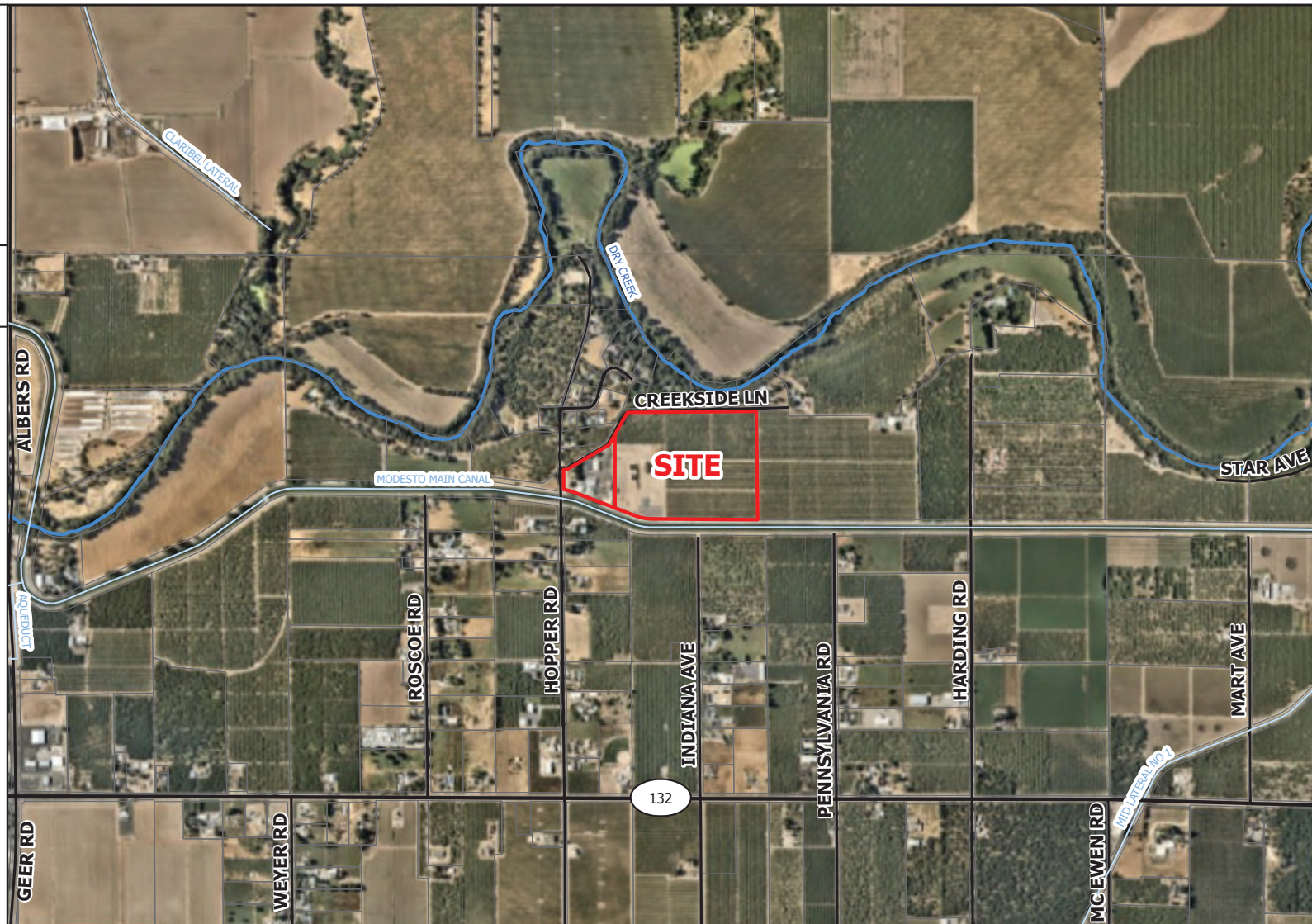
LEGEND

-  Project Site
-  Parcel
-  Highway
-  Street
-  Canal
-  River



Source: Planning Department GIS

Date Exported: 1/15/2025








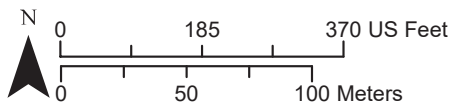
MASROC FARMS

**UP
PLN2019-0075**

2023 AERIAL SITE MAP

LEGEND

-  Project Site
-  Parcel
-  Street
-  Canal
-  River



Source: Planning Department GIS

Date Exported: 1/15/2025



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.



Paul Bollard, President

April 3, 2020



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.

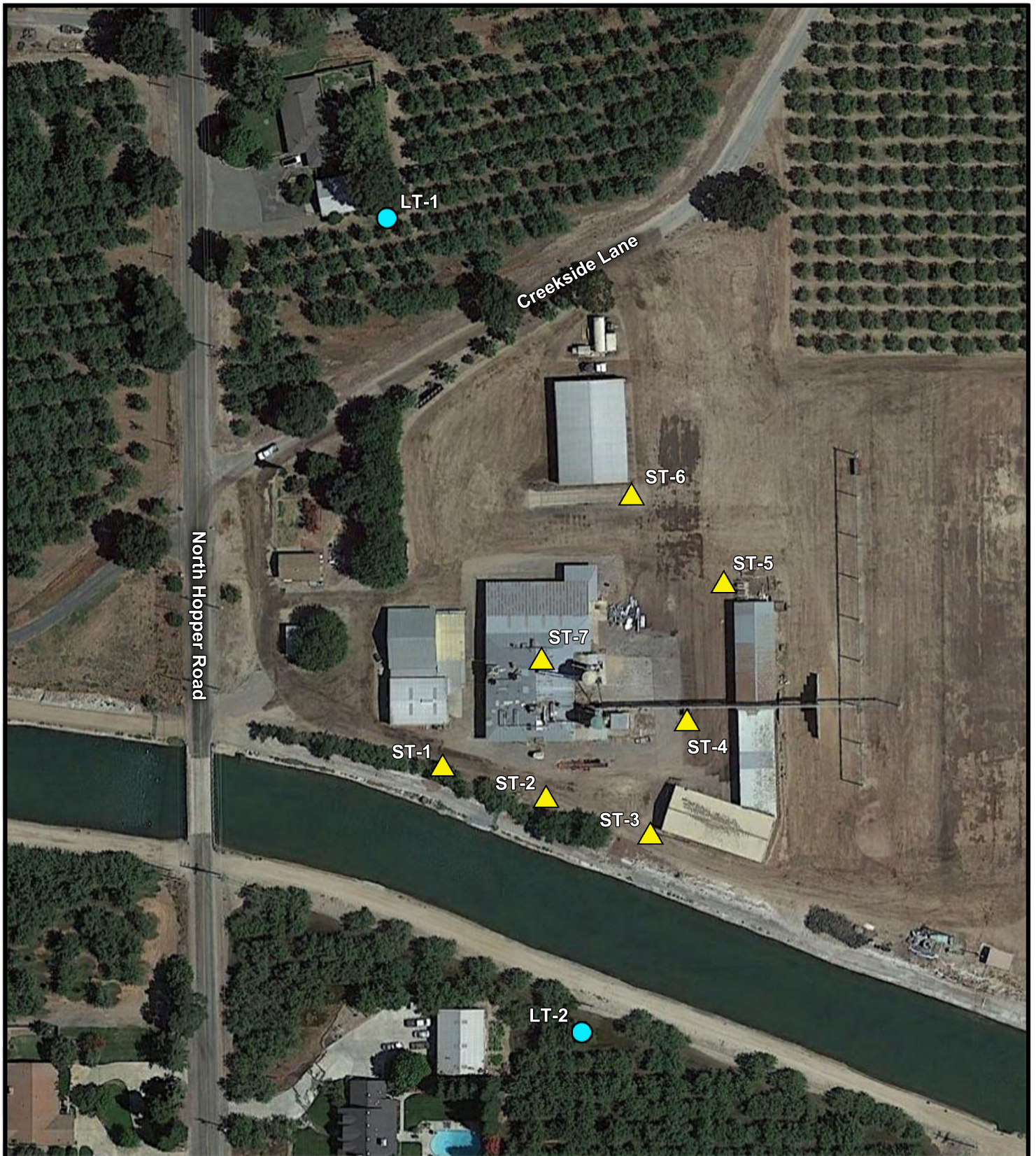
Due to concerns expressed by local residents regarding the noise generation of the facility, the County of Stanislaus has requested that a noise analysis be conducted. Pursuant to that request, Bollard Acoustical Consultants, Inc. (BAC) was retained by the project applicant to prepare this noise analysis. 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.

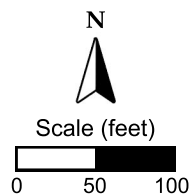
Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals of pressure) as a point of reference, defined as 0 dB. Other sound pressures are then compared 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



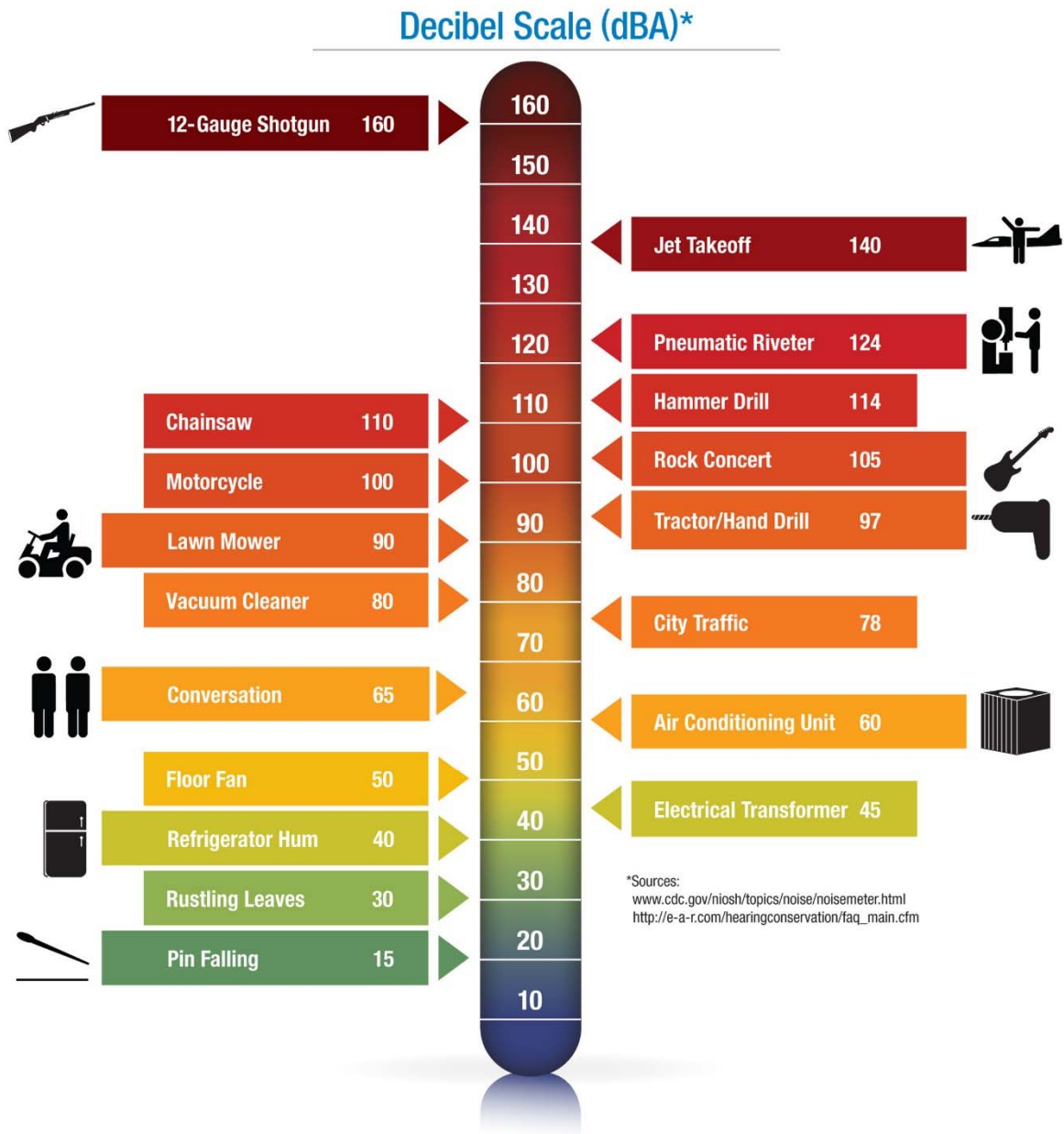
Masroc Farms
Hulling & Shelling Operations
Stanislaus County, California

Site Vicinity & Noise Measurement Locations

Figure 1



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
<i>Source: Stanislaus County Code Section 10.46.050, Table B.</i>	

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 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 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, 2019¹

Site ²	Date	L _{dn}	Average Measured Hourly Noise Levels, dBA ³			
			Daytime ⁴		Nighttime ⁵	
			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

Site ¹	Time	Measured Noise Levels, dBA		Notes
		L _{eq}	L _{max}	
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.
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.
RT₆₀	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.



A



B



C



D

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



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

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

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

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

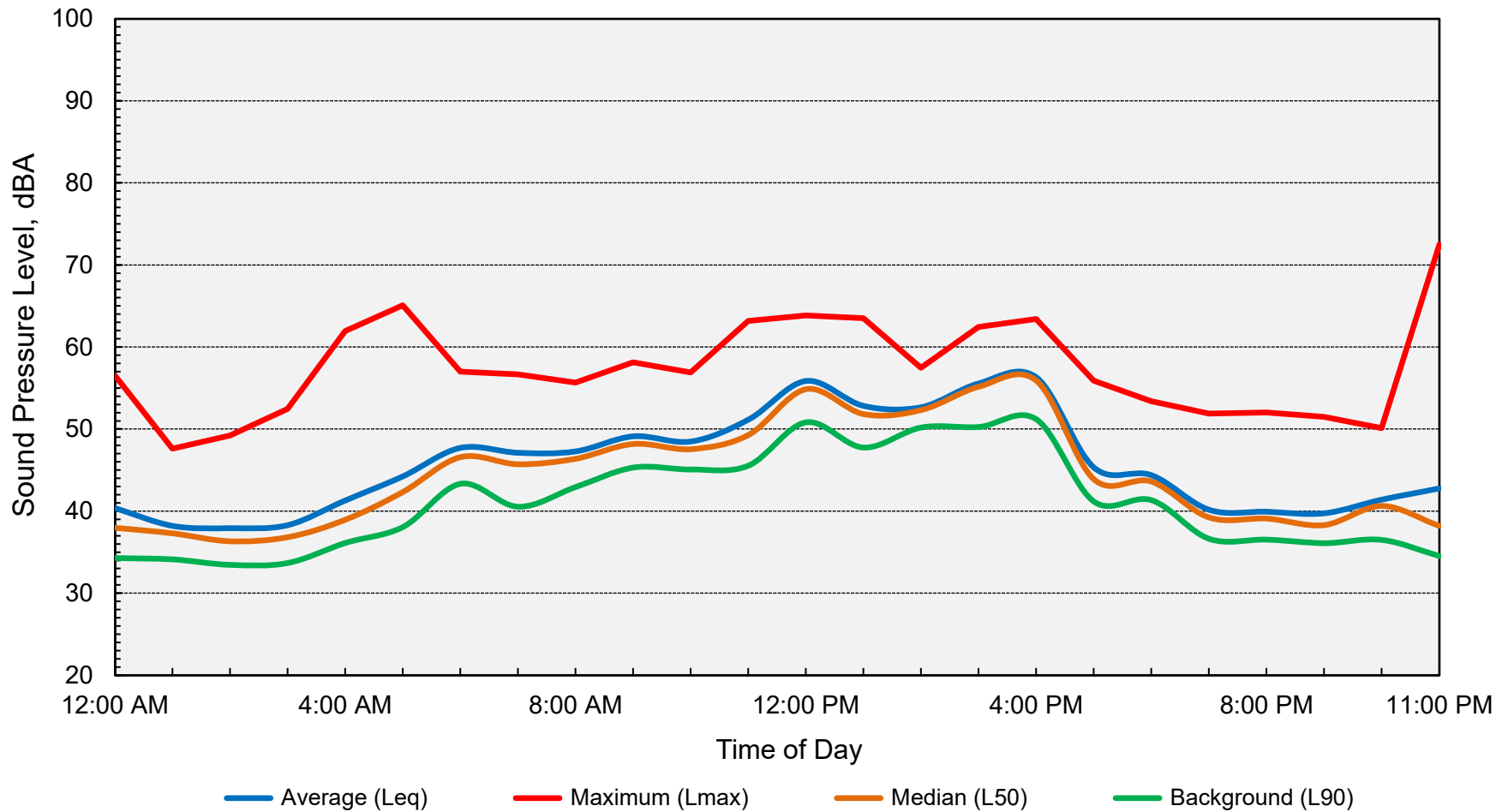
Hour	Leq	Lmax	L50	L90
12:00 AM	36	45	34	32
1:00 AM	36	47	35	32
2:00 AM	34	43	33	31
3:00 AM	35	45	33	31
4:00 AM	46	72	36	33
5:00 AM	38	48	38	36
6:00 AM	41	51	40	38
7:00 AM	59	68	59	42
8:00 AM	61	68	61	60
9:00 AM	61	70	60	58
10:00 AM	57	69	56	55
11:00 AM	61	63	61	59
12:00 PM	61	65	61	60
1:00 PM	61	80	61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

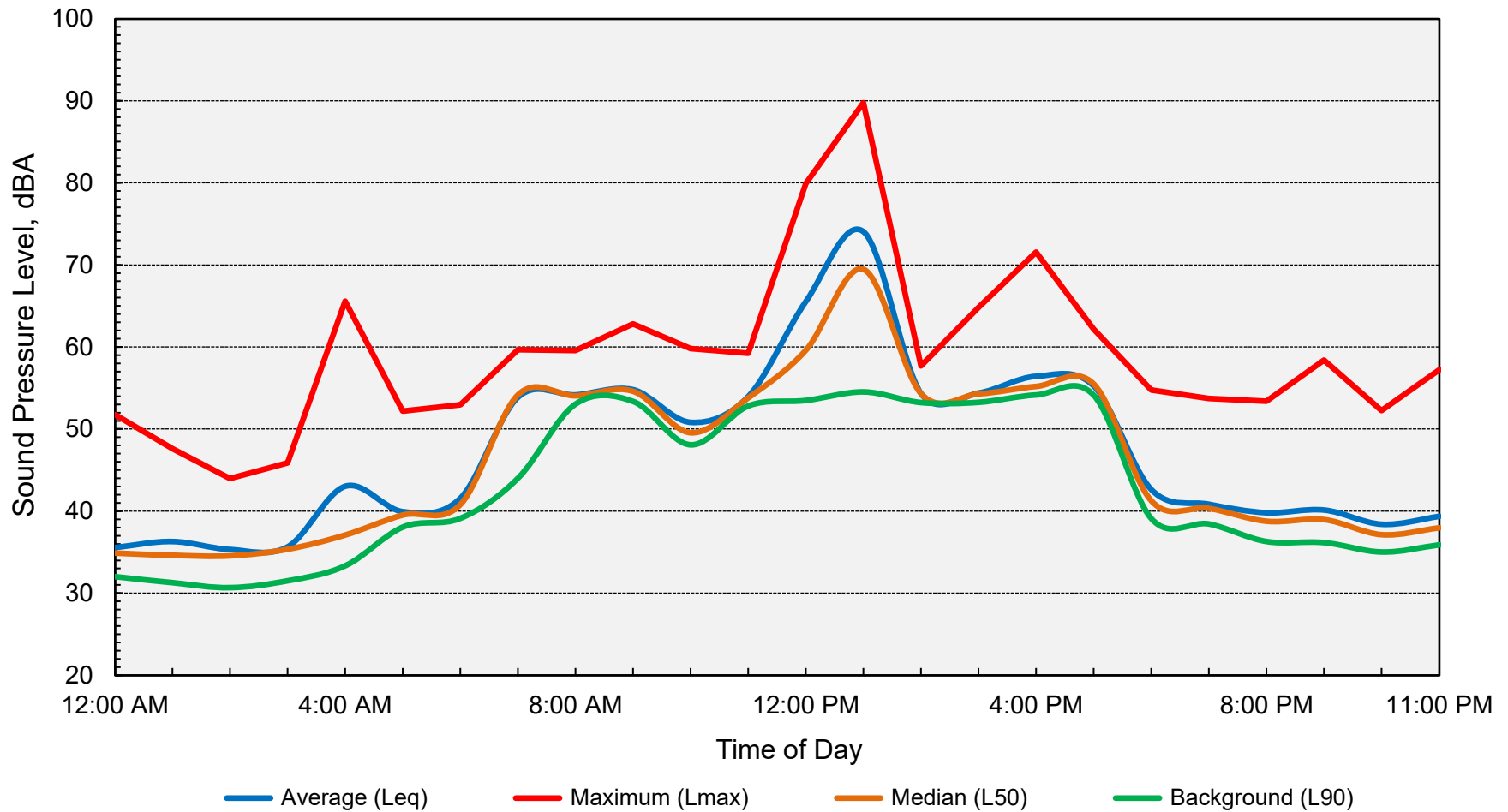
GPS Coordinates	37°38'45.99" N
	120°49'42.07" W

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



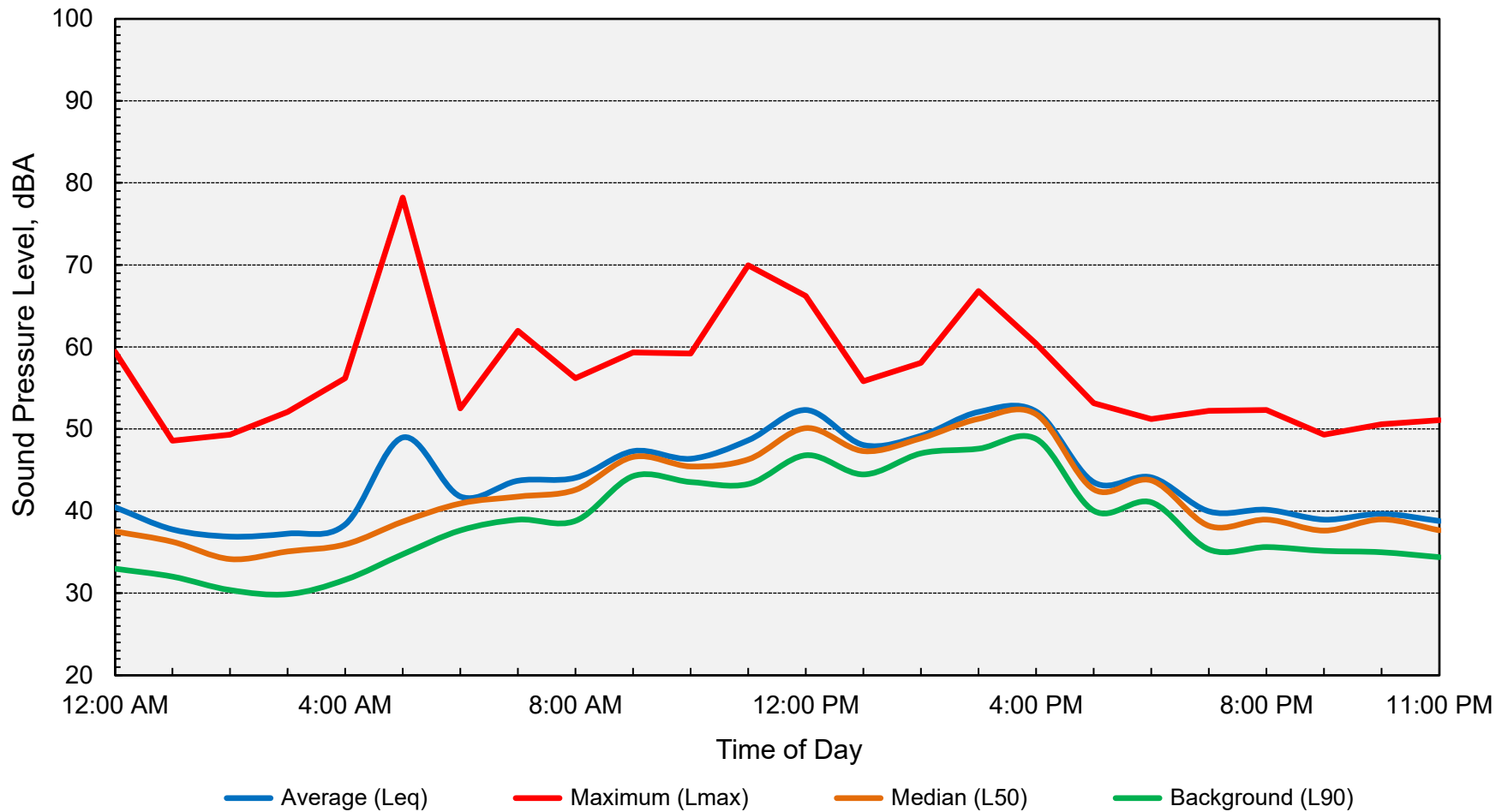
Computed Ldn = 52 dB

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



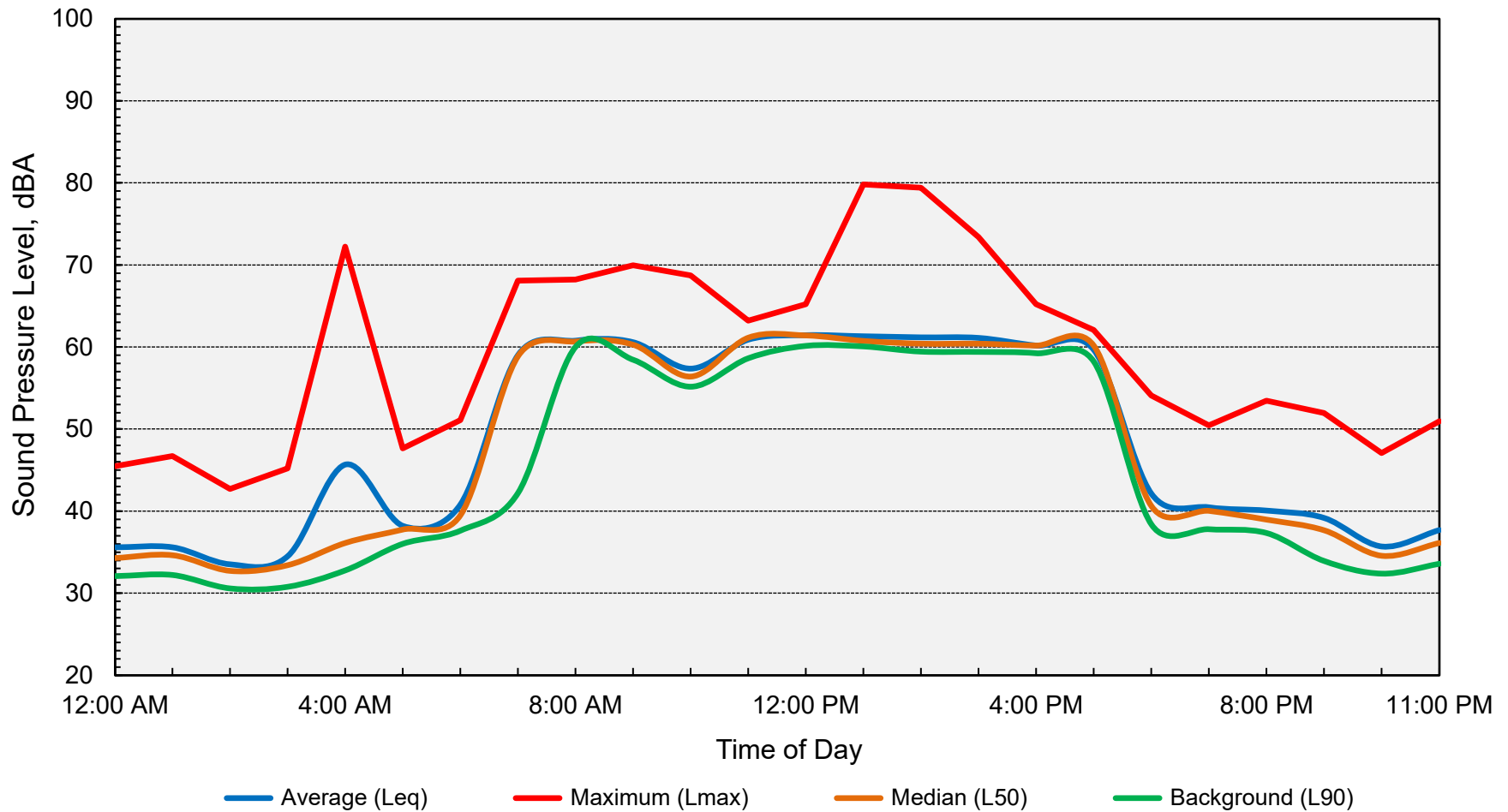
Computed Ldn = 61 dB

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

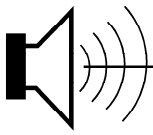


Computed Ldn = 50 dB

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



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.

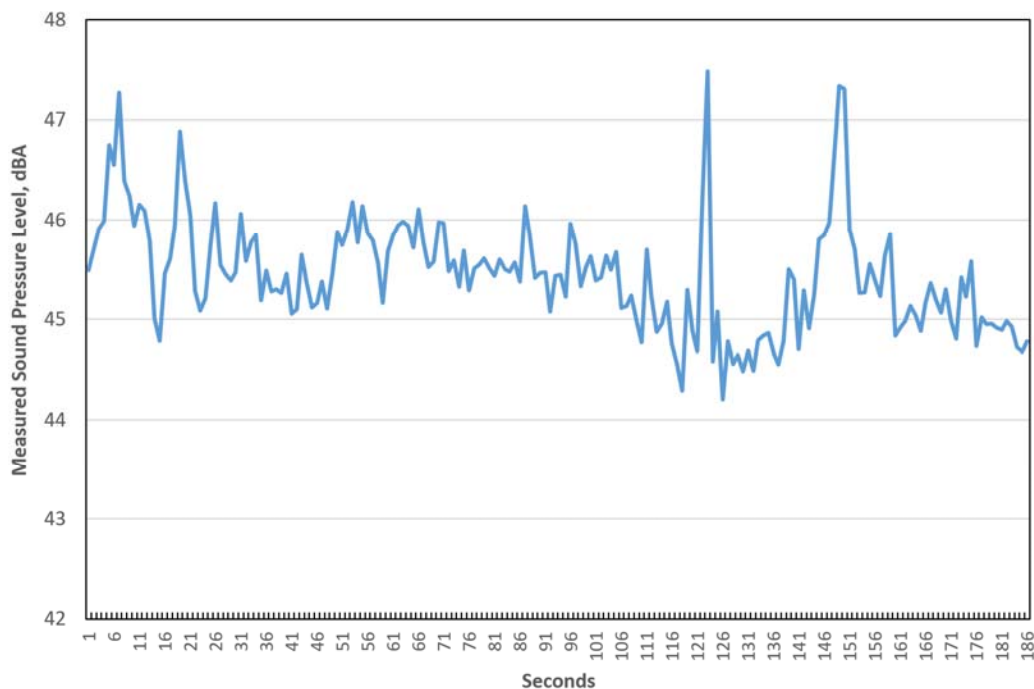


October 2020:

- 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.

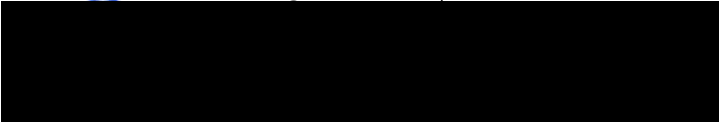
Non-Operational Period of 2021 (current period)

- 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.



Paul Bollard, President

October 14, 2021



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.

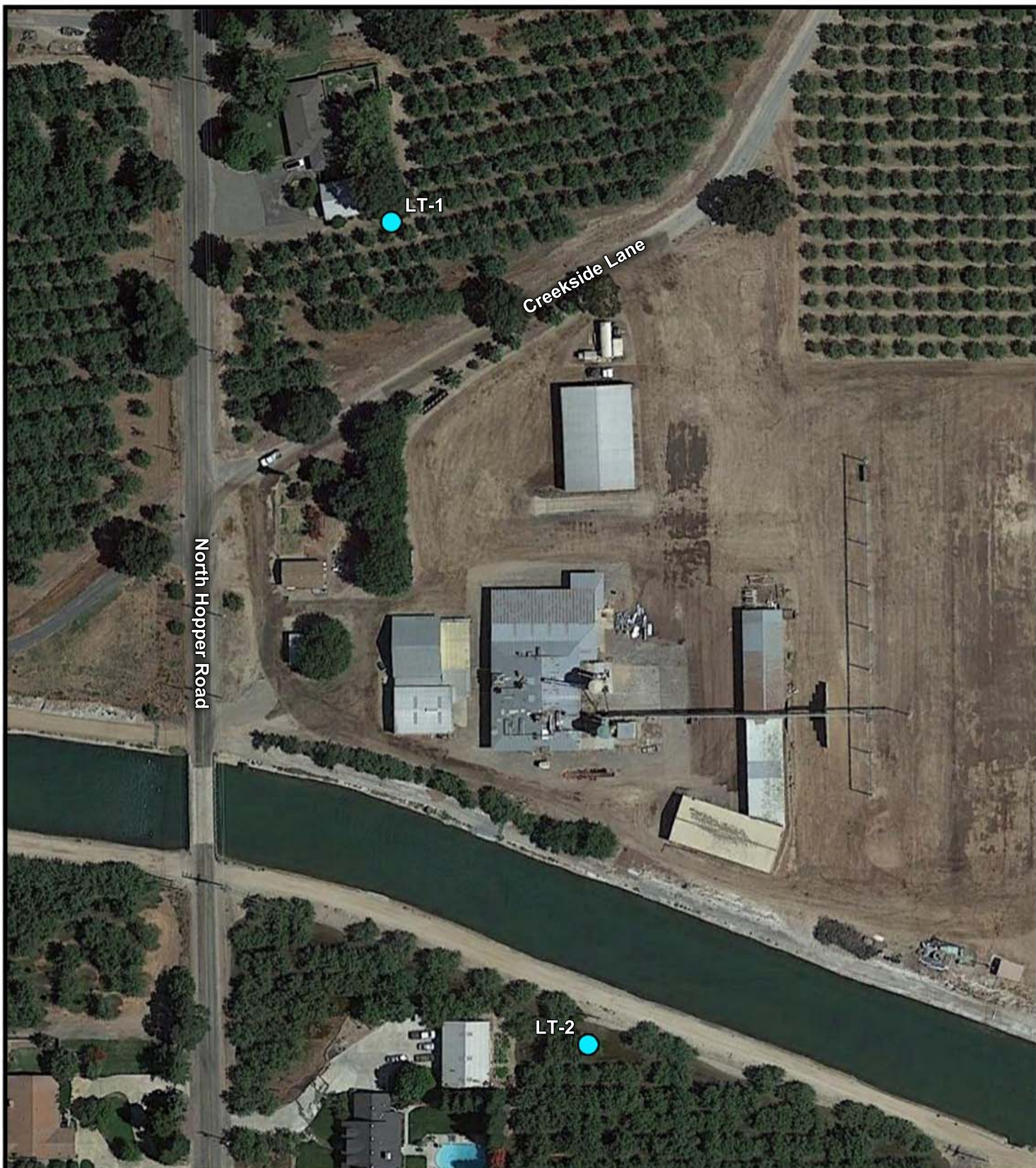
Following the April 2020 noise study, Masroc Farms has implemented several noise mitigation measures during the non-operational periods (off-season) of 2020 and 2021. Those measures included the replacement of wood bearings with greaseable bearings, the use of almond crates to create sound barriers along 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

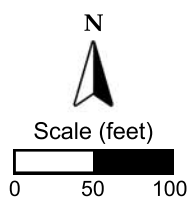
Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are designated as sound. The number of pressure variations per second is 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



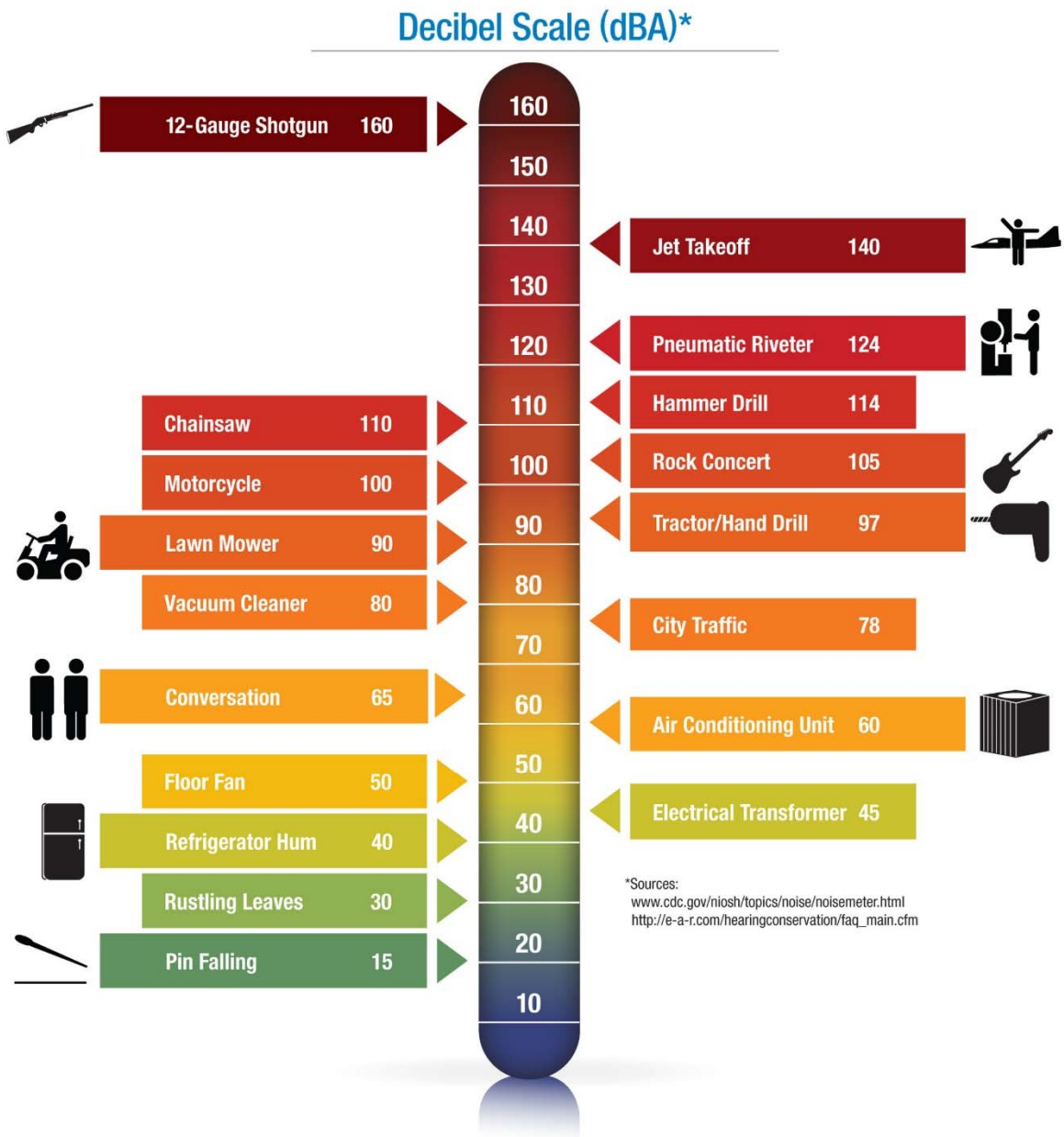
Masroc Farms
Hulling & Shelling Operations
Stanislaus County, California

Site Vicinity & Noise Measurement Locations

Figure 1



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 L₅₀ 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 L₅₀ 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 L₅₀ 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.

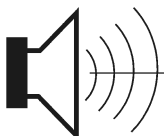
At this time, BAC is unable identify additional feasible noise mitigation measures which could be implemented to further reduce facility noise levels to a state of compliance with the County's 45 dB L₅₀ nighttime noise level standard at the residence to the south. As a result, unless a variance can be 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.
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.
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	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.



BOLLARD

Acoustical Consultants



Legend

A: LT-1
B: LT-2

Masroc Farms
Hulling & Shelling Operations
Stanislaus County, California
Photographs of Noise Survey Locations

Appendix B



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

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

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

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

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

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

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

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

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

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

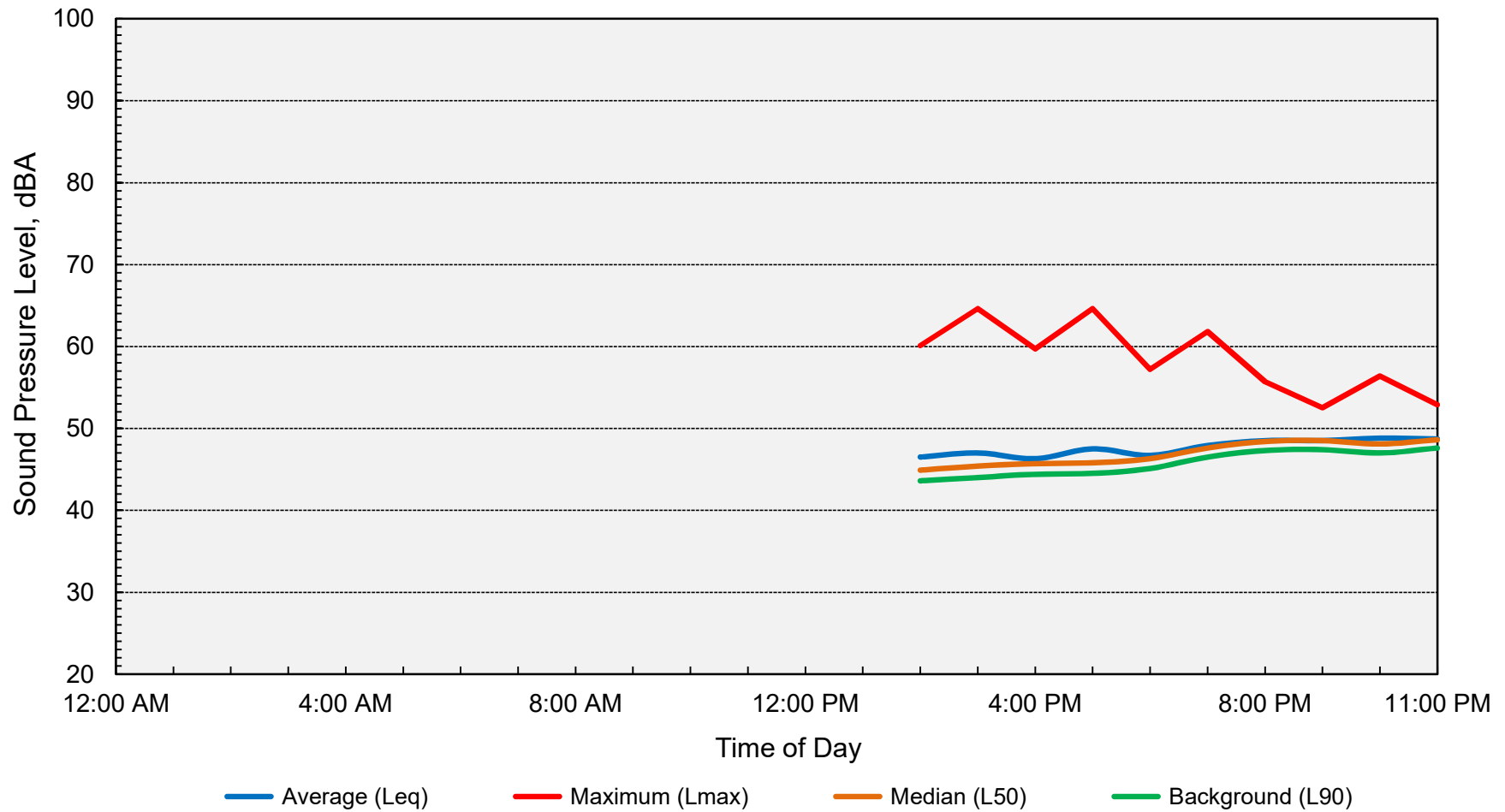
Hour	Leq	Lmax	L50	L90
12:00 AM	52	67	52	51
1:00 AM	52	61	52	50
2:00 AM	53	55	53	51
3:00 AM	53	59	53	52
4:00 AM	51	53	51	50
5:00 AM	52	55	52	51
6:00 AM	53	64	53	52
7:00 AM	53	71	53	52
8:00 AM	52	67	52	51
9:00 AM	52	58	52	51
10:00 AM	51	62	51	50
11:00 AM	51	60	51	50
12:00 PM	51	59	51	50
1:00 PM	52	64	51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

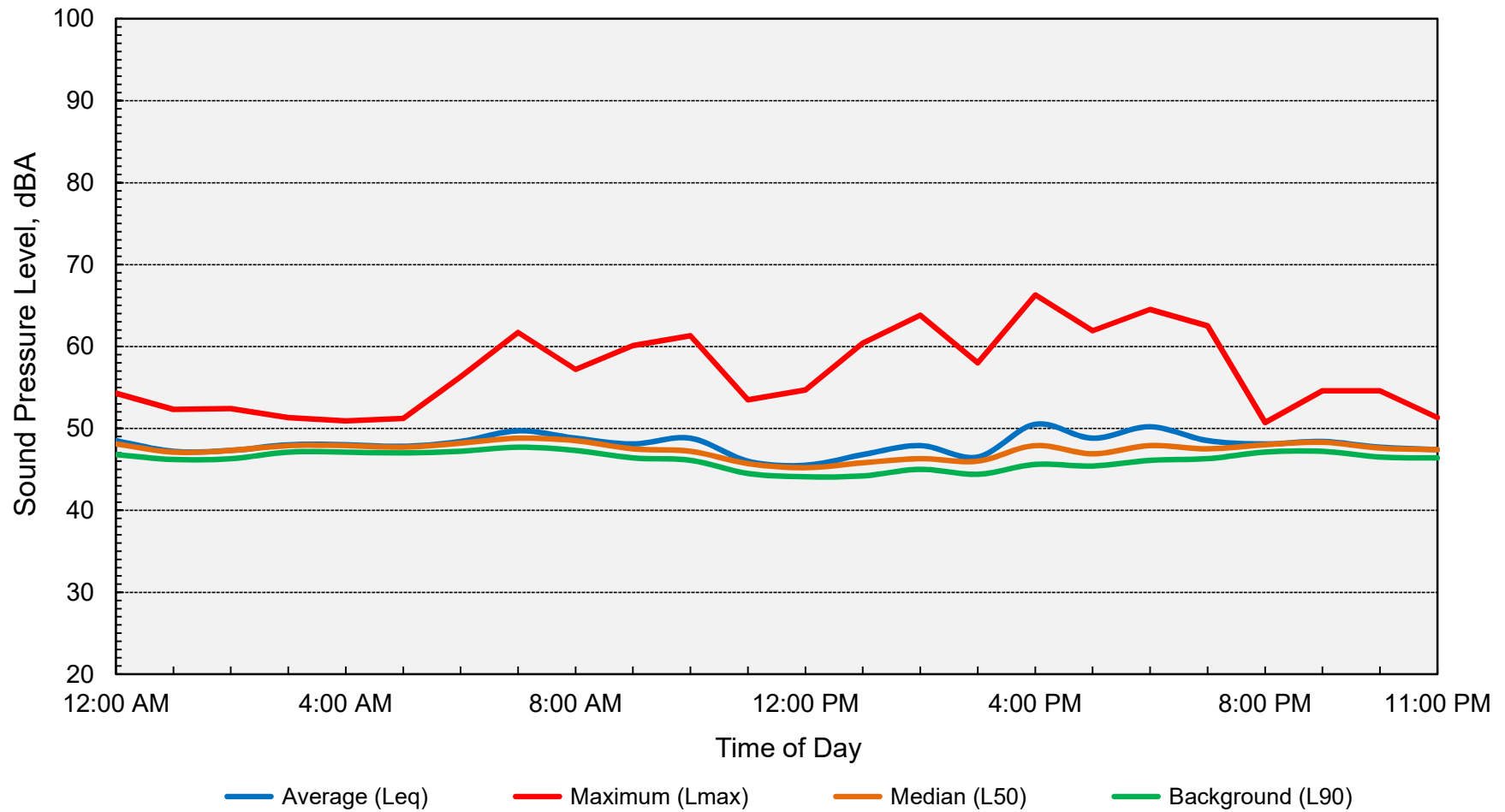
GPS Coordinates	37°38'45.81"N
	120°49'42.49"W

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



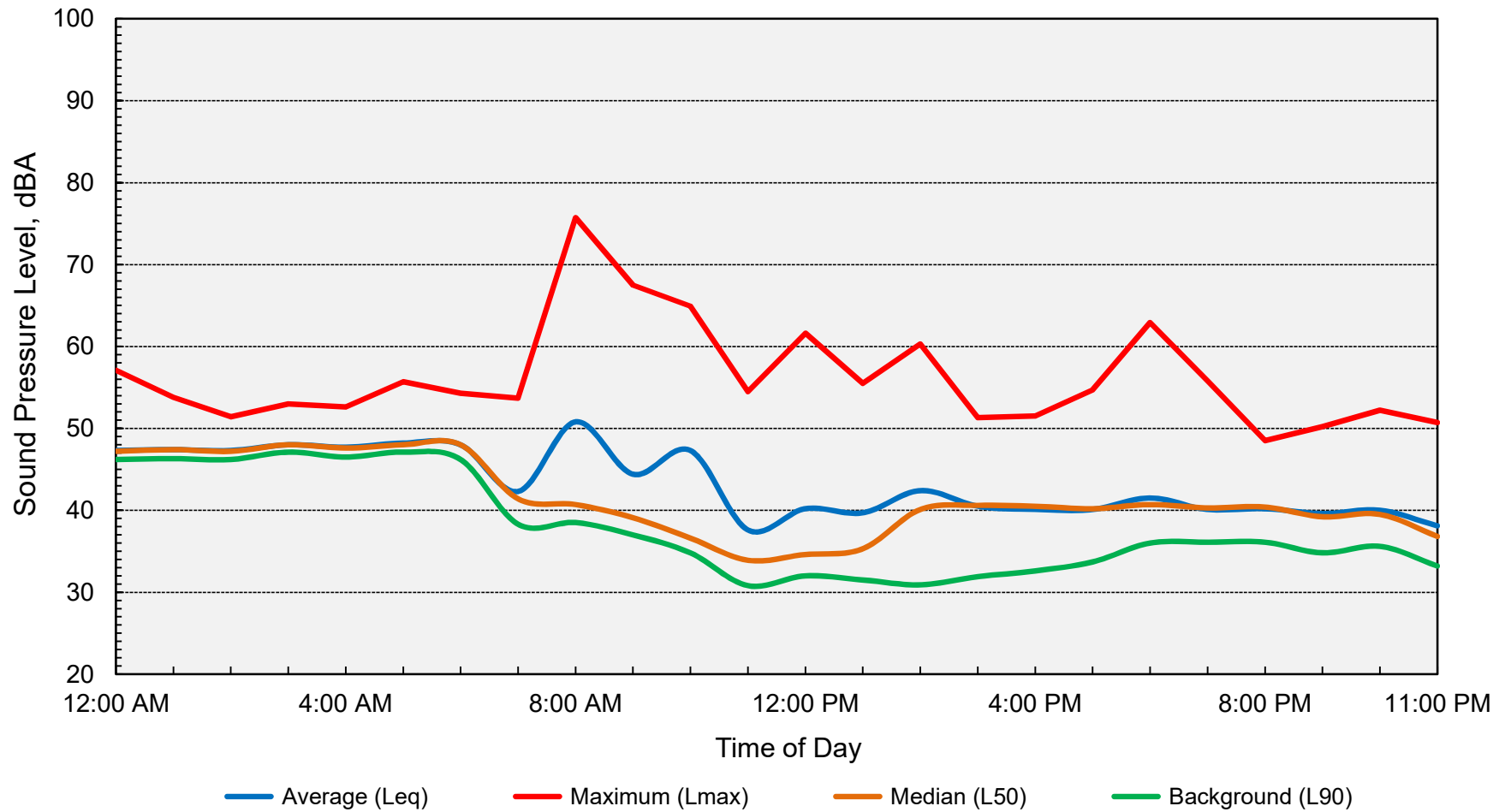
Computed DNL = 49 dB

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



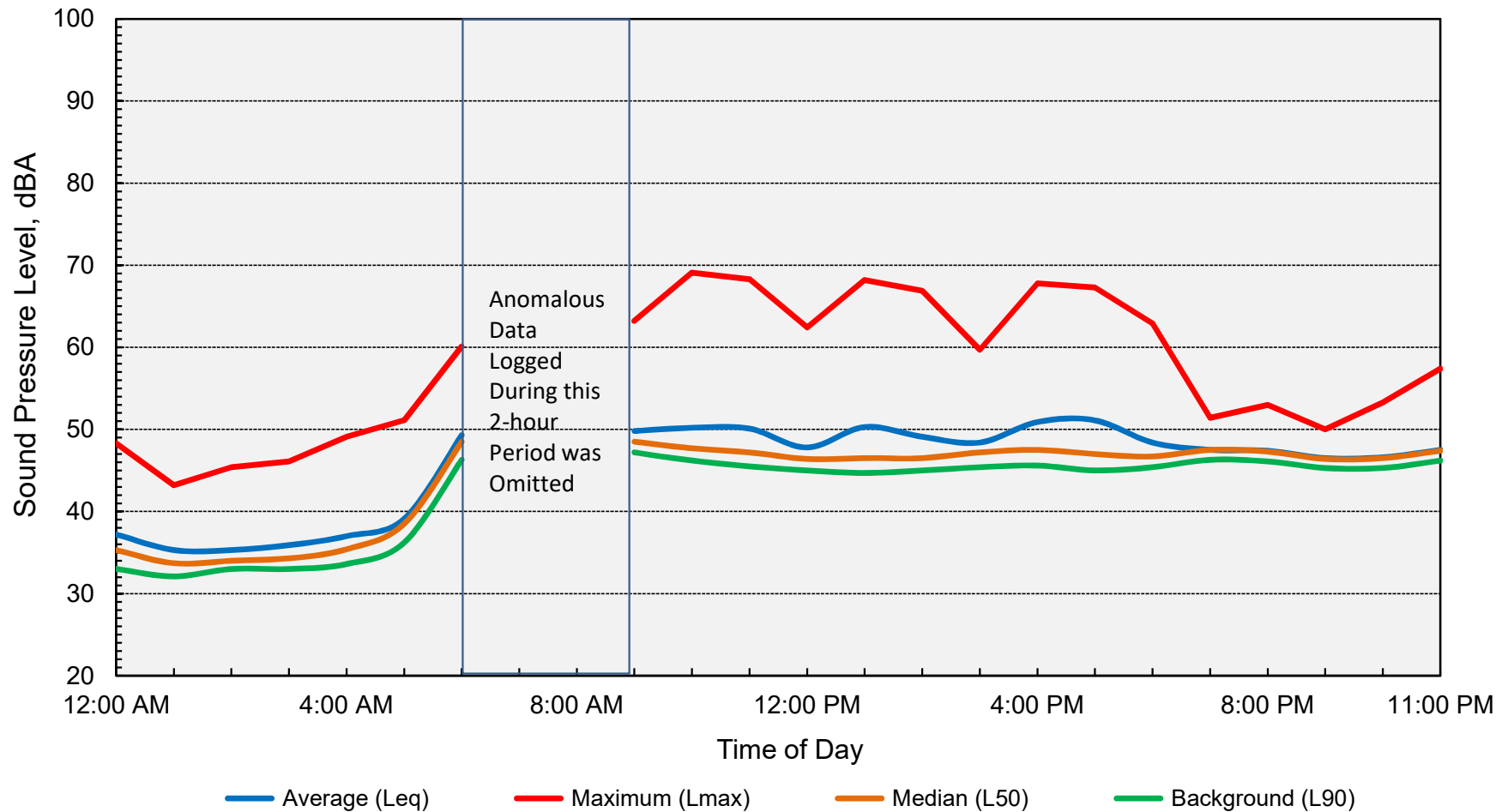
Computed DNL = 54 dB

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



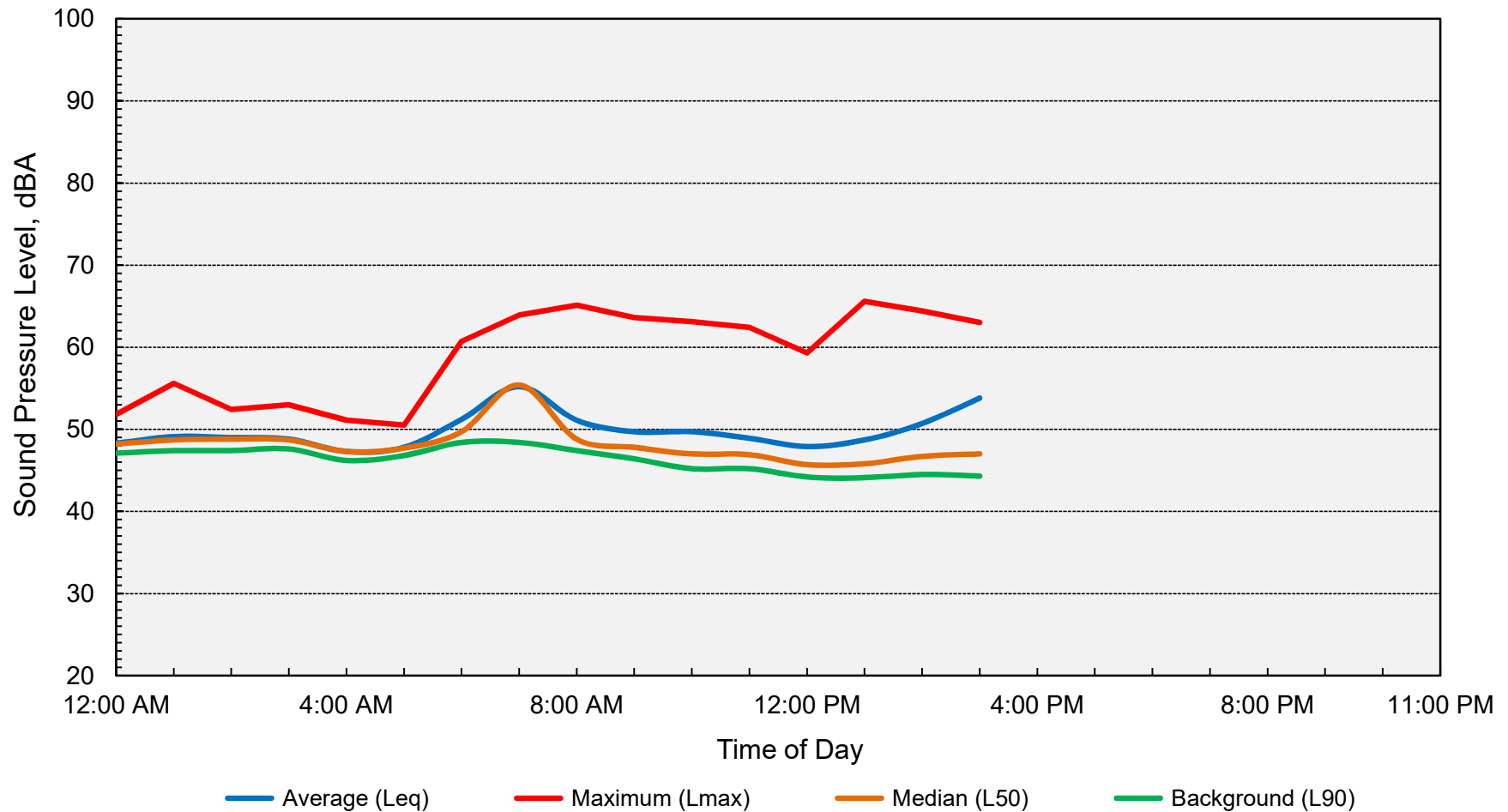
Computed DNL = 53 dB

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



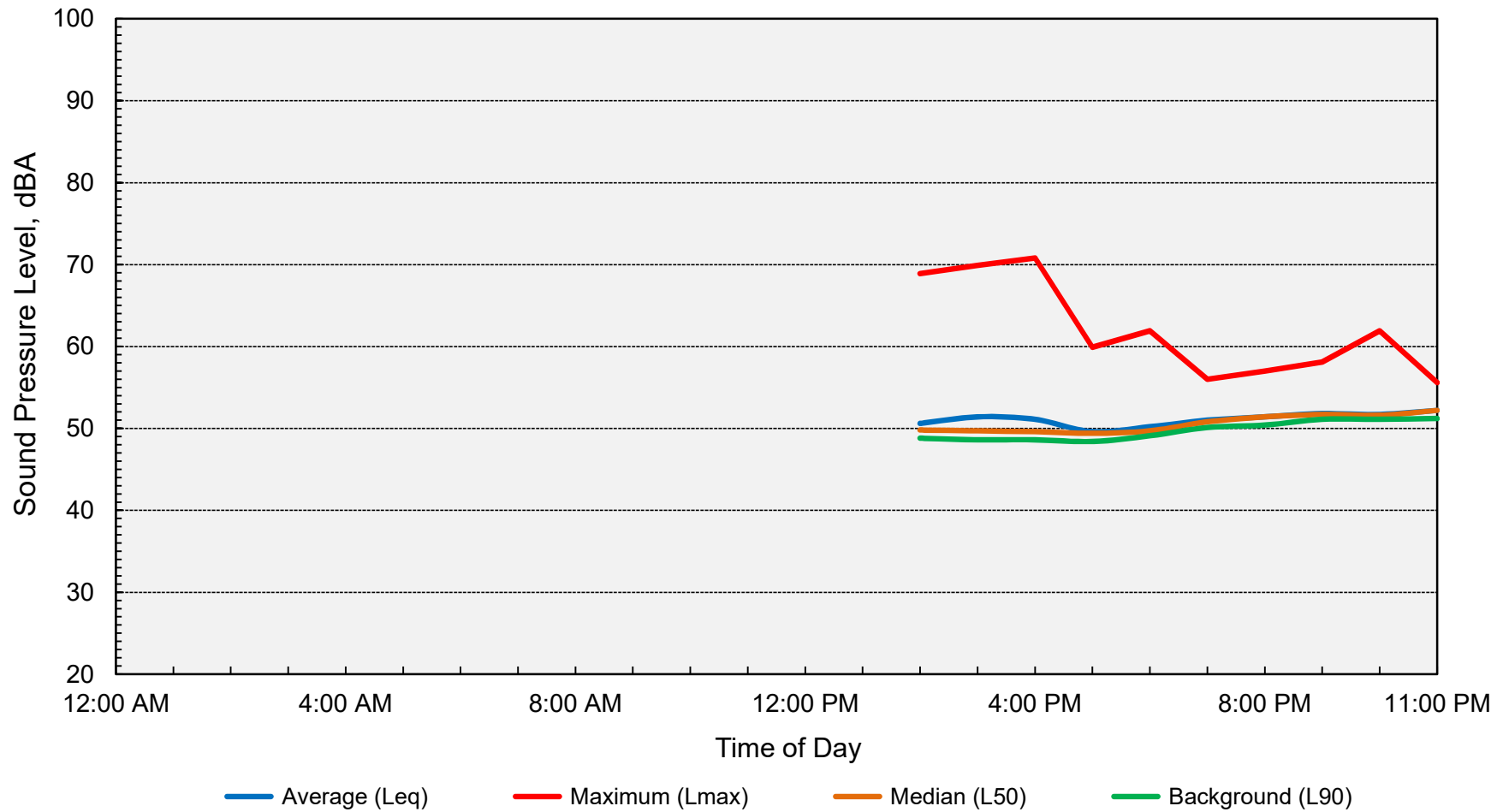
Computed DNL = 51 dB

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



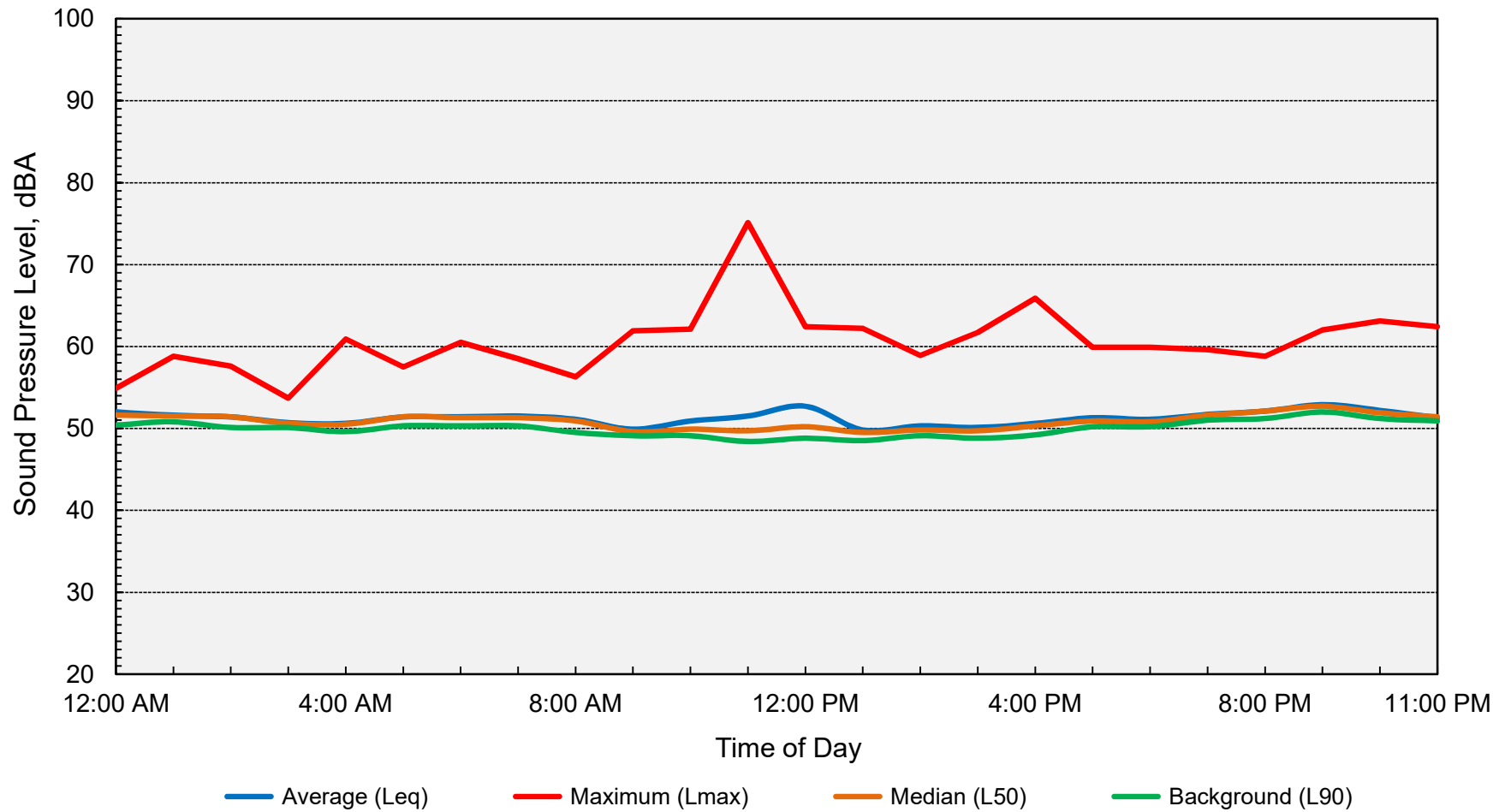
Computed DNL = 54 dB

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



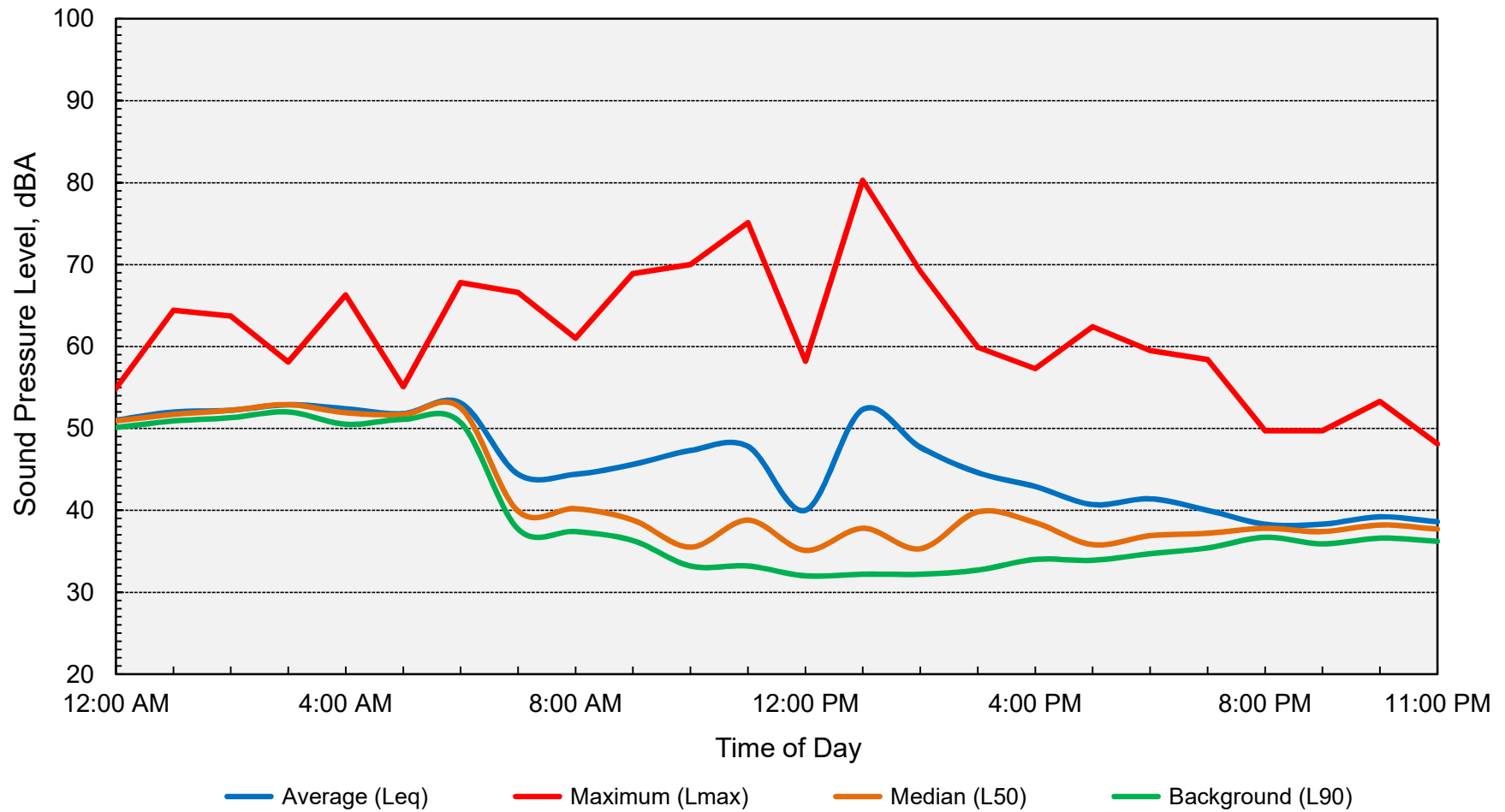
Computed DNL = 52 dB

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



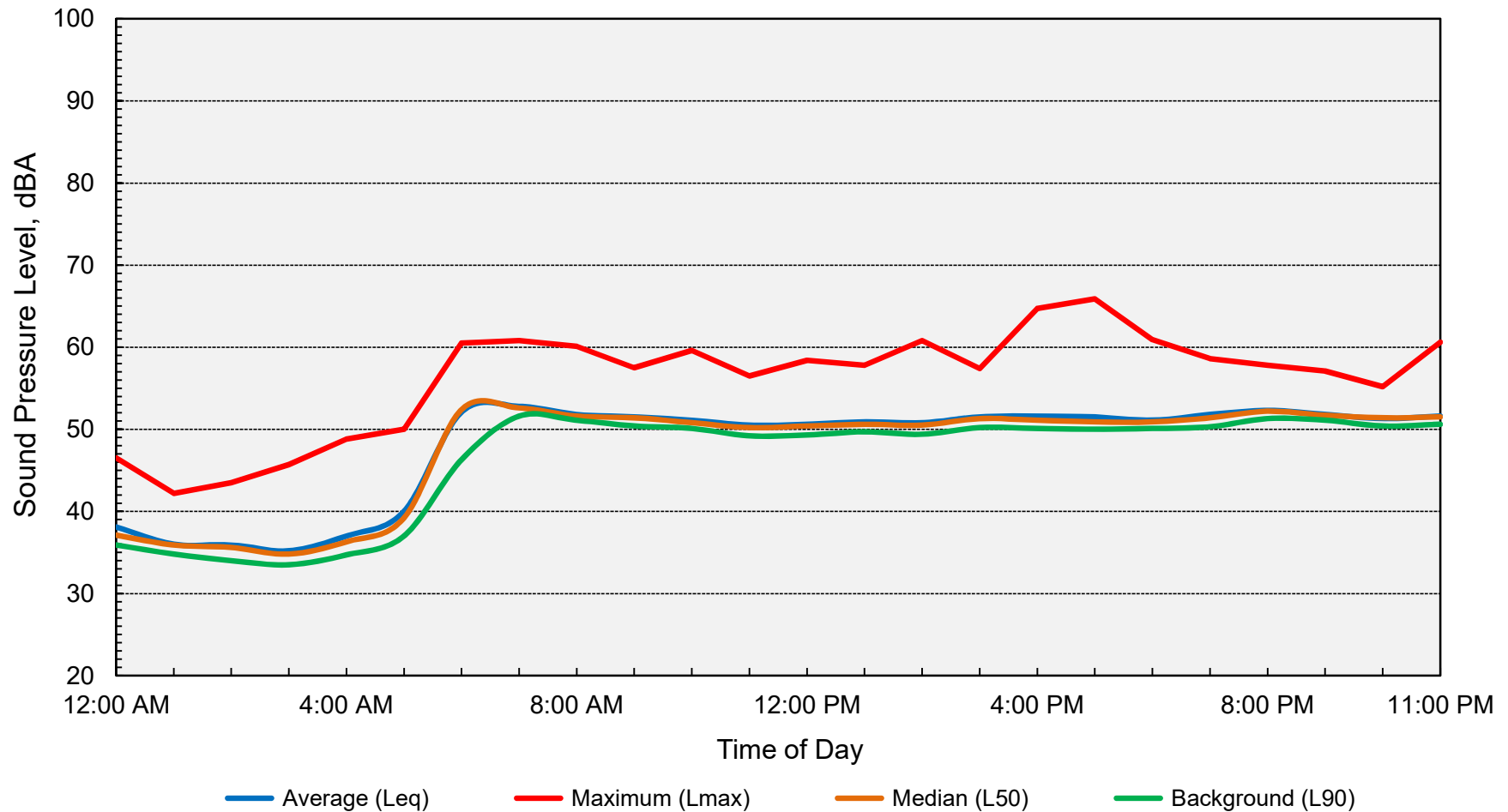
Computed DNL = 58 dB

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



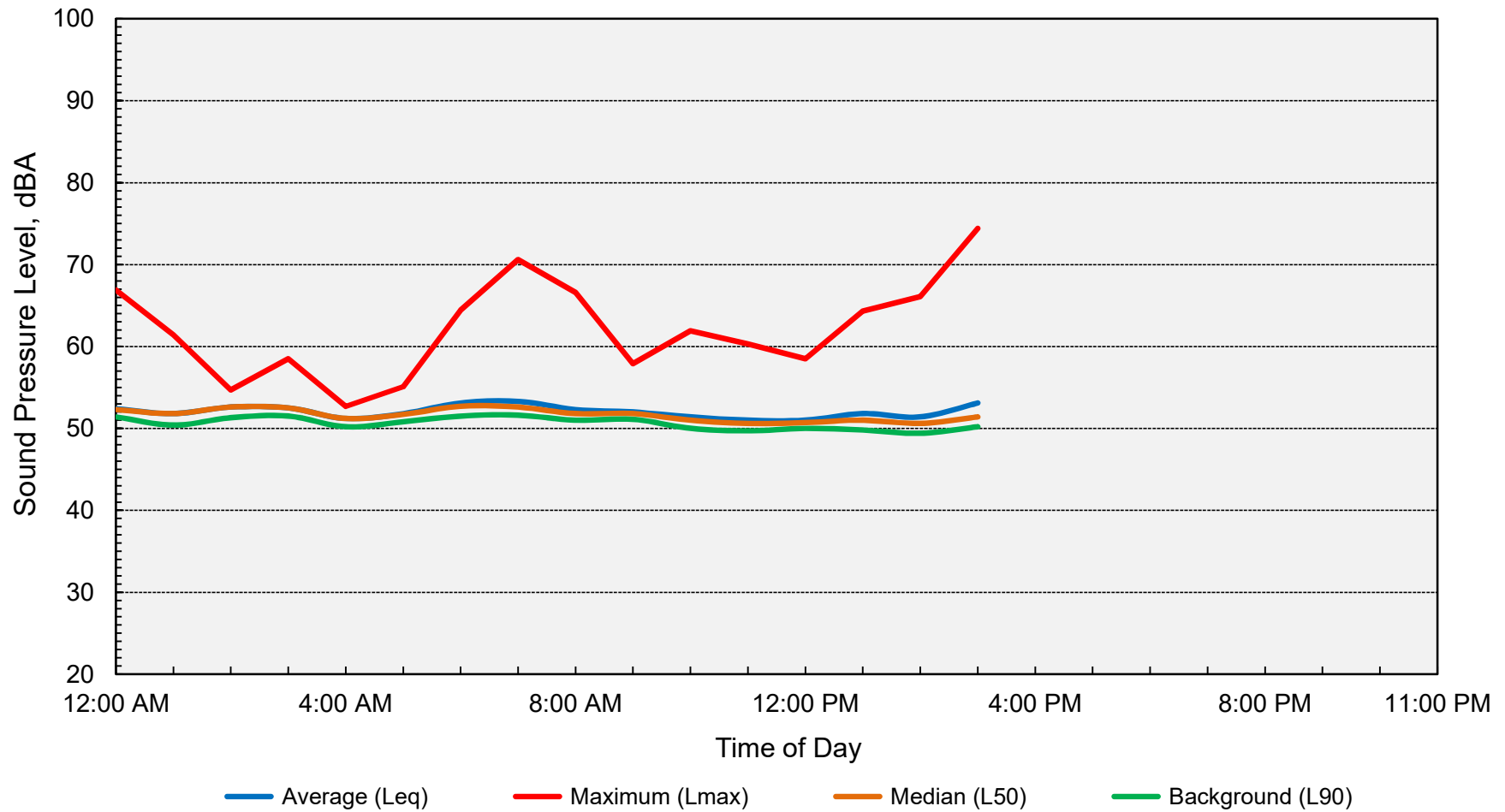
Computed DNL = 57 dB

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



Computed DNL = 55 dB

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



Computed DNL = 57 dB

Environmental Noise Assessment Update

Masroc Farms Hulling and Shelling Operations

Modesto (Stanislaus County), California

BAC Job # 2019-256

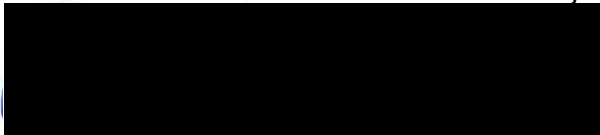
Prepared For:

Masroc Farms

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

Prepared By:

Bollard Acoustical Consultants, Inc.



Paul Bollard, President

October 25, 2024



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



Scale (feet)



Masroc Farms
Hulling & Shelling Operations
Stanislaus County, California

Site Vicinity & Noise Measurement Locations

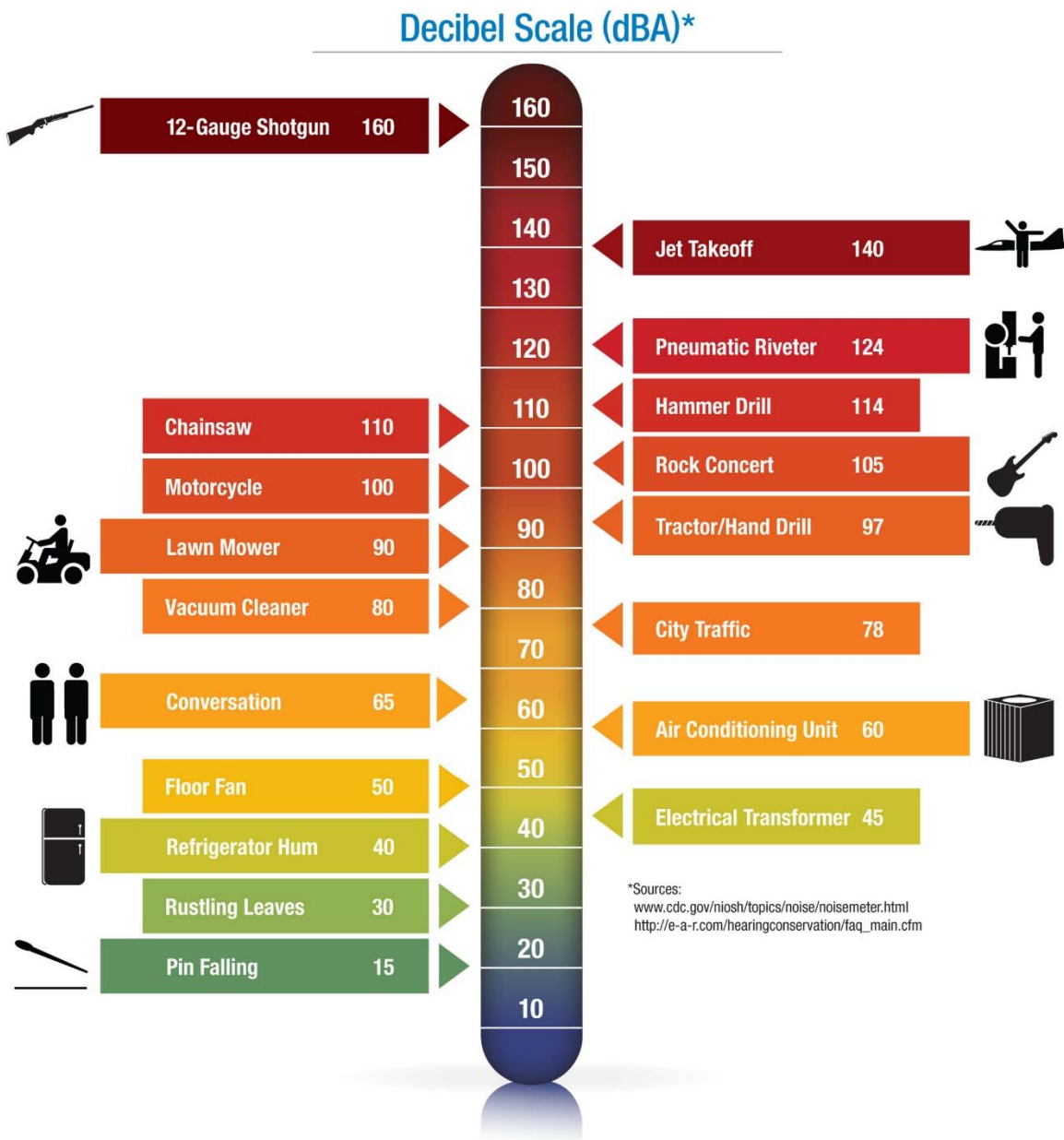
Figure 1



BOLLARD
Acoustical Consultants

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 (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.

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.
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.
RT₆₀	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.



A



B

Legend

A: LT-1
B: LT-1

Masroc Farms
Hulling & Shelling Operations
Stanislaus County, California

Photographs of Noise Survey Location

Appendix B





A



B



C



D

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



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
49	46	47	48	48	48
70	50	57	53	52	52
49	46	47	48	48	48
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

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

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

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

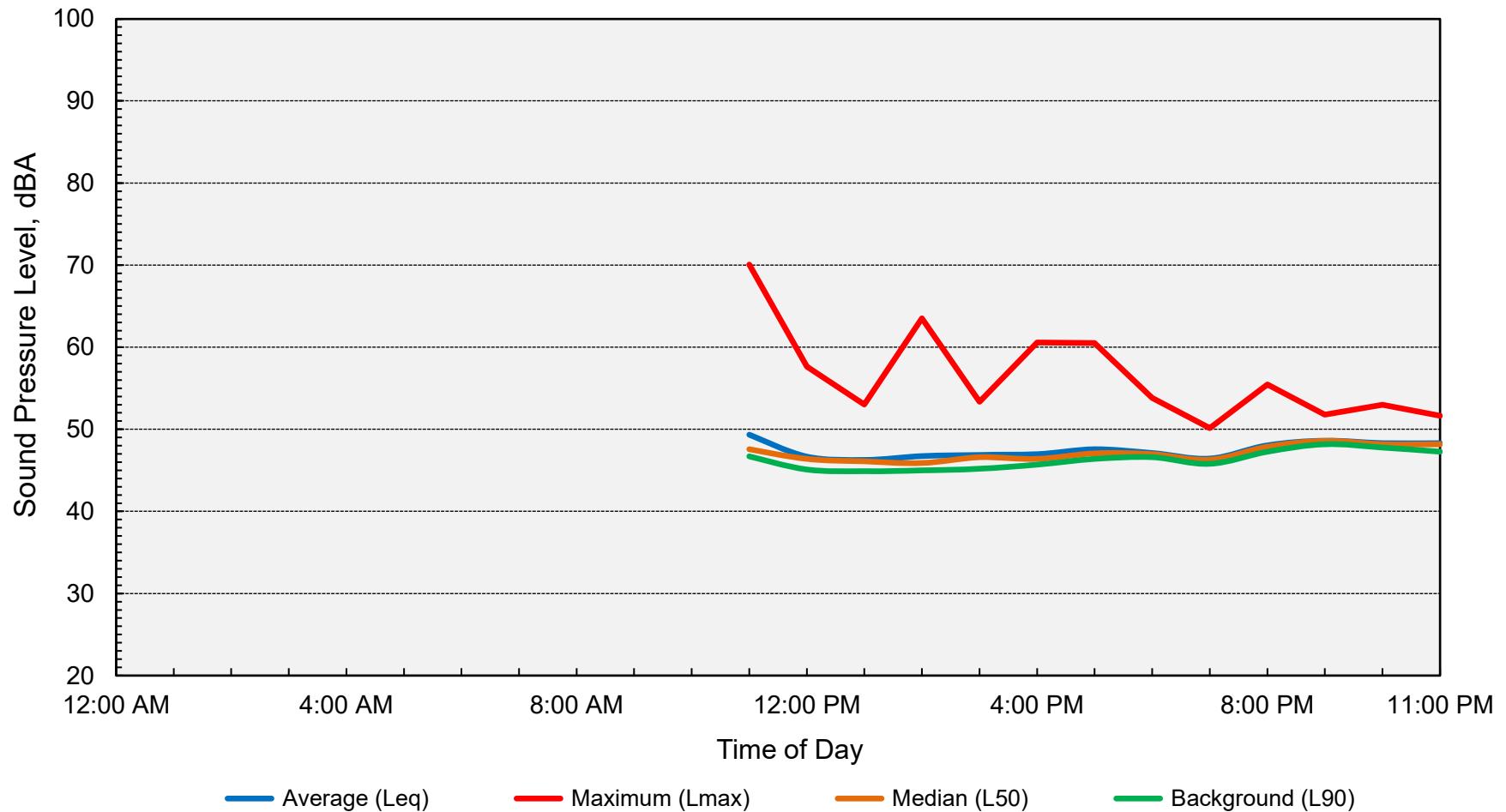
Hour	Leq	Lmax	L50	L90
12:00 AM	48	51	48	47
1:00 AM	48	56	48	47
2:00 AM	45	51	44	43
3:00 AM	43	46	43	43
4:00 AM	43	51	43	43
5:00 AM	47	56	47	46
6:00 AM	50	65	49	47
7:00 AM	50	60	49	49
8:00 AM	49	57	49	48
9:00 AM	51	62	49	48
10:00 AM	48	55	48	47
11:00 AM	47	57	47	46
12:00 PM				
1:00 PM				
2:00 PM			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

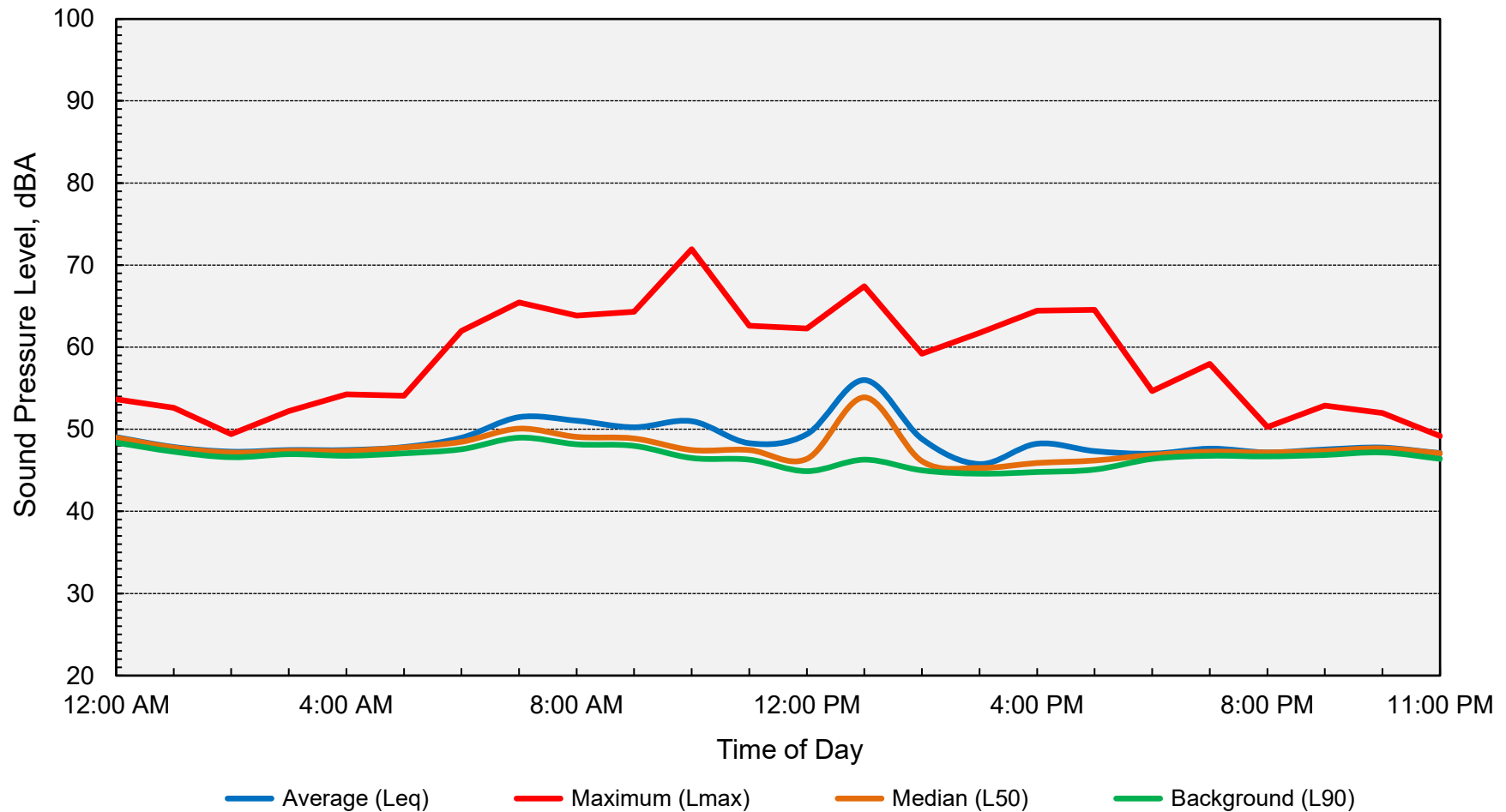
GPS Coordinates
37°38'45.81"N
120°49'42.49"W

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



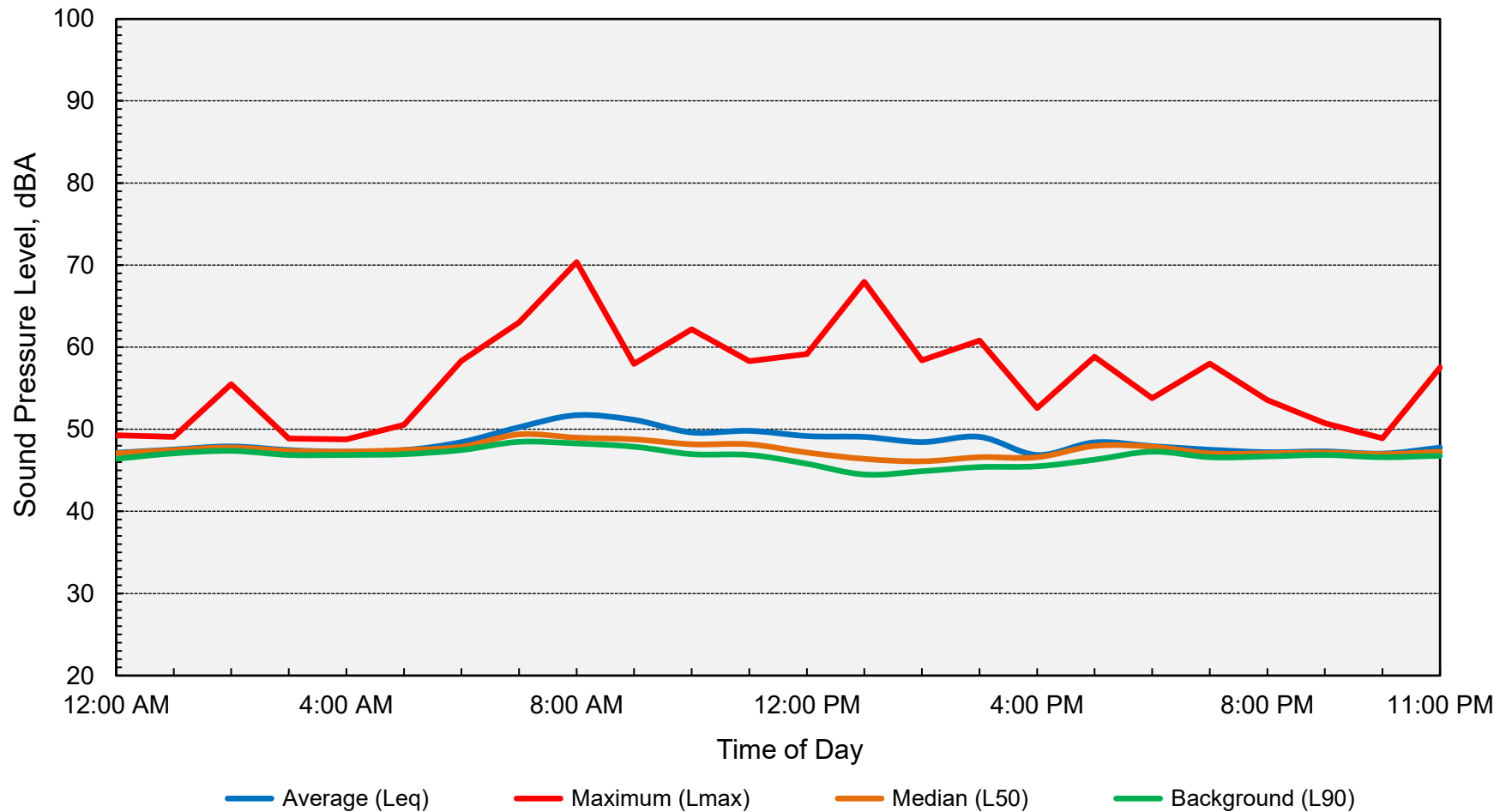
Computed DNL = 55 dB

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



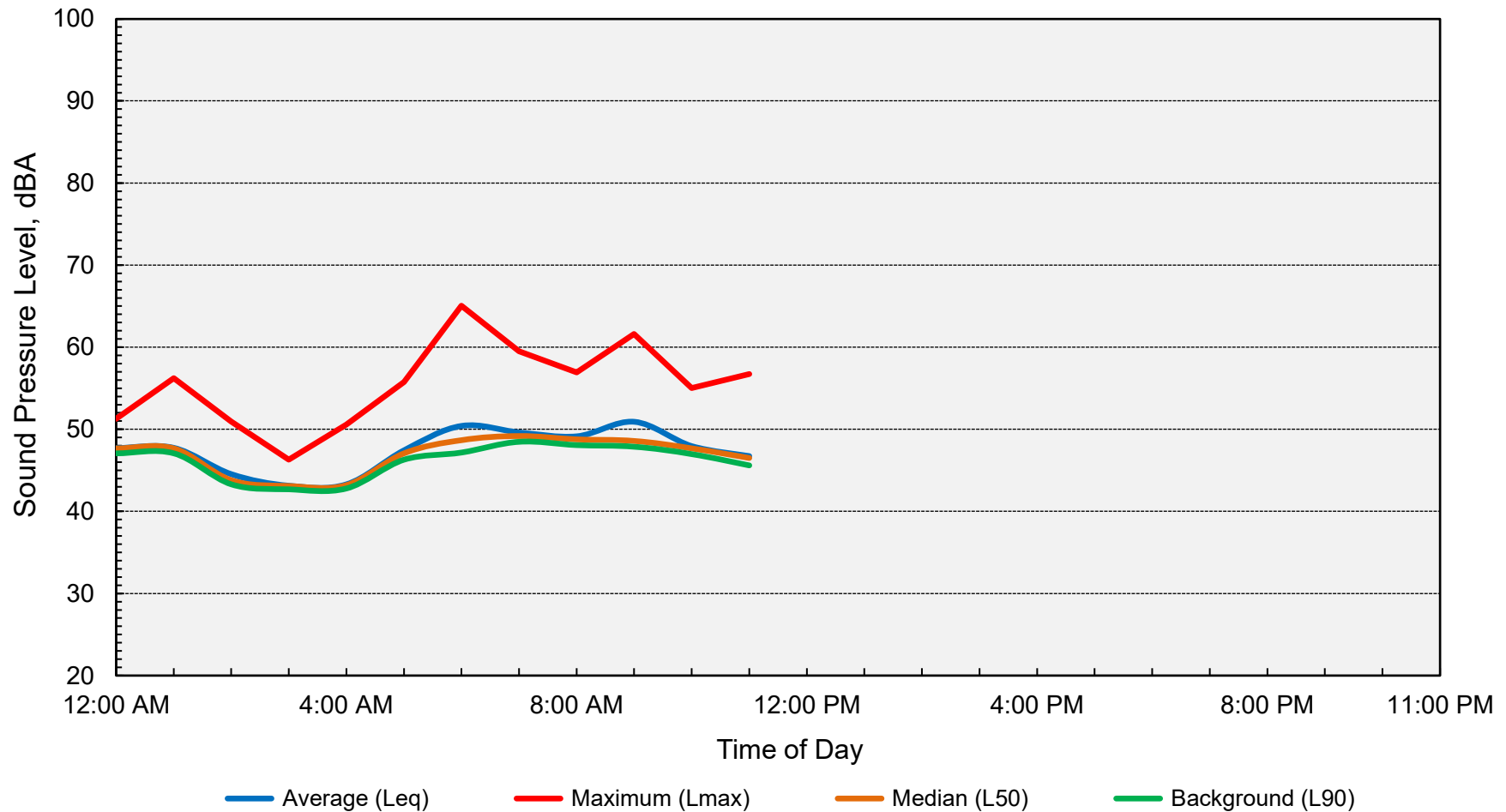
Computed DNL = 55 dB

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



Computed DNL = 54 dB

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



Computed DNL = 54 dB

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
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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 PM₁₀ (including fugitive dust).

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

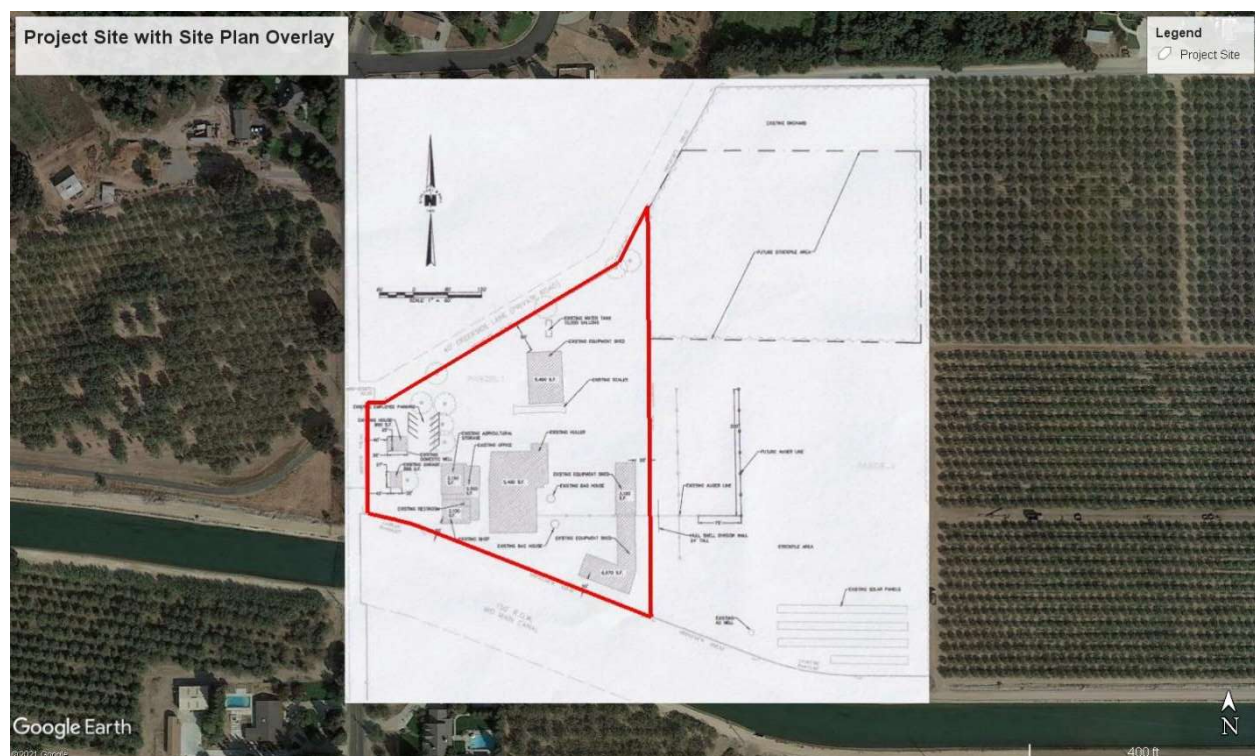


Figure 1 – Proposed Project Site Plan Overlay

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 occur 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 (represented 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 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.

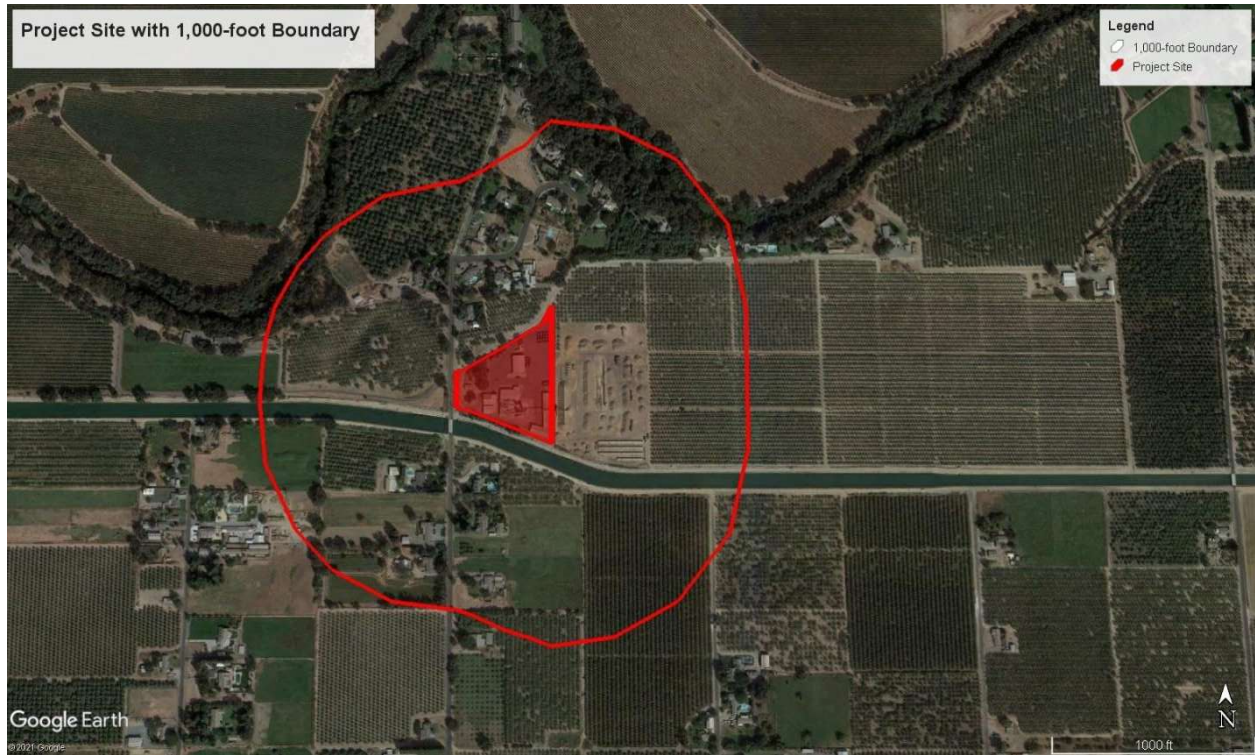


Figure 2 – Project Site with a 1,000-foot Buffer

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.

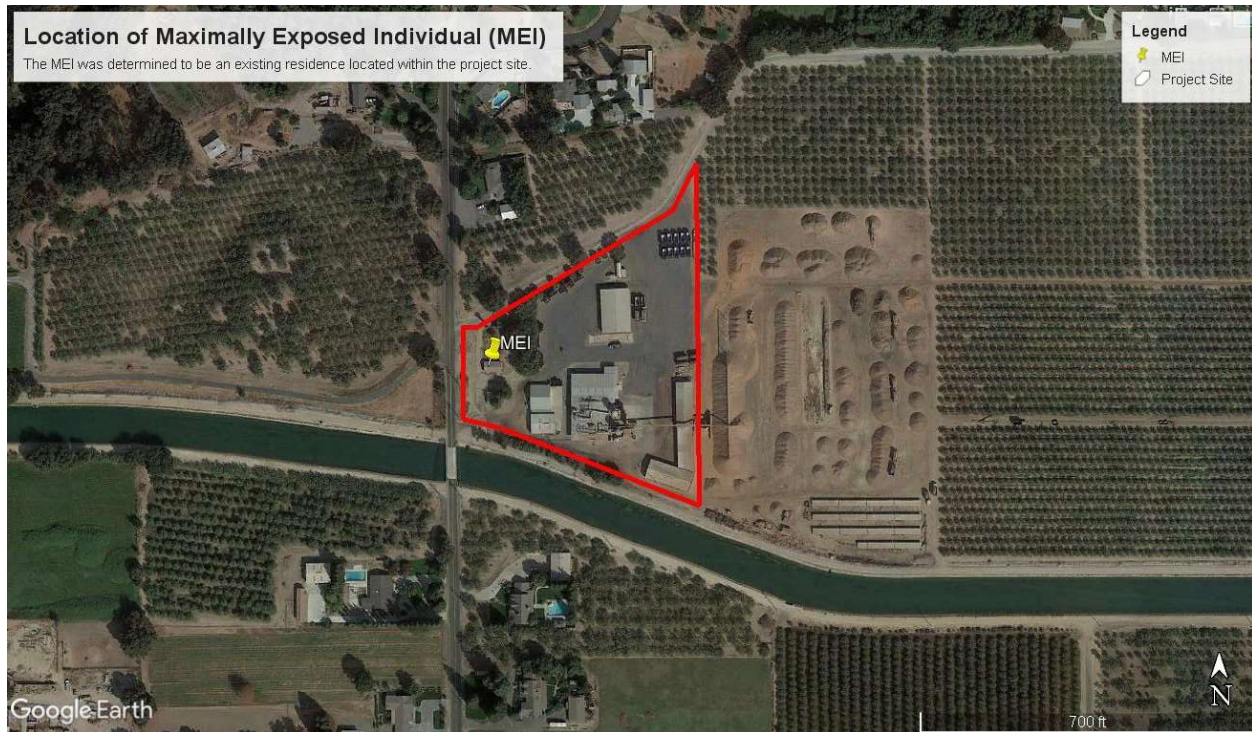


Figure 3 – Location of Maximally Exposed Individual

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 occur 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 techniques 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.

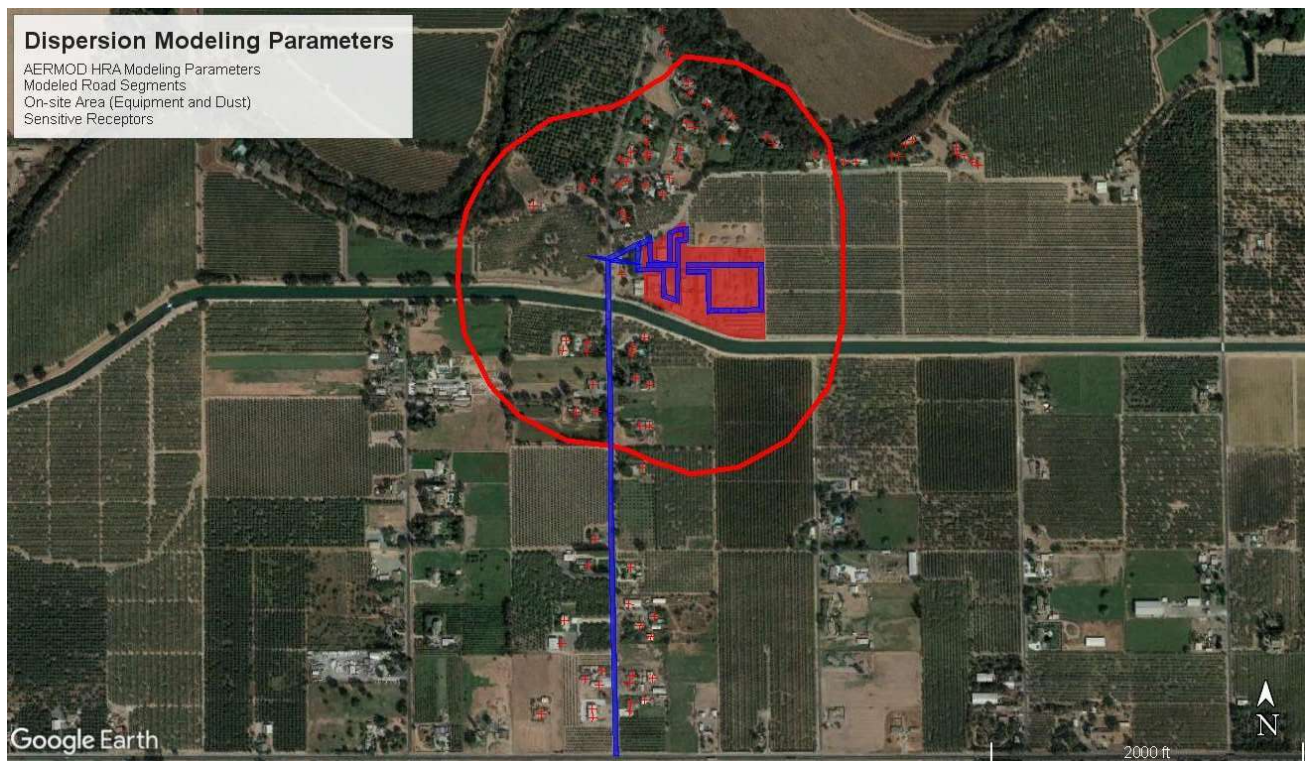


Figure 5 – Dispersion Modeling Parameters

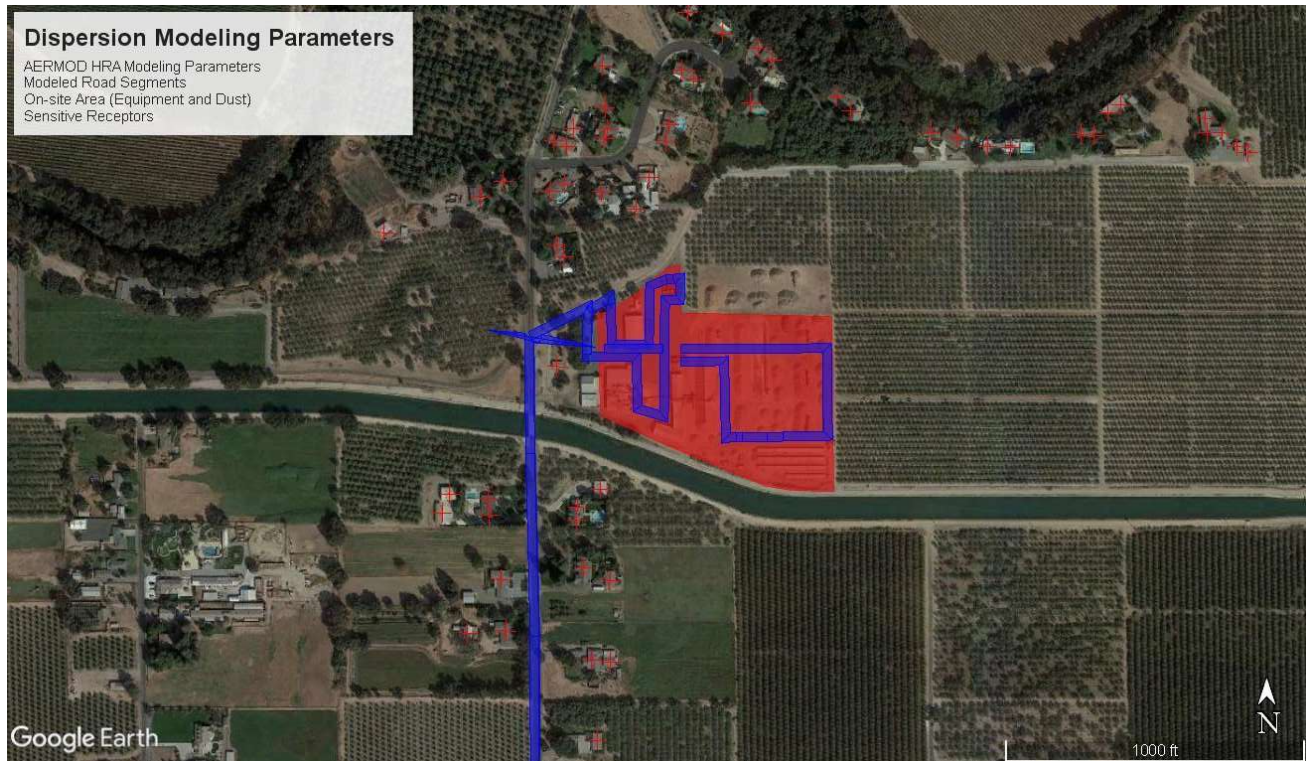


Figure 6 – Dispersion Modeling Parameters (Zoomed In Near the Project Site)

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	<ul style="list-style-type: none"> • Configuration: line volume sources • Release height: 10.2 feet (3.1 meters) • Vehicle Speed: 5 mph • Vehicle types: <ul style="list-style-type: none"> ○ Heavy-heavy-duty trucks (HHDT) ○ Medium-heavy-duty trucks (MHDT) ○ Heavy ag trucks (T7 Ag) • Emission factors: EMFAC2017
On-site Truck Idling	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> ○ Heavy-heavy-duty trucks (HHDT) ○ Medium-heavy-duty trucks (MHDT) ○ Heavy ag trucks (T7 Ag) • Emission factors: EMFAC 2017
Facility Operations	<ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> ○ 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: <ul style="list-style-type: none"> ○ 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 PM₁₀ 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 [µg/m³] 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:

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

Where:

Dose-air	=	dose through inhalation (mg/kg/day)
C _{air}	=	air concentration (µg/m ³) from air dispersion model
{BR/BW}	=	daily breathing rate normalized to body weight (L/kg body weight – day) (361 L/kg BW-day for 3 rd 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/cmr/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)

	3 rd 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/cnr/2015guidancemanual.pdf .						

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

	3 rd 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):

$$\text{Risk}_{\text{inh-res}} = (\text{Dose}_{\text{air}} * \text{CPH} * \text{ASF} * \text{ED/AT} * \text{FAH})$$

Where:

$\text{Risk}_{\text{inh-res}}$	=	residential inhalation cancer risk (potential chances per million)
Dose_{air}	=	daily dose through inhalation (mg/kg-day)
CPF	=	inhalation cancer potency factor (mg/kg-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:

$$\text{Hazard Quotient} = \text{Ci}/\text{REL}_i$$

Where:

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

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 PM₁₀) 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 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 MEI¹			
Health Risks from DPM	9.86	0.008	0.000
Health Risks from Dust-Generating Almond Processing Operations	9.65	0.313	0.940
<i>70-Year Exposure from Total Project Operations</i>	<i>19.51</i>	<i>0.321</i>	<i>0.940</i>
70-Year Exposure at the Off-site MEI²			
Health Risks from DPM	12.12	0.008	0.000
Health Risks from Dust-Generating Almond Processing Operations	5.64	0.183	0.414
<i>70-Year Exposure from Total Project Operations</i>	<i>17.76</i>	<i>0.191</i>	<i>0.414</i>
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.

			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	X 691506.70	Y 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 2021	Operations 2021	Operations 2022	Operations 2023	Operations 2024	Operations 2025	Operations 2026	Operations 2027	Operations 2028	Operations 2029	Operations 2030	Operations 2031-2037	Operations 2038	Operations 2039	Operations 2040-2051	Operations 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)

X	Y	2021 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

X	Y	2021 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 2021	Operations 2021	Operations 2022	Operations 2023	Operations 2024	Operations 2025	Operations 2026	Operations 2027	Operations 2028	Operations 2029	Operations 2030	Operations 2031-2037	Operations 2038	Operations 2039	Operations 2040-2051	Operations 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	61,09	61,09	11,93	11,93	11,93	11,93	11,93	11,93	11,93	75,69	1,67	1,67	20,01	56,06

Maximum Off-Season Concentration (ug/m3)

X	Y	2021 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	4,5988E-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	2,5388E-03	2,5388E-03	2,5386E-03	2,5371E-03

Annual Risk (risk/million)—Off-Season

X	Y	2021 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)

X	Y	2021 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	Y	Maximum Annual Average DPM	CNCHI
(m)	(m)	(ug/m3)	
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.

			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)
	X	Y						
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 2021	Operations 2021	Operations 2022	Operations 2023	Operations 2024	Operations 2025	Operations 2026	Operations 2027	Operations 2028	Operations 2029	Operations 2030	Operations 2031-2037	Operations 2038	Operations 2039	Operations 2040-2051	Operations 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	2.934246675	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
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

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
691511.55	4169004.64	0.4850	0.9910	2.3292	2.0211	0.2520	0.2067	0.2066	0.2066	0.2066	0.2065	0.2085	1.3103	0.0289	0.0289	0.3465

Off Season Duration 0.580821918 years (percent of the year)

	Operations 2021	Operations 2021	Operations 2022	Operations 2023	Operations 2024	Operations 2025	Operations 2026	Operations 2027	Operations 2028	Operations 2029	Operations 2030	Operations 2031-2037	Operations 2038	Operations 2039	Operations 2040-2051	Operations 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	4.066753425	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
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	3.8466E-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
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

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
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

Total
2.0797
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

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

Chronic

Non-Cancer Hazard

Index

0.008391

Threshold of Significance

1

Exceeds threshold?

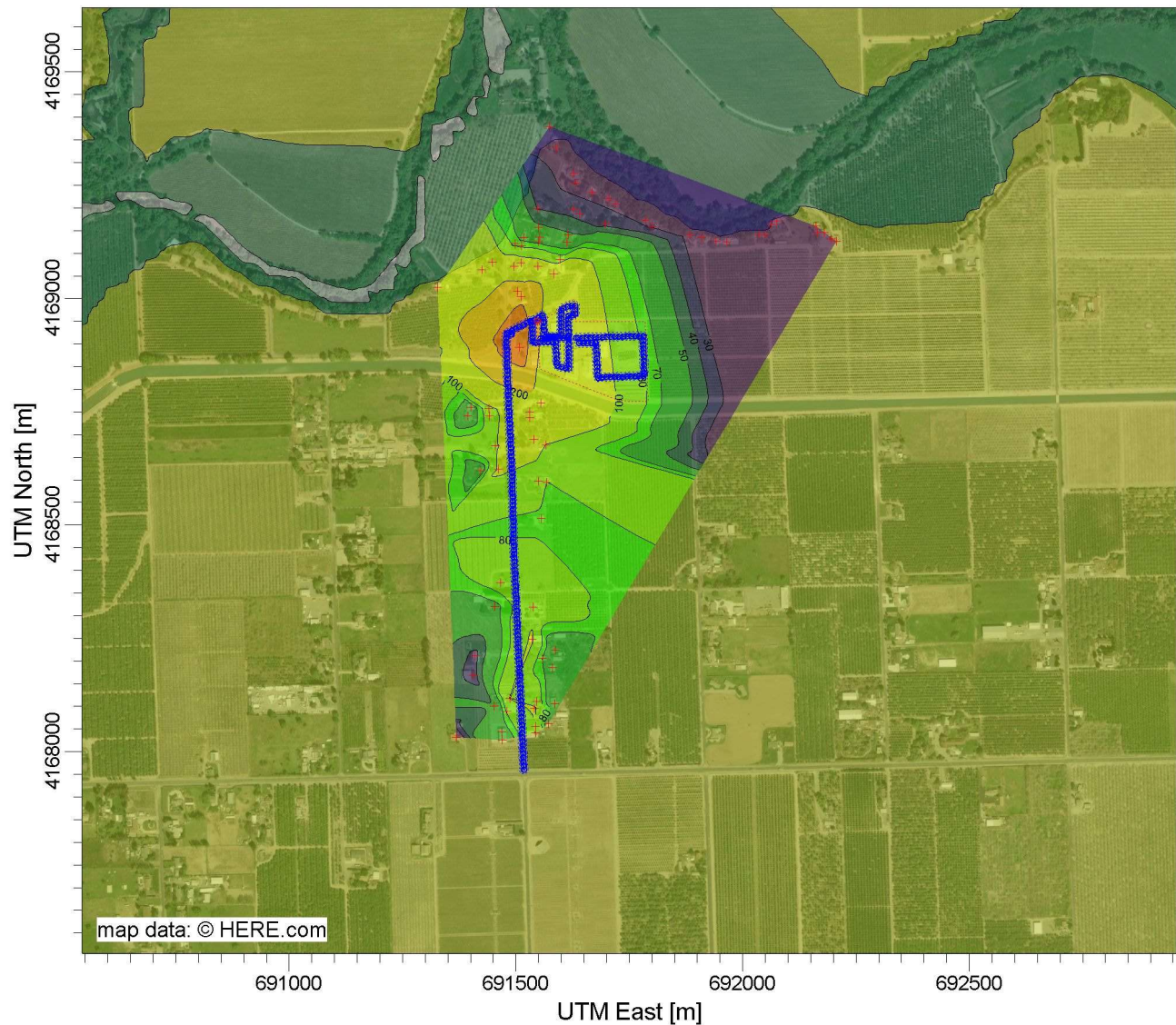
No

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



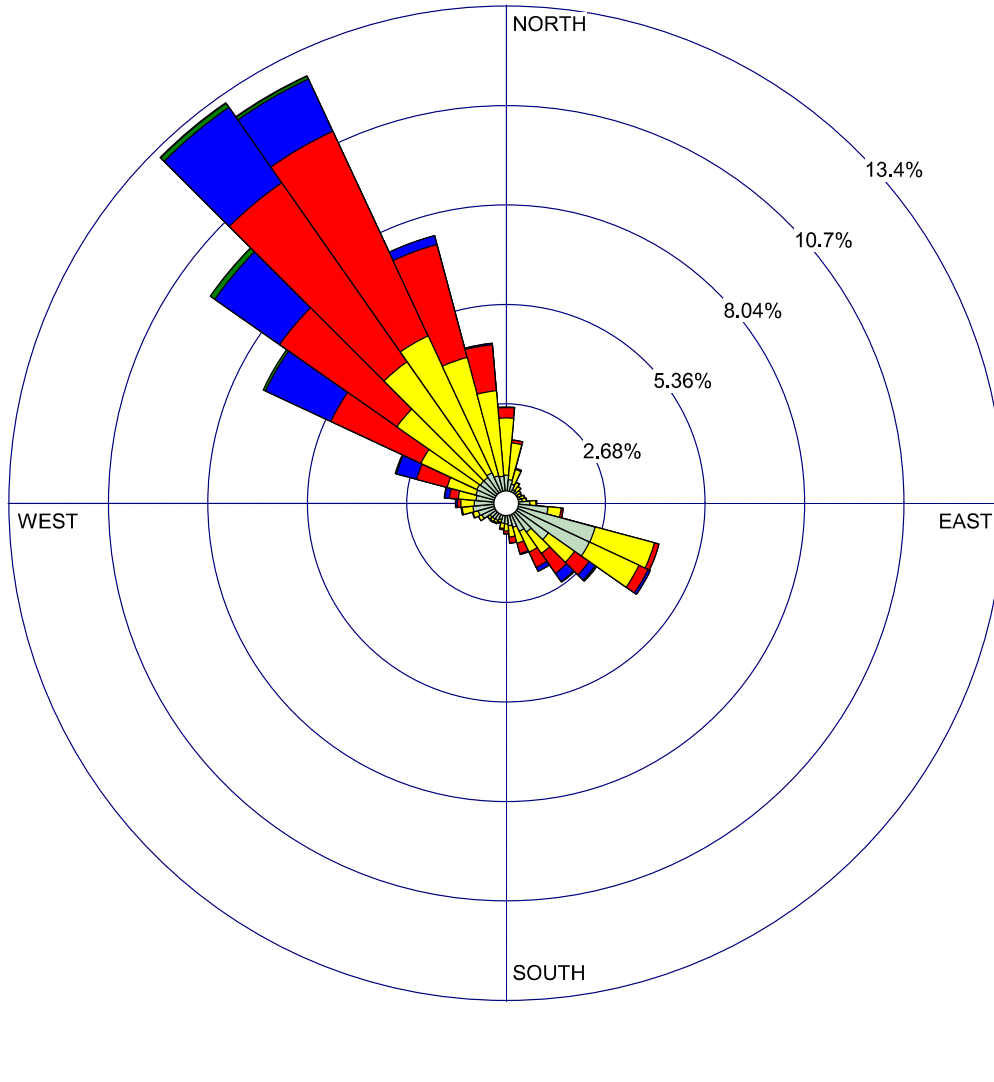
COMMENTS:	SOURCES:		
	5		
	RECEPTORS:		
	81		
	OUTPUT TYPE:	SCALE:	1:15,185
	Concentration	0 0.5 km	
	MAX:	DATE:	PROJECT NO.:
	375 ug/m^3	7/19/2021	

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%

AVG. WIND SPEED:

3.23 m/s

TOTAL COUNT:

43582 hrs.

DATE:

7/19/2021

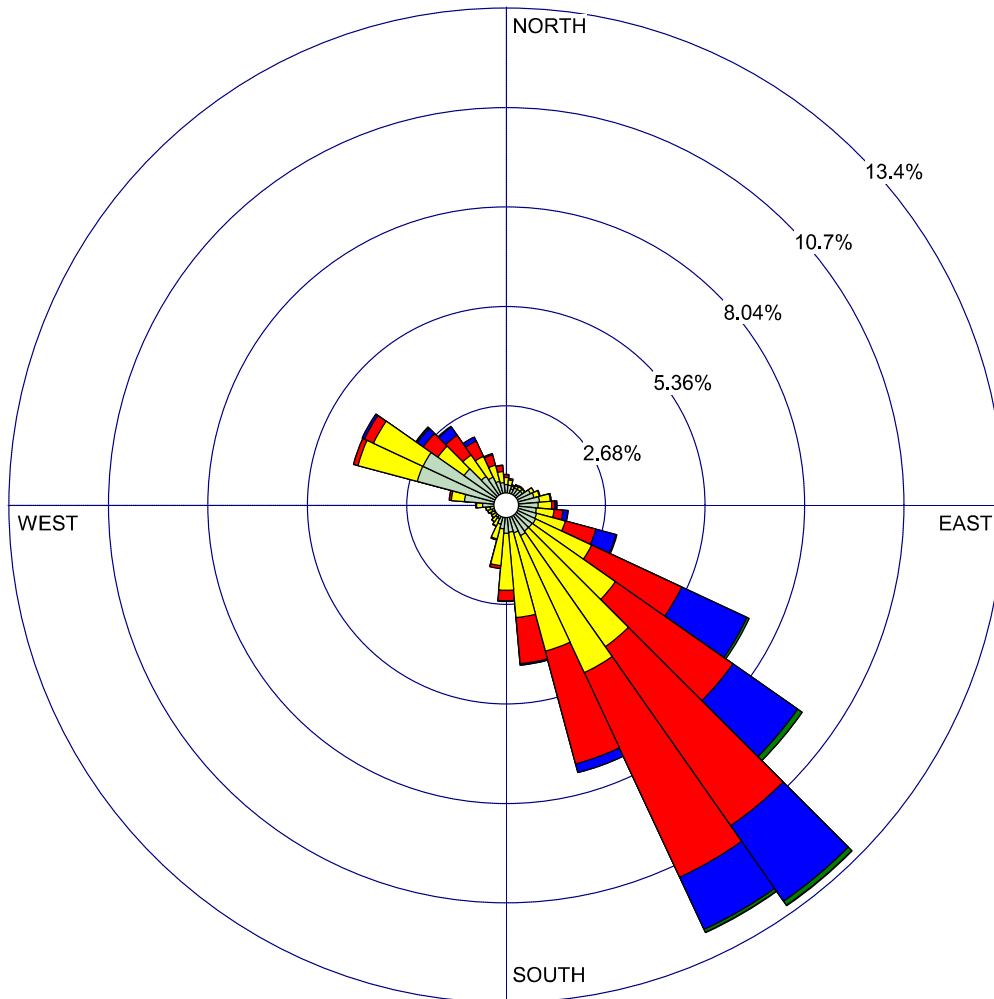
PROJECT NO.:

WIND ROSE PLOT:

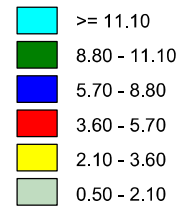
Wind Rose - Station #23258 (Blowing To)

DISPLAY:

**Wind Speed
Flow Vector (blowing to)**



WIND SPEED
(m/s)



Calms: 2.26%

COMMENTS:

DATA PERIOD:

**Start Date: 1/1/2013 - 00:00
End Date: 12/31/2017 - 23:59**

CALM WINDS:

2.26%

AVG. WIND SPEED:

3.23 m/s

TOTAL COUNT:

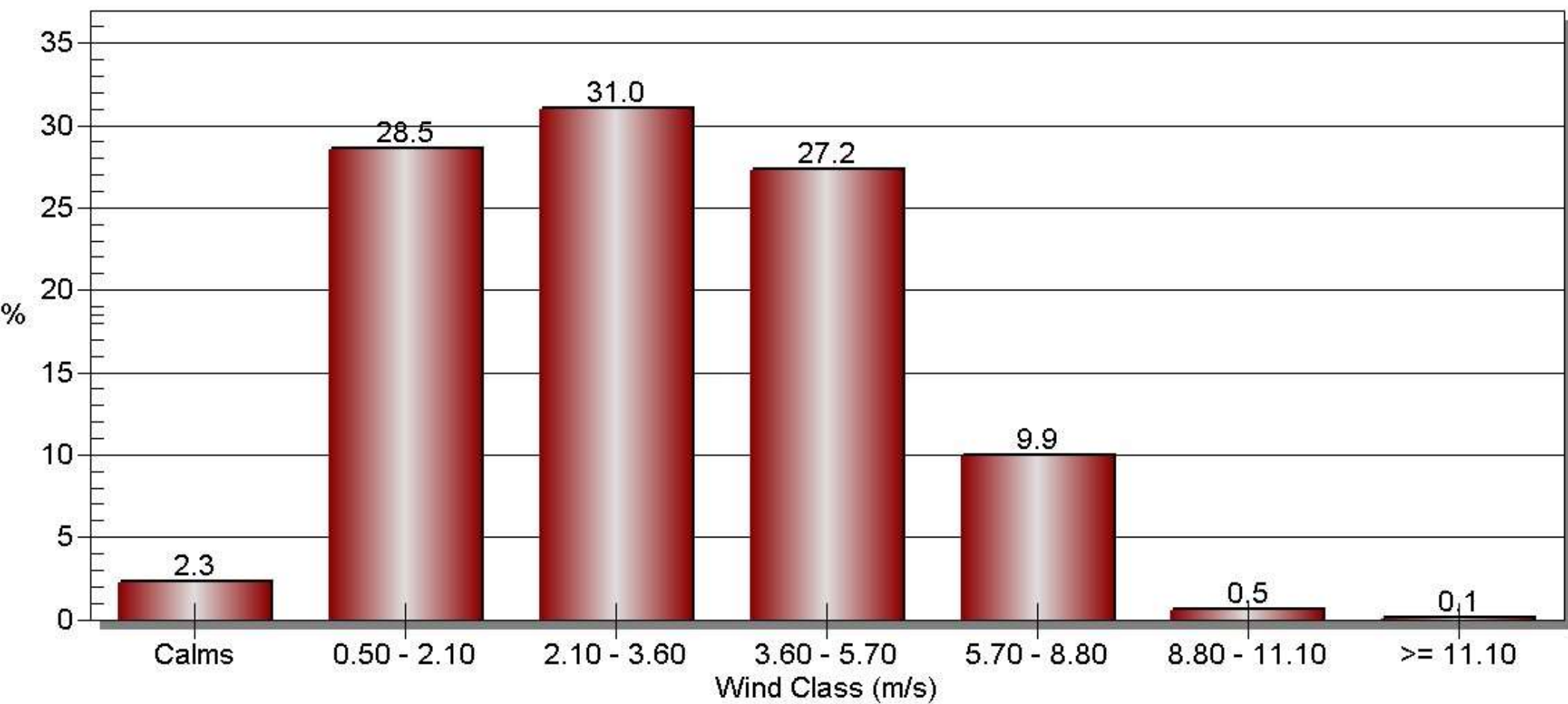
43582 hrs.

DATE:

7/19/2021

PROJECT NO.:

Wind Class Frequency Distribution



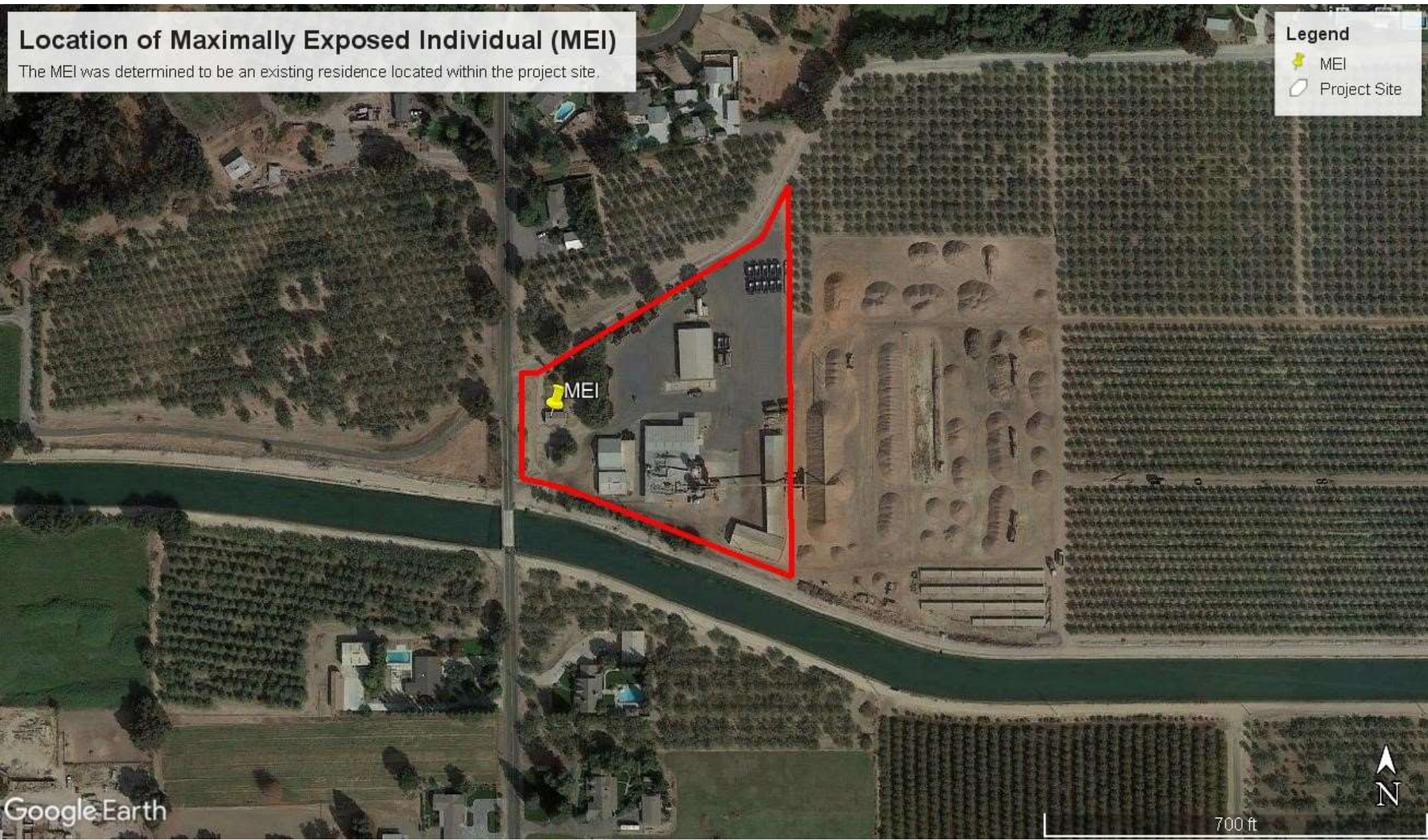
Location of Maximally Exposed Individual (MEI)

The MEI was determined to be an existing residence located within the project site.

Legend

 MEI

 Project Site



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.



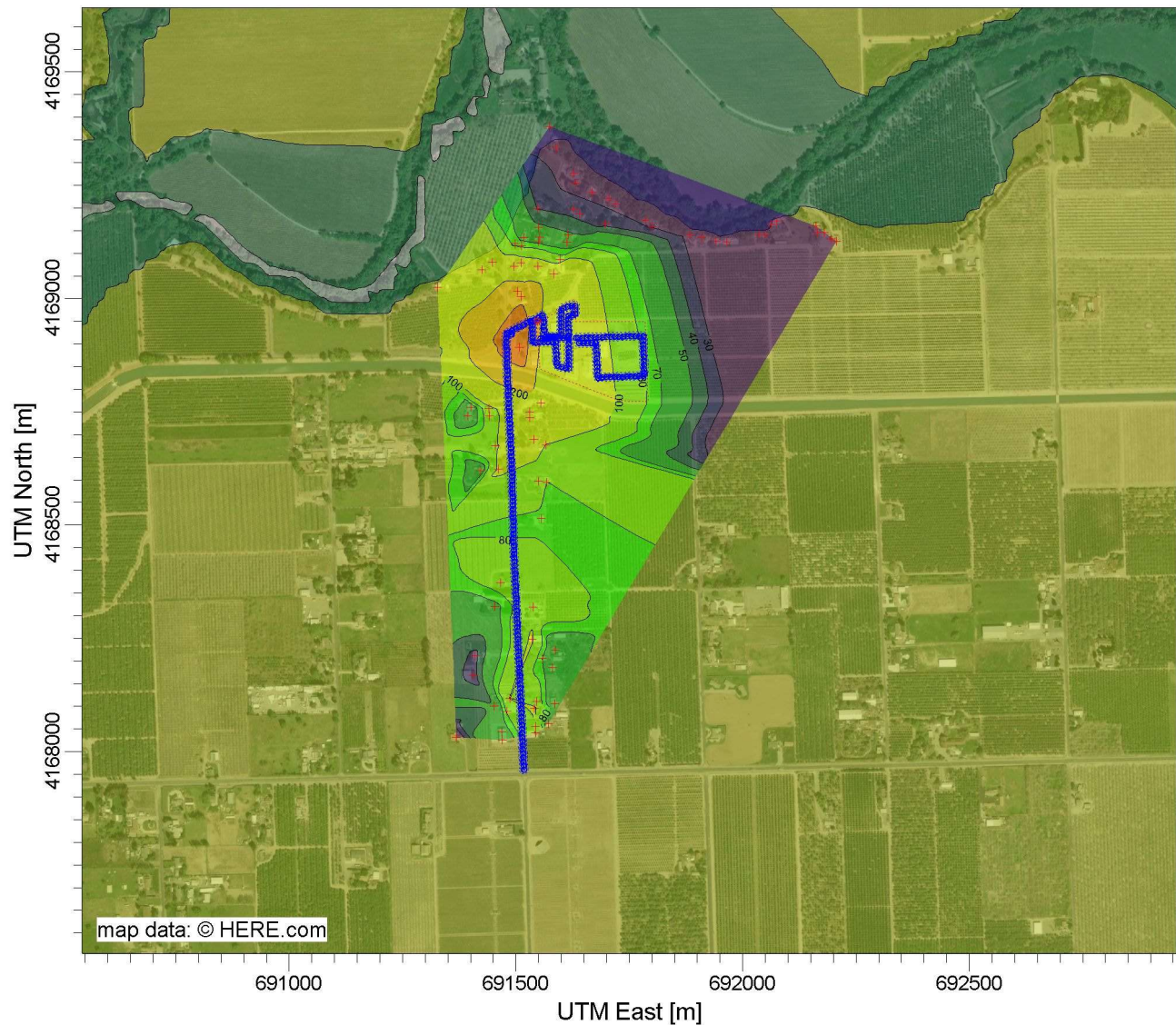
Daily Truck Trip Estimates (Peak Season)

Time Period to Estimate Daily Trips

Start End
 Aug Jan
 5 months
 153 days


	Inbound	Outbound	Total			After Rounding (Trips/Day)
1. 370 - inbound field run nuts. Mid-August – Mid October. *2-axle truck pull set of doubles (Hoppers)	Trips 471	Trips 471	Trips 942	Days 62	Trips/Day 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)



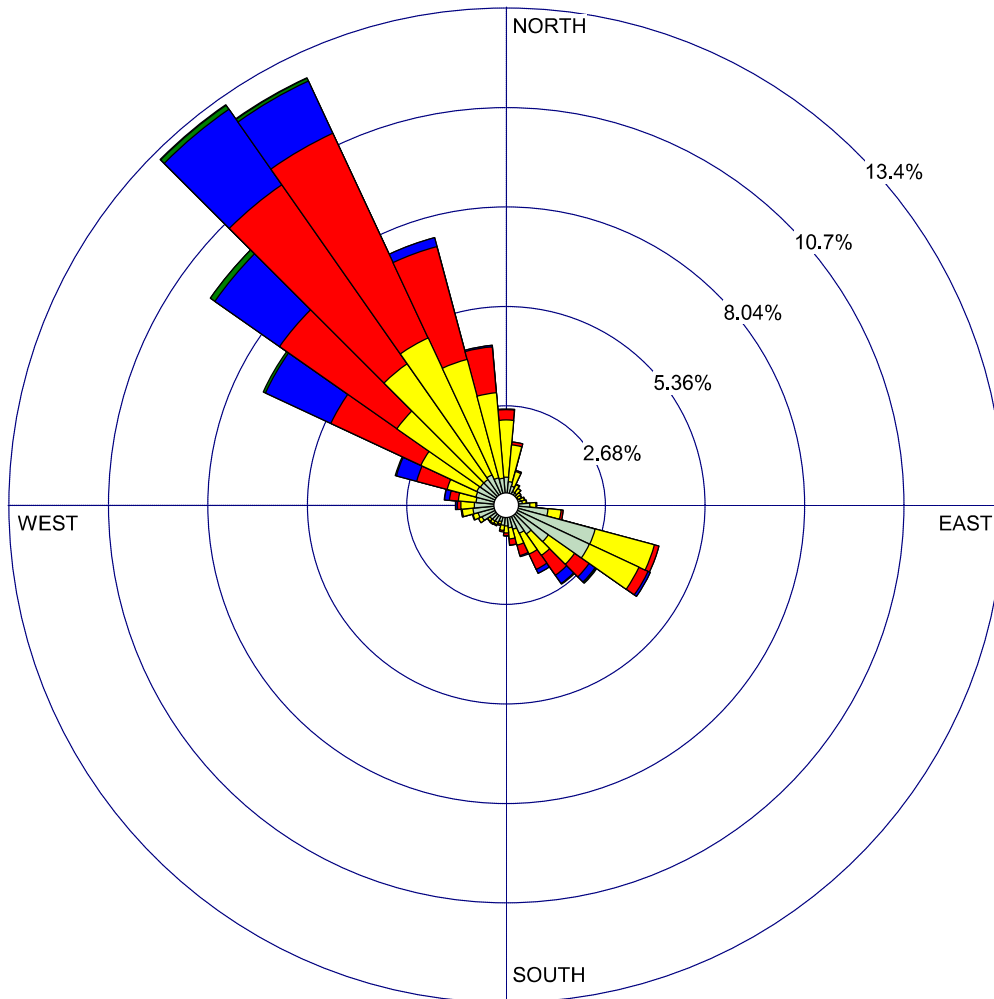
COMMENTS:	SOURCES:		
	5		
	RECEPTORS:		
	81		
	OUTPUT TYPE:	SCALE:	1:15,185
	Concentration	0  0.5 km	
	MAX:	DATE:	PROJECT NO.:
	375 ug/m^3	7/19/2021	

WIND ROSE PLOT:

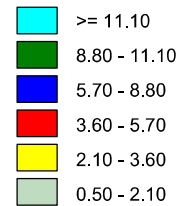
Wind Rose - Station #23258 (Blowing From)

DISPLAY:

**Wind Speed
Direction (blowing from)**



WIND SPEED
(m/s)



Calms: 2.26%

COMMENTS:

DATA PERIOD:

**Start Date: 1/1/2013 - 00:00
End Date: 12/31/2017 - 23:59**

CALM WINDS:

2.26%

AVG. WIND SPEED:

3.23 m/s

TOTAL COUNT:

43582 hrs.

DATE:

7/19/2021

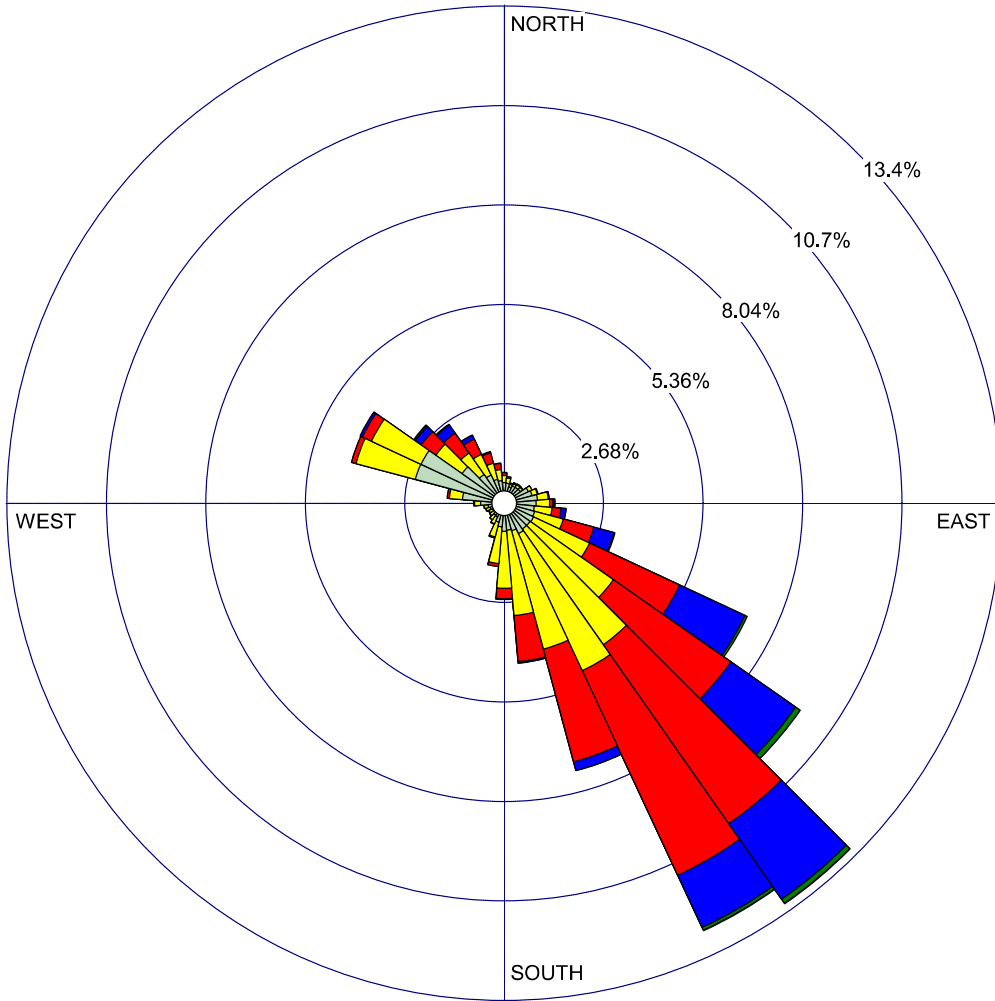
PROJECT NO.:

WIND ROSE PLOT:

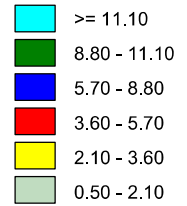
Wind Rose - Station #23258 (Blowing To)

DISPLAY:

**Wind Speed
Flow Vector (blowing to)**



WIND SPEED
(m/s)



Calms: 2.26%

COMMENTS:

DATA PERIOD:

**Start Date: 1/1/2013 - 00:00
End Date: 12/31/2017 - 23:59**

CALM WINDS:

2.26%

AVG. WIND SPEED:

3.23 m/s

TOTAL COUNT:

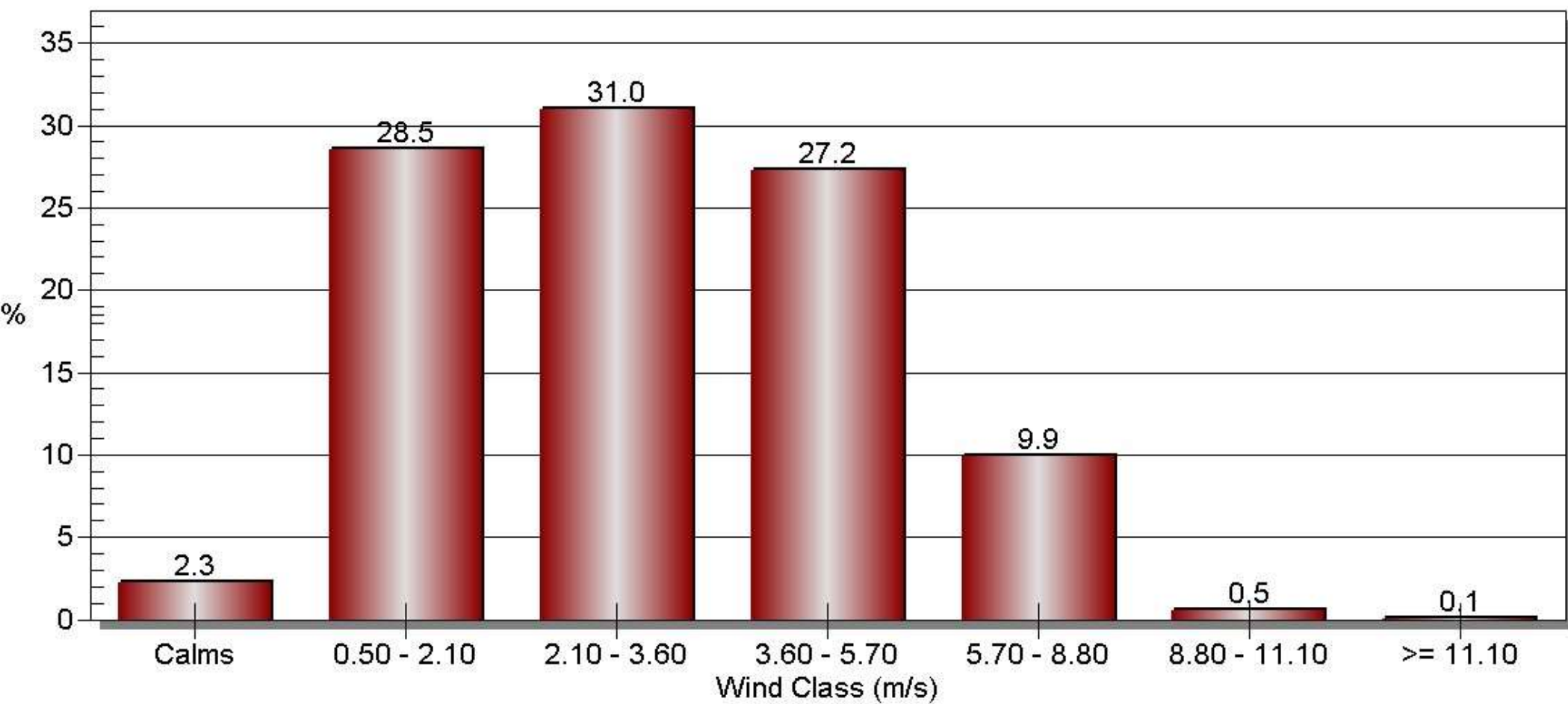
43582 hrs.

DATE:

7/19/2021

PROJECT NO.:

Wind Class Frequency Distribution



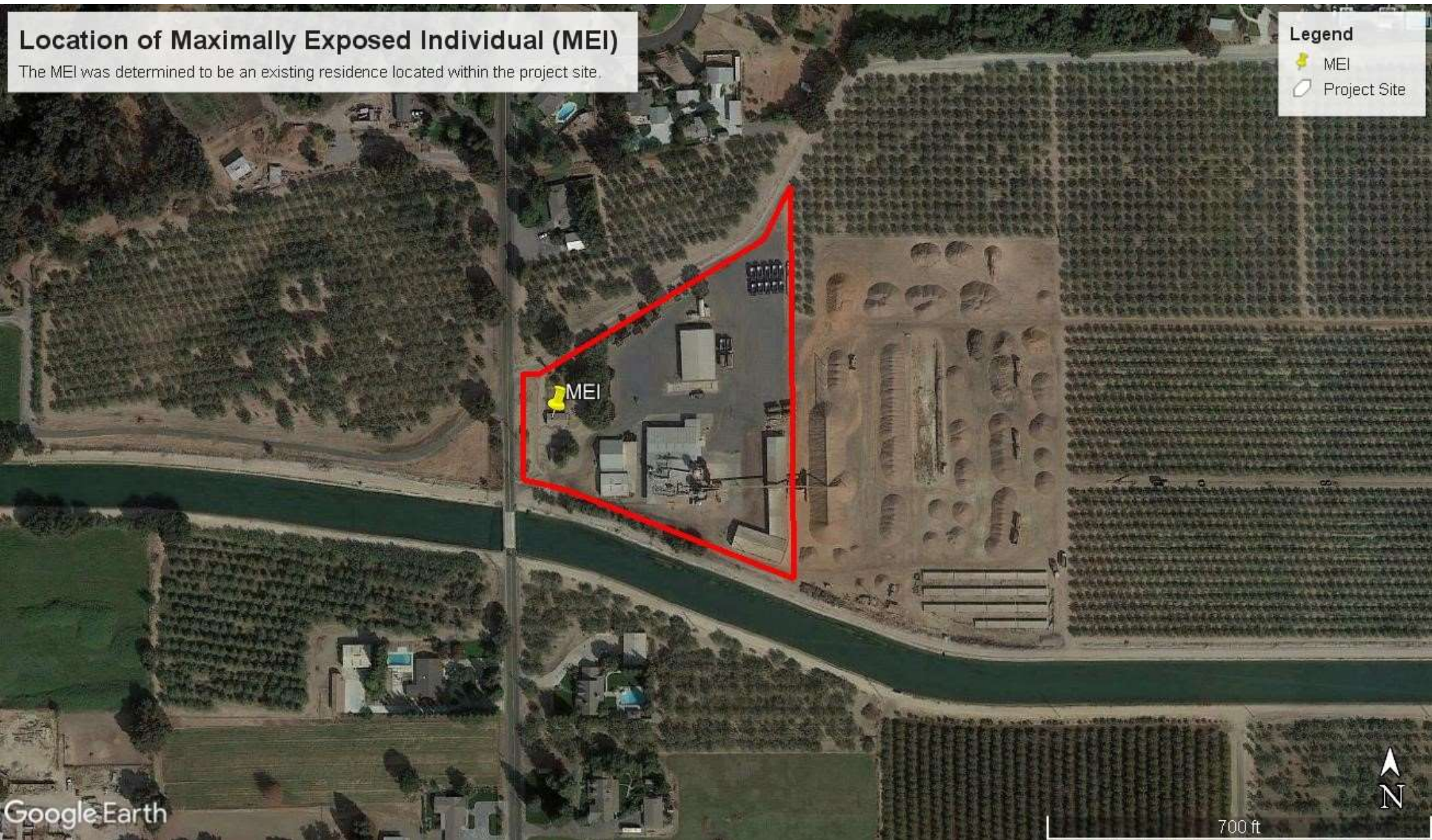
Location of Maximally Exposed Individual (MEI)

The MEI was determined to be an existing residence located within the project site.

Legend

 MEI

 Project Site



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.



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 (Trips/Day)
1. 370 - inbound field run nuts. Mid-August – Mid October. *2-axle truck pull set of doubles (Hoppers)	Trips 471	Trips 471	Trips 942	Days 62	Trips/Day 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

Health Risk Assessment

Almond Sheller Project

DPM from Off-road Equipment Use

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**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

2.1 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

[illegible]

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

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

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**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

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**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

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**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

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**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

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**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

2.1 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

[illegible]

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

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

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**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

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**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

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**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

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**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
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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)	Daily Trips Fleet Mix	Trucks 31 100.0%
892		

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		
Vehicle	Speed	DPM
Class	(mph)	(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

Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec):	6.45E-05
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

Maximum DPM (ug/m3)	UTM X	UTM Y
4.19561E-02	691511.55	4169004.64
4.0765E-02	691506.70	4168892.79

		Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Area Annual DPM Exhaust w/Actual Emissions	Offsite Annual DPM Exhaust w/Actual Emissions	Onsite-Road Segment 1 Annual DPM Exhaust w/Actual Emissions	Onsite-Road Segment 2 Annual DPM Exhaust w/Actual Emissions	On-site Truck Idle Annual DPM Exhaust w/Actual Emissions	Total DPM (ug/m3)
X	Y	On-site Area	Offsite Truck Travel	Travel - Segment 1	Travel - Segment 2	On-site Truck Idle	(ug/m3)	(ug/m3)	(ug/m3)	(ug/m3)	(ug/m3)	(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	23.62643	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	3.23239	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						

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
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Offsite Vehicle Travel Segments

Segment	Segment Travel Distance (m)
Road Segment 1 – Offsite Truck Travel	981.3

Other Input Parameters

Facility Operations (hr/day):	24
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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	1.17E-05
	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	
SLINE3	LHDT1	5 mph	0.098	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	8.95E-06
	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	

Diesel Vehicle Emissions (Off Season)

Diesel truck Idling Emissions

Onsite Vehicle Travel Segments		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	3.84E-07
	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	

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	Vehicle	
Class	Speed	DPM
	(mph)	(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

Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec): 6.33E-06
 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

Maximum DPM (ug/m3)
 4.9715E-03
 5.6070E-03
 X
 691506.70
 691511.55
 UTM
 Y
 4168892.79
 4169004.64

		Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	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)
X	Y	Offsite Truck Travel	On-site Truck Segment 1 Travel	On-site Truck Segment 2 Travel	On-site Truck Idle					
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	6.36871	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	3.23680	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	4168118									

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	8.29E-07
	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	

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		
Vehicle Class	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

Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec): 5.80E-05
 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

Maximum DPM (ug/m3) X Y
 3.98012E-02 691511.55 4169004.64
 3.7906E-02 691506.70 4168892.79

		Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	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)
X	Y	Offsite Truck Travel	On-site Truck Travel - Segment 1	On-site Truck Travel - Segment 2	On-site Truck Idle					
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	2.36E-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	1.28E-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	5.84E-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	5.72E-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	6.38671	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	3.37E-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	3.23680	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	2.76E-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	1.48E-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

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	1.00E-05
	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	
SLINE3	LHDT1	5 mph	0.094	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	7.65E-06
	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	

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	Vehicle	
Class	Speed	DPM
	(mph)	(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

Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec):
 Annual Average Total DPM Emission Rate - On-site-Road Segment 1 (grams/sec):
 Annual Average Total DPM Emission Rate - On-site-Road Segment 2 (grams/sec):
 Annual Average Total DPM Emission Rate - On-site Truck Idle (grams/sec):

5.49E-06
 1.00E-05
 9.48E-05
 9.24E-08

Maximum
 DPM
 (ug/m3)
 4.5989E-03
 5.3276E-03
 X
 691506.70
 691511.55
 UTM
 Y
 4168892.79
 4169004.64

		Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	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)
X	Y	Offsite Truck Travel	On-site Truck Travel - Segment 1	On-site Truck Travel - Segment 2	On-site Truck Idle					
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	7.54778	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	6.36871	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					

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	Vehicle	
Class	Speed	DPM
	(mph)	(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

Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec): 1.55E-06
 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

Maximum DPM (ug/m3) 2.4005E-02 1.5918E-02
 UTM X 691511.55 691506.70
 Y 4169004.64 4168892.79

		Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	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)
X	Y	Offsite Truck Travel	On-site Truck Travel - Segment 1	On-site Truck Travel - Segment 2	On-site Truck Idle					
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	3.68E-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	4.68E-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	7.54778	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	9.9432E-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	1.86034	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-0

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	Vehicle	
Class	Speed	DPM
	(mph)	(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

Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec): 1.79E-07
 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

Maximum DPM (ug/m3)
 3.8514E-03
 2.5422E-03
 X
 691511.55
 691506.70
 UTM
 Y
 4169004.64
 4168892.79

		Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Offsite Annual DPM	Onsite-Road Segment 1 Annual DPM	Onsite-Road Segment 2 Annual DPM	On-site Truck Idle Annual DPM	Total
X	Y	Offsite Truck Travel	On-site Truck Travel - Segment 1	On-site Truck Travel - Segment 2	On-site Truck Idle	Exhaust w/Actual Emissions (ug/m3)	Exhaust w/Actual Emissions (ug/m3)	Exhaust w/Actual Emissions (ug/m3)	Exhaust w/Actual Emissions (ug/m3)	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	6.74E-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	6.53E-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</										

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	6.92E-07
	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	

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	Vehicle	
Class	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

Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec): 1.56E-06
 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

Maximum DPM (ug/m3)
 2.3986E-02
 1.5898E-02
 X
 691511.55
 691506.70
 UTM
 Y
 4169004.64
 4168892.79

		Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	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)
X	Y	Offsite Truck Travel	On-site Truck Segment 1 Travel	On-site Truck Segment 2 Travel	On-site Truck Idle					
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	7.54748	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	3.2179					

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	2.08E-07
	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	
SLINE3	LHDT1	5 mph	0.057	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	1.59E-07
	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	

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	Vehicle	
Class	Speed	DPM
	(mph)	(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

Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec): 1.78E-07
 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

Maximum DPM (ug/m3)
 3.8483E-03
 2.5388E-03
 UTM
 X
 691511.55
 691506.70
 Y
 4169004.64
 4168892.79

		Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	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)
X	Y	Offsite Truck Travel	On-site Truck Travel - Segment 1	On-site Truck Travel - Segment 2	On-site Truck Idle					
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	9.68E-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
6										

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	1.77E-06
	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	
SLINE3	LHDT1	5 mph	0.024	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	1.35E-06
	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	

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	8.29E-07
	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	

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	Vehicle	
Class	Speed	DPM
	(mph)	(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

Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec): 1.60E-06
 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

Maximum DPM (ug/m3)
 2.3992E-02
 1.5906E-02
 UTM
 X
 691511.55
 691506.70
 Y
 4169004.64
 4168892.79

		Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Offsite Annual DPM	Onsite-Road Segment 1 Annual DPM	Onsite-Road Segment 2 Annual DPM	On-site Truck Idle Annual DPM	
			On-site Truck	On-site Truck	On-site Truck	Exhaust w/Actual Emissions (ug/m3)	Exhaust w/Actual Emissions (ug/m3)	Exhaust w/Actual Emissions (ug/m3)	Exhaust w/Actual Emissions (ug/m3)	Total
X	Y	Offsite Truck Travel	Travel - Segment 1	Travel - Segment 2	Idle					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	6.83E-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	4169063.47	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	7.54778	6.34934	2.81E-06	1.17E-05	4.11E-03	5.72E-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	3.4							

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	1.99E-07
	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	
SLINE3	LHDT1	5 mph	0.024	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	1.52E-07
	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	

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	Vehicle	
Class	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

Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec): 1.79E-07
 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

Maximum DPM (ug/m3)
 3.8484E-03
 2.5386E-03

UTM
 X
 691511.55
 691506.70

Y
 4169004.64
 4168892.79

		Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	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)
X	Y	Offsite Truck Travel	On-site Truck Segment 1 Travel	On-site Truck Travel - Segment 2	On-site Truck Idle					
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	7.47E-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	8.29E-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	6.75E-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	91.3								

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
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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	6.49E-07
	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	

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	Vehicle	
Class	Speed	DPM
	(mph)	(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

Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec): 1.62E-06
 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

Maximum DPM (ug/m3)
 2.3980E-02
 1.5897E-02
 X
 691511.55
 691506.70
 Y
 4169004.64
 4168892.79

		Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	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)
X	Y	Offsite Truck Travel	On-site Truck Travel - Segment 1	On-site Truck Travel - Segment 2	On-site Truck Idle					
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	7.54778	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	2.78E-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	2.72						

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	1.99E-07
	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	
SLINE3	LHDT1	5 mph	0.013	0.0	461	0.29	0.00E+00	0.00E+00	0.00E+00	1.52E-07
	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	

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	7.01E-08
	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	

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	Vehicle	
Class	Speed	DPM
	(mph)	(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

Annual Average Total DPM Emission Rate - Off-site Road Segment (grams/sec): 1.81E-07
 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

Maximum DPM (ug/m3)
 3.8466E-03
 2.5371E-03
 X
 691511.55
 691506.70
 UTM
 Y
 4169004.64
 4168892.79

		Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Unit Emissions VALUES AVERAGED	Offsite Annual DPM Exhaust w/Actual Emissions	Onsite-Road Segment 1 Annual DPM Exhaust w/Actual Emissions	Onsite-Road Segment 2 Annual DPM Exhaust w/Actual Emissions	On-site Truck Idle Annual DPM Exhaust w/Actual Emissions	Total DPM (ug/m3)
X	Y	Offsite Truck Travel	On-site Truck Travel - Segment 1	On-site Truck Travel - Segment 2	On-site Truck Idle					
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	3.81966	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									

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\Hull\AIHRAInput.hra

1	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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	1.03E-03	0.00E+00	0.00E+00	3.21E-02
37	ALL	691628.49	4169277.05	NonCancerChronicDerived_InhSoilDermMMiik	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_InhSoilDermMMiik	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_InhSoilDermMMiik	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	416922																

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\Hul\HulHRAInput.hra

1	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	4169152.63	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	2.93E-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	41																

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

169g 1 metric cup
1 metric cup 0.0003270 cy

516819.5719 g/cy

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	
	kg/Mg	lb/ton	kg/Mg	lb/ton	kg/Mg	lb/ton
Unloading	0.03	0.06	ND	ND	ND	ND
Precleaning cyclone	0.48	0.95	ND	ND	0.41	0.82
Precleaning baghouse	0.0084	0.017	ND	ND	0.0075	0.015
Hulling/separating cyclone	0.57	1.1	ND	ND	0.41	0.81
Hulling/separating baghouse	0.0078	0.016	ND	ND	0.0065	0.013
Hulling/shelling baghouse	0.026	0.051	0.0068	0.014	ND	ND
Classifier screen deck cyclone	0.2	0.4	ND	ND	0.16	0.31
Air leg	0.26	0.51	ND	ND	ND	ND
Roaster	ND	ND	ND	ND	ND	ND

Source: EPA "9.10.2.1 Almond Processing"

Factors for Asses Independent Variable

PM-10b	2963.558 tons almonds per year
lb/ton	lb PM10/yr
0.06	177.8135
0.82	2430.118
0.015	44.45337
0.81	2400.482
0.013	38.52625
0.051	151.1415
0.31	918.703
0.51	1511.415
ND	N/A

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#
Aluminum	9.58E-02	lb/lb PM10	7429905
Ammonia	1.98E-03	lb/lb PM10	7664417
Antimony	1.02E-04	lb/lb PM10	7440360
Arsenic	5.00E-06	lb/lb PM10	7440382
Barium	8.75E-04	lb/lb PM10	7440393
Bromine	1.10E-05	lb/lb PM10	7728956
Cadmium	3.00E-06	lb/lb PM10	7440439
Chromium	1.20E-05	lb/lb PM10	7440473
Chromium, hexavalent (& compounds)	6.00E-07	lb/lb PM10	18540299
Cobalt	8.00E-06	lb/lb PM10	7440484
Copper	1.69E-04	lb/lb PM10	7440508
Lead	6.20E-05	lb/lb PM10	7439921
Manganese	1.04E-03	lb/lb PM10	7439965
Mercury	1.30E-05	lb/lb PM10	7439976
Nickel	1.20E-05	lb/lb PM10	7440020
Phosphorus	1.57E-03	lb/lb PM10	7723140
Selenium	3.00E-06	lb/lb PM10	7782492
Silver	3.00E-06	lb/lb PM10	7440224
SULFATES	1.01E-02	lb/lb PM10	9960
Vanadium (fume or dust)	4.20E-05	lb/lb PM10	7440622
Zinc	1.58E-03	lb/lb PM10	7440666

Total Per Year	Maximum per Day	Maximum per Day
7.35E+02	1.11E+01	9.28081E-01
1.52E+01	2.30E-01	1.91816E-02
7.83E-01	1.19E-02	9.88145E-04
3.84E-02	5.81E-04	4.84385E-05
6.71E+00	1.02E-01	8.47673E-03
8.44E-02	1.28E-03	1.06565E-04
2.30E-02	3.49E-04	2.90631E-05
9.21E-02	1.40E-03	1.16252E-04
4.60E-03	6.98E-05	5.81262E-06
6.14E-02	9.30E-04	7.75015E-05
1.30E+00	1.96E-02	1.63722E-03
4.76E-01	7.21E-03	6.00637E-04
7.98E+00	1.21E-01	1.00752E-02
9.97E-02	1.51E-03	1.25940E-04
9.21E-02	1.40E-03	1.16252E-04
1.20E+01	1.83E-01	1.52097E-02
2.30E-02	3.49E-04	2.90631E-05
2.30E-02	3.49E-04	2.90631E-05
7.75E+01	1.17E+00	9.78457E-02
3.22E-01	4.88E-03	4.06883E-04
1.21E+01	1.84E-01	1.53066E-02

* AERMOD (21112	): G:\AS_HRA\H		RA (v3)\HRA (v3		).isc			06/07/			22		
* AERMET (1808	1):							15:30			41		
* MODELING OPTI	ONS USED: Reg		DFAULT CONC E		LEV FLGP		OL RURAL		ADJ_U		*		
* PLOT	FILE OF HIGH		1ST HIGH 1-HR		VALUES F		OR SOURCE		GROUP: ALL				
* FOR A	TOTAL OF 81		RECEPTORS.										
* FORMA	T: (3(1X,F13.5)		,3(1X,F8.2),3X,		A5,2X,A8,		2X,A5,5X,		A8,2X,I		8)		
* 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

* AERMOD (21112	): G:\AS_HRA\H	RA (v3)\HRA (v3	).isc				6/7/2002	2
* AERMET (1808	1):						15:30:04	1
* 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
<hr/>								
	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